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

New Definition of Default ("DoD")

For the purposes of the subsequent disclosure on credit quality, note that from 1 January 2021, for regulatory purposes, the application of the New Definition of Default ("DoD") was made compulsory, deriving from the implementation of the "RTS on the materiality threshold for credit obligations past due under Article 178 of the CRR (EU Delegated Regulation 2018/171)" and the correlated EBA guidelines "EBA Guidelines on the application of the definition of default under Article 178 of the CRR".
The above-mentioned regulation, while confirming the bases of default in payment delays and in the unlikely to pay status of the borrower, introduces several stricter criteria to identify non-performing positions and their subsequent return to performing. In particular, the New Definition of Default establishes the criteria to identify past due receivables, the method for the management of indicators to be considered to identify likely default, the specific aspects of retail exposures and the criteria for the return of a position to performing status.
More specifically, the main changes introduced with respect to legislation previously in force regard the following areas:

- new definition of past due:
  - lowering of the "relative" materiality threshold from 5% to 1% (threshold calculated as the ratio of the amount past due and/or overdue to the customer's total exposure, both determined at Banking Group level without offsetting with any margins available on other lines of credit);
  - introduction of an "absolute" relevance threshold differentiated by type of exposure (100 euro for retail and 500 euro for non-retail, to be compared with the total amount past due and/or overdue of the borrower);
  - classification of a debtor in default status (NPE) when both materiality thresholds have been breached for 90 consecutive days;
- introduction of an observation period of at least 3 months before reclassification to performing status for debtors previously classified as defaulting (Non Performing Exposure) who rectifies his position;
- classification of a debtor as defaulted in a harmonious way at Banking Group level, namely on all credit obligations active at Group companies;
- classification of a debtor as defaulted in the event in which the distressed restructuring implies a reduced financial obligation of over 1% compared to the previous one (i.e. Δ NPV > 1%);
- introduction of new rules of propagation/assessment of propagation of the defaulted status of a position on the basis of the link with other positions that have become non-performing;
- impossibility for the bank to offset amounts past due/overdue existing on several credit lines of the borrower with other open credit lines that it has not used ("available margins").

The criteria introduced by supervisory regulations had an impact on the accounting classification of non-performing credit exposures (Stage 3), as supervisory regulations are deemed consistent with the accounting regulations set forth in IFRS 9, in terms of objective evidence of impairment.
As at 1 January 2021, the initial application of the criteria set forth in the New Definition of Default entailed the classification under past-due positions of a gross amount of 113.4 million, previously classified as performing exposures. The relative value adjustments, which amounted to a total of 16.2 million, did not have any impact on the income statement for 2021, as the valuation effects ensuing from the initial application of the new regulations had already been incorporated in the financial statements as at 31 December 2020.
As illustrated in paragraph "2.2 Management, measurement and control systems" below, the monitoring activities undertaken by the Group, as well as the extraordinary support measures granted to customers relating to Covid-19, primarily moratoria, have enabled the increase of gross non-performing past-due exposures recorded in 2021 to be reduced to only 3.6 million.
As indicated in table "A.1.7 Prudential consolidation - On-balance sheet credit exposures to customers: changes in gross non-performing exposures" below, non-performing past-due exposures as at 31 December 2021 amounted, effectively, to 65.9 million, against 62.3 million at the beginning of the year.

The following tables provide quantitative information about the credit quality of the Group's total "credit exposures"; in this regard, note that the above-mentioned exposures do not include equity instruments and UCIT units.

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	906,482	2,309,438	44,610	571,520	136,616,338	140,448,388
2. Financial assets measured at fair value through other comprehensive income	-	-	-	-	10,335,722	10,335,722
3. Financial assets designated at fair value	-	-	-	-	-	-
4. Other financial assets mandatorily measured at fair value	109	104,471	60	3,099	300,408	408,147
5. Financial assets held for sale	83	861	5,551	2,653	114,795	123,943
Total 31/12/2021	**906,674**	**2,414,770**	**50,221**	**577,272**	**147,367,263**	**151,316,200**
Total 31/12/2020 (*)	**1,470,618**	**2,900,336**	**45,892**	**1,782,957**	**145,864,480**	**152,064,283**

(*) The figures relating to the previous year have been restated to take into account the amendments introduced by the 7th update of Circular no. 262 of the Bank of Italy.

Information on the portfolio to which forborne credit exposures belong

As at 31 December 2021, net forborne exposures amounted to 6,694.7 million (of which 3,449.5 million non-performing and 3,245.2 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	6,376,177	(3,115,647)	3,260,530	427,545	137,646,869	(459,011)	137,187,858	140,448,388
2. Financial assets measured at fair value through other comprehensive income	-	-	-	-	10,338,849	(3,127)	10,335,722	10,335,722
3. Financial assets designated at fair value	-	-	-	-	X	X	-	-
4. Other financial assets mandatorily measured at fair value	196,540	(91,900)	104,640	-	X	X	303,507	408,147
5. Financial assets held for sale	8,313	(1,818)	6,495	-	118,344	(896)	117,448	123,943
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**
Total 31/12/2020 (**)	**8,847,620**	**(4,430,774)**	**4,416,846**	**551,237**	**147,816,277**	**(474,450)**	**147,647,437**	**152,064,283**

(*) Value to be shown for disclosure purposes

(**) The figures relating to the previous year have been restated to take into account the amendments introduced by the 7th update of Circular no. 262 of the Bank of Italy.

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	(1,725)	1,439	3,247,901
2. Hedging derivatives	-	-	127,076
Total 31/12/2021	**1,725**	**1,439**	**3,374,977**
Total 31/12/2020	**19,660**	**7,045**	**6,616,316**

Poor credit quality exposures, with a book value of 1.4 million, refer exclusively to derivative instruments with customers.

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

B.1 Consolidated structured entities

As at 31 December 2021, 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 2021, 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 1,091.6 million (1,015.3 million as at 31 December 2020).
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 2021 amounted to 592.2 million (462.7 million in 2020).

Section 2 - Risks of prudential consolidation

Group Risk Appetite Framework (RAF)

During the first quarter of 2021, 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.
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)".

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 2021, the first RAF indicators relating to the ESG (Environmental, Social and Governance) dimension were included, a sphere that will be further boosted in the coming years, consistent with the ESG project defined by the Group; in addition, we will seek to achieve the full alignment of the Risk Appetite Framework indicators with the corresponding set of the Recovery Plan.
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 and Other Significant Issues.
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. The scope of application of the ex-ante opinions of the Risk Function has been extended to also include transactions defined as Significant. The latter regard the credit area and enable a considerably greater number of credit transactions to be assessed in advance, both at the time of disbursement - with specific reference to the SME portfolio - and when classified from greater to lesser risk and vice versa.

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. In 2020, Banco BPM launched a specific training plan for the entire staff of the Risk Function, focusing on:

- market scenario and Covid-19;
- changes in the legislative framework and its impact on the measurement of Credit, Liquidity and Market Interest Rate risks and Operational Risk, and illustration of Banco BPM's choices of method.

The plan continued in 2021, with training courses focusing on:

- integrated understanding of Risks and of Banco BPM's positioning;
- introduction to emerging risks: Cyber Risk, Climate Change & ESG, Model Risk;
- a deeper understanding of Market Risk with reference to the FRTB (Fundamental Review of Trading Book) and Quantitative Finance courses.

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.

During the first half of 2021, the Group was involved in the 2021 EU-wide Stress Test exercise, conducted by the European Banking Authority (EBA), in collaboration with the European Central Bank (ECB), the European Systemic Risk Board (ESRB) and the European Commission, with a view to testing the business model and the resilience of banks on the basis of 2 scenarios, baseline and adverse, developed by the Regulator. The results of the banks that participated in the exercise under the guidance of the EBA were published by the EBA on 30 July 2021.
Furthermore, in the second half of the year, preparatory work started for the 2022 Climate Risk Stress Test exercise, which will be conducted by the ECB on the whole European banking sector between February and July 2022.

Monitoring and reporting activities

Risk monitoring and control activities carried out by the Risk Function have the task of ensuring, at the Group and individual company levels, unitary oversight over the applicable risks, guaranteeing appropriate and timely information to the Corporate Bodies and the Organisational Units involved in risk management, ensuring the development and continuous improvement of risk measurement methodologies and models.

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 Entity 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. Furthermore, on a quarterly basis, the integrated reports include an update on the performance of the Recovery Plan indicators, which in 2021 were all included in the RAF Framework; said analysis is prepared by the "Recovery and Resolution Plans" Function, with the assistance of the Risk Function.

Positioning analyses (benchmarks) provide the Corporate Bodies of the Parent Company and top management with a quarterly update on the Group's positioning with respect to the Italian and European banking systems with regard to the main risk areas; the analyses are conducted adopting the Regulator's perspective, making use of the main findings and the risk metrics reported in the EBA Risk Dashboard 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 self-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, 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.

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 envisages an annual internal self-assessment of the overall liquidity risk management framework, with a view to the continuous improvement of this process.

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.
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.
INVESTMENTS	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.
PANDEMIC	Risk resulting from the expected effects of the continuation of the current crisis and/or uncertainties as to new potential crises and the ability to react to them.
CLIMATE RISK	Direct and indirect risks related to climate change issues

As part of the Risk Identification process carried out in 2021, the Group identified the Climate Risk related to environmental issues concerning "Climate change & ESG" as a specific additional risk factor.
With regard to this area, the Group has embarked on an ambitious path to integrate Sustainability into the Bank's corporate and business activities. To this end, it has established a specific ESG project, creating seven working groups. Within its structure, the Risk Function has launched a specific assessment to evaluate compliance with the regulatory requirements envisaged by the "Guidelines on climate-related and environmental risks" published by the ECB in November 2020.

Environmental risks

Introduction

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, obliging the various interested parties, including Banco BPM, to consequently take action to meet the growing interest of investors and stakeholders. 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 2021 Non-Financial Statement.

Recent development concerning the ECB

The European Central Bank (ECB) 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) and to provide action plans with a view to monitoring the impact of climate and environmental changes (Questionnaire B).
Banco BPM therefore sent "Questionnaire A" to the ECB within the envisaged deadline of 28 February 2021, in which a self-assessment of its internal processes had been conducted, with a view to assessing and adequately managing environmental and climate-related risks. Subsequently, it sent "Questionnaire B", containing the action plans to achieve the full alignment of the Group to the expectations of the ECB in this regard, based on the results that emerged during the self-assessment phase. 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. Increasing sustainability skills in the departments involved for various reasons in these issues, particularly as regards the Risks and Credit areas;

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. Furthermore, gathering all of the data, through external providers and specific internal initiatives (e.g. through questionnaires to customers), needed to define and develop adequate internal methods that enable these components to also be included in the current estimation models adopted by the Bank is of primary importance;
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 credit portfolio of Banco BPM Group is exposed to have to be identified, assessing them with relation to specific scenarios that the Bank could be exposed to. This can be implemented by defining KRIs (Key Risk Indicators)/KPIs (Key Performance Indicators) that expressly include climate-related and environmental risks in the RAF, promoting the development of a methodological framework able, inter alia, to integrate these factors into the definition and assessment of the customer's credit risk, and into loan origination, monitoring and pricing processes. In addition, the definition of Banco BPM's lending policies will envisage an analysis of the sectors most exposed to climate-related and environmental risks (so-called "controversial sectors") and these risks must be also assessed when drawing up business continuity plans and when implementing the frameworks for the management of operational, reputational, market and liquidity risks;
4. Disclosure: Banco BPM is required to publish information and results relating to climate-related and environmental risks retained significant, by developing reports in compliance with the expectations stated in the Non-Financial Reporting Directive (NFRD) and, progressively, to align with the recommendations of the Task Force on climate-related Disclosures.

Lastly, one of the other areas of focus and development within the ambit of the ECB's activities, are the fundamentally important stress tests on the risks originating from climate change, which will be conducted between January and July 2022 and which will involve Banco BPM in the preparation of bottom-up forecasts.

The main initiatives implemented in 2021

During 2021, Banco BPM defined and implemented numerous initiatives relating to analysing and managing climate-related and environmental risks, both as part of its own ESG Programme, and in response to the expectations of the ECB Guide on the subject, by preparing and submitting to the Tax Authority the detailed action plan (Questionnaire B), illustrated above.
More specifically, the activities that have been launched and completed, or are still in progress and under development in 2022, as well as in the following years, mainly regard two 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;
- 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 2021, with particular focus on the Risk & Credit Area, are summarised below. For further details, please refer to the content of the Non-Financial Statement.
As part of the specific "Climate Transparency" initiative, Banco BPM has examined the potential physical and transition risks of the Group's credit portfolio, by mapping all of its exposures, with a view to assessing said risk factors (exposure to controversial sectors, transitional sectors etc.), identifying the most appropriate benchmark climate scenarios and defining the various methodological frameworks that must be implemented over time, in order to fully integrate climate-related risk into the Bank's decision-making processes.

As regards the Climate Scenario Analysis & Stress Test initiatives, instead, the inventories of the climate scenarios available were defined, while with regard to the RAF, ESG risks were identified and included in the Group's Risk Inventory, focusing specifically on defining adequate KPIs, to be used for the future quantification ad proactive management of climate-related risks. With regard to the area of Market & Liquidity risk, an initial materiality analysis was conducted on the climate-related risks of these portfolios, with a view to integrating them, at a later stage, into the existing framework and in monitoring and reporting processes.
Furthermore, the processes to identify climate-related and environmental factors in operational, reputational and business continuity risks, were reviewed. With regard, instead, to the Group's lending policies, a preliminary analysis was conducted to quantify environmental risk, defining the reference policies for the controversial sectors (Credit Strategies "lending policies" initiative).
To meet the new disclosure requirements resulting from the implementation of the EU Taxonomy, the definition of the data needed to measure eligibility at counterparty level was launched.
Lastly, specific questionnaires were prepared to send to customers, with a view to starting to collect data and information on climate impacts.
In parallel to the above-cited project streams, specific training activities were implemented in 2021, and a specific working group was established to look across the board at the IT aspects required to govern and manage the various projects.
Those presented represent just a part of the series of initiatives and projects that Banco BPM has been, is and will be committed to as regards climate change and to ESG in general.

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 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 structure of Banco BPM, which reports to the Chief Lending Officer, coordinating with Bipielle Real Estate 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 Part A "Accounting policies" - Section 5 "Other Aspects", 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.

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 form-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 implementing 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, in 2021, the Bank 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 2021, the Scenario Council met 7 times 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 the year, the Group participated in the EU-wide Stress Test 2021 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 in January 2021, was concluded on 30 July 2021 with the publication of the results by the EBA.

The internal risk control system

The following paragraphs illustrate the structures and the tasks allocated to the corporate control functions of the new 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.

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 remote checks, and, on the other hand, it strives to assess the completeness, adequacy, functionality and reliability of the organisational structure 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.
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.

The Compliance Function of the Parent Company reports to the Chief Executive Officer and oversees compliance risk management with regard to all company activities, adopting a risk-based approach, verifying that internal procedures are adequate to prevent said risk. To this end, 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 the management of compliance risk with regard to all Group activities, according to a risk based approach, verifying that internal procedures are adequate to mitigate that risk.
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.
In 2021, the Compliance Function worked on identifying the applicable regulations and assessing their impacts on company processes, models and procedures, providing advice on compliance, as well as assessing compliance with internal regulations as part of the issuing process. In application of the annual or specific plan required by the Corporate Bodies or the Supervisory Authorities, the Function conducted compliance checks to evaluate the existence and adequacy of governance, organisation, control and IT measures of the Group, their strength and effectiveness in mitigating compliance risks, and the compliance of the operating practices and conduct of employees or workers, reporting any situations of non-compliance and identifying possible remediation actions, monitoring their implementation. The Compliance Function also provided advice and assistance to the Group’s corporate structures on topics where compliance risk is important, particularly as regards preparatory work relating to the issue of internal regulations and sales proposals.

The Function also provided its assistance in conducting personnel training courses, in order to disseminate and promote a solid and robust risk management culture within the Bank, adequate knowledge of the regulations and the relative responsibilities, as well as ensure awareness of the supporting instruments and procedures in the fulfilment of obligations.
The Parent Company's Anti-Money Laundering function, part of the Compliance function, has full autonomy to oversee the risk of money-laundering and terrorist financing, as well as the reporting of suspicious transactions, and has direct access to the Corporate Bodies, communicating with them without any restrictions or intermediation; it also performs the tasks entrusted by law to the head of the Anti-Money Laundering function and the Suspicious Transaction Reporting Officer (SOS).

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 Banco BPM businesses and retail. 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 AIRB. In 2017, Banco BPM Group submitted a request to the European Central Bank for the extension of the advanced internal models (AIRB) 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 AIRB 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 AIRB model change application to the Regulator in the first quarter of 2022;
- market risk: following the request submitted in 2019 by Banco BPM Group, on 16 November 2020, the Supervisory Authority granted the authorisation to extend it to the specific risk of debt securities, therefore from the reporting date of 31 December 2020, Banco BPM Group uses the extended model to calculate the capital requirement for Market Risk. Said requirement is therefore calculated on the basis of VaR, Stressed VaR – including the specific risk of debt securities – and IRC. During 2021, significant refinements were made to the internal model, with a view to fulfilling the Obligations of previous inspections: the changes regarded, in particular, the measurement of foreign exchange positions, the quality of VaR, Stressed VaR and IRC market parameter data, the process of identifying and managing Risks Not In Model Engine (RNIME) and the Incremental Risk Charge (IRC) calculation method. As regards the latter, a limitation is in place with a 10% Add-On on an individual and consolidated basis, until several relative methodological findings have been resolved;
- operational risk: from the date of the merger, Banco BPM Group was authorised by the European Supervisors to temporarily use, for regulatory purposes, a combination of the three regulatory methods, specifically the AMA (Advanced Measurement Approach), relating to the validated scope of the former Banco Popolare Group (former Banco Popolare segments of the Parent Company and Banca Aletti), the TSA (Traditional Standardised Approach) on the scope of the former Banca Popolare di Milano Group (segments of the former Parent Company BPM S.c.a r.l., former BPM S.p.A., ProFamily and Banca Akros) and the BIA (Basic Indicator Approach) for the other remaining companies making up Banco BPM Group. After the transition period for the above ECB authorisation ended, from the Reporting date of 31 December

2020, the Supervisory Authority asked the Group to fully adopt 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, to fulfil all of the requirements of the CRR 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).

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 2020/07 Guidelines 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 resulting from the Covid-19 pandemic

The period of global health emergency, which started at the beginning of 2020, has impacted the method of calculation of expected losses and the management of credit exposures. More specifically, the highly asymmetrical nature of the macroeconomic shock that occurred and the consequent mitigating measures implemented by the different Competent Authorities have imposed the introduction of model changes, and ad hoc fine tuning, of the models currently used, with a view to enabling the real risk level of the Group's portfolio to be correctly measured.
Said model changes and fine tuning, which regarded both the method for estimating expected losses and the stage assignment criteria, led Banco BPM to adopt, from June 2020, a method based on sector-related future rates of

default, able to factor in the mitigation measures consequent to the various forms of support introduced by the Italian Government (Heal Italy and Liquidity Decree).
In the first half of 2021, this method was modified by introducing the use of new sector satellite models developed by the Group for specific sectors of economic activity impacted to a lesser extent by the support measures cited above (particularly with reference to the moratoria).
For a full illustration of the changes to the models and to the staging criteria, please refer to the paragraph below "Changes due to Covid-19" in section "2.3 Measurement methods for expected losses".

It should also be noted that, within the context of the Covid-19 health emergency, from 2020, Banco BPM Group has provided numerous customer support measures, including moratoria pursuant to law (Heal Italy Decree), disbursements of new loans set forth in the "Liquidity" Decree Law and measures established internally by the Group (e.g. bilateral suspension agreements), implementing new actions to prioritise the measures for 2021, whilst waiting for the Government to implement the budget law, which envisages greater room for manoeuvre on this (particularly with the support of SACE). In accordance with the EBA guidelines, during the period from March to November 2020, the Group opted for the opportunity of applying the so-called EBA temporary framework, on the basis of which, new loans were exempted from the assessment of financial difficulties ("forbearance"), with the exception of restructuring, and the moratorium measures that complied with the requirements defined by the Regulator. Although the EBA temporary framework was applicable until 31 March 2021, from November 2020, the Group resumed the ordinary process of assessing forbearance for all support measures granted to the customer.
In order to carry out accurate monitoring of the overall support measures granted, Banco BPM Group set in motion specific customer interaction with those benefiting from said measures. The checks have been conducted applying risk-based criteria, which consider specific qualitative and quantitative information to best assess creditworthiness and the correct classification of exposures - with the aim of highlighting borrowers with potential financial difficulties. For the counterparties selected in this way, the Group launched a customer relations programme through specific contact campaigns (also "early engagement" campaigns). The above activity, performed by the commercial network, enabled accurate feedback and qualitative information on the customer to be collected, which were made available to the function reporting to the Chief Lending Officer (CLO), for the appropriate assessments made by a dedicated function (Monitoring and prevention).
With a view to developing a better process to manage non-performing exposures, the functions reporting to the CLO, in collaboration with the Risk Function, started to work on specific activities to integrate that already envisaged by the Group's internal processes, including: (i) the definition, from the end of December 2020, of a specific checklist to be submitted to all managers of Unlikely to Pay exposures, with a view to collecting additional information on the counterparties affected by the worsening of the economic scenario due to Covid-19 and (ii) interaction with said counterparties to gather more updated information on their economic and financial situation and to check, where envisaged, compliance with contractual covenants.

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 (AIRB 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 Corporate 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. Although, as at 1 January 2021, the new definition of default led to an increase of non-performing exposures following the new rules of automatic interception of non-performing past-due positions (+113.4 million), the monitoring activities illustrated above enabled the increase in gross non-performing past-due exposures recorded as a whole in 2021 to be reduced to only 3.6 million. Moreover, this development follows the extraordinary support measures granted to customers with relation to Covid-19 initiatives, primarily moratoria.
For further details on the new definition of default and on the stock of non-performing past-due exposures, please refer to the content of the paragraph entitled "New Definition of Default (DoD)" contained in "Section 1 - Risks of the consolidated book".

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 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 including 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.
The paragraphs below illustrate the changes that will be introduced in 2022.
For 2022, the credit policy framework will be 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 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 - will be 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;
- analysis of ESG financial sustainability (for example, the presence of investments with ESG objectives) incorporated in the future assessment tools (medium-long term business plan).

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 initiatives to encourage the Green reconversion of sectors associated with fossil fuels through new incremental disbursements dedicated to transition projects (target >80%);
- 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 will 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 are envisaged:

- 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 (namely aligned with the European taxonomy).

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 will enable 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 will equip itself with over the year.
To facilitate the process of acquiring these new approaches, specific training courses were immediately organised 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.

The models currently used by the Group to calculate the expected losses of performing loans (ECL) do not directly incorporate the risks resulting from the exposure of the borrower counterparty to aspects relating to climate and environment; nevertheless, these aspects are considered indirectly to the extent that the ECL calculation models consider the expected impact of the evolution of macroeconomic variables on credit risk parameters, also through the use of sector-based satellite models, namely of models that define the functional relationships between the evolution of macroeconomic variables and the Bank's risk parameters (PD and LGD). The same can be applied to non-performing exposures measured on a "lump-sum" basis.
With regard instead to non-performing loans to be assessed analytically, the risks related to climate and the environment are taken into consideration in the estimate of the present value of envisaged future cash flows, on an essentially discretionary basis and together with other pieces of information.

2.3 Measurement methods for expected losses

Changes due to Covid-19

With regard to the calculation of expected losses (ECL), in 2021, 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. 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 losses following Covid-19, as well as further changes introduced in 2021 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).
Overall, the above-cited interventions led to an increase in the Group's credit exposures classified as "Stage 2" with respect to those recorded at the beginning of the year, and even more so, with respect to the pre-Covid-19 situation. As highlighted in the Group Report on operations (see, for a comparison, particularly, the section on results), for the portfolio represented by loans to customers, gross exposures classified as "Stage 2" as at 31 December 2021 amounted to 11.7 billion (10.97% of total performing exposures), up by 4.5 billion compared to the start of the year (when they totalled 6.82% of all performing exposures).
The total coverage of performing loans was 0.43%, substantially aligned with that recorded as at 31 December 2020 (0.44%). In detail, the average coverage of "Stage 2" exposures was 2.82%, compared to 4.32% as at 31 December 2020.
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 with respect to the estimation models used previously.

Assessment of the SICR

With regard to the stage assignment framework, to draw up the 2021 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).
More specifically, in 2021, a new quantitative rule was introduced, which if met a SICR was assumed with respect to the date of disbursement of the loan. Said rule, called the "Threefold effect" represents a backstop criterion insofar as it envisages the automatic classification as Stage 2 of all loans granted by the Bank 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 follows the analyses made during 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.[1] In said letter, the ECB invited banks to consider, inter alia, the opportunity of adopting an increase equal to or higher than the 300% of the annualise lifetime PD as an indicator of SICR[2].
A further change was the classification as Stage 2 of credit lines of less than 500 thousand euro disbursed to counterparties which, by virtue of the provisions of the Support two Decree, requested an extension of the moratorium pursuant to Article 56 of the Heal Italy Decree, initially set by the Italian Government as 30 June 2021, to 31 December 2021.
The changes to the quantitative SICR model and to the "Backward-looking approach", already introduced in 2020, were confirmed for 2021 as well, as explained in more detail below.
With regard to the first change, to better reflect the effects of Covid-19, from the 2020 financial statements, the method of the quantitative model of the SICR was changed, with a view to making the staging system more reactive with respect to the macroeconomic scenarios, by redefining new materiality for the transfer between the various stages of risk, related to the change in the rating for each counterparty segment. More specifically, this change has impacted counterparties belonging to the economic sectors that were worst hit by the economic crisis, as a function of the envisaged evolution of the macroeconomic scenarios.

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[1] More specifically, this regards the letter sent by the ECB to European banks on 4 December 2020 entitled "Identification and measurement of credit risk in the context of the coronavirus (Covid-19) pandemic".
[2] Said threshold is justified by that observed by the ECB in the most recent quantitative surveys conducted before the beginning of the pandemic.

With regard to the second change, in accordance with that already applied at the time of preparation of the 2020 financial statements, counterparties that had been previously classified as Stage 1 due, solely, to the benefits resulting from obtaining a government support measure were brought back to Stage 2 ("Backward-looking approach").

Lastly, as part of the continuous process of revision of models currently used, with regard to counterparties of "Structured Finance Operations - SFO" (Income Producing Real Estate, Real Estate Development, Project Financing and Leveraged & Acquisition Finance), previously considered "unrateable", during 2021, a specific method was developed to calculate the operational rating. This enabled a new staging rule to be introduced, based on the counterparty rating, which envisages the classification of exposures relating to counterparties whose ratings have belonged to a medium/high risk band for at least six months, as Stage 2.

Estimate of forward-looking information

With reference to the inclusion of forward-looking information[1] from 30 June 2020, non-proprietary satellite sector-based models have been introduced, which enabled the consequences of the pandemic on the different sectors of the Italian economy to be assessed. In 2021, in addition to the usual update of the time series of risk parameters, a new proprietary sector-based satellite risk model has been developed, which has partly replaced the non-proprietary sector-based satellite model acquired from third parties and used for the financial statement valuations of the previous year. In any event, the latter continued to be used to calculate the effects on the risk parameters of the business sectors that most benefited from the moratoria introduced by the Italian Government following the pandemic crisis[2].
In addition, to calculate expected losses on performing credit exposures as at 31 December 2021, the macroeconomic scenarios and the relative probabilities were updated on the basis of the information provided by a leading provider, available at the beginning of 2021, based on three different scenarios ("baseline", "adverse" and "favourable"), as approved by a specific Scenario Council of Banco BPM, as envisaged by Group policy.
For further details, refer to the paragraph "Inclusion of forward-looking factors", below.

Other amendments to the model

In 2021, the internal models to calculate IFRS 9 risk parameters were revised, in order to implement the new definition of default (DoD) and, more generally, to reflect the project to revise A-IRB models. As illustrated in the previous "Section 2 - Risks of prudential consolidation", 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, which moreover 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), were also introduced in the framework for the calculation of the IFRS 9 ECL, for the aspects retained compatible.
With regard to DOD regulations, the main change regarded the default rate forecasts, with an impact on the probability of default (PD) parameter, which was estimated by taking into account time series consistent with the dictates of the new regulation, and on the loss given default (LGD) parameter, which was calibrated to take the changes on default rates into account.
A further refinement introduced in 2021 relating to ECL calculation is represented by the full use of the information of internal models that assess the risk of Structured Finance Operations - SFO (Income Producing Real Estate, Real Estate Development, Project Financing and Leveraged & Acquisition Finance) through the calculation of the risk parameters relating to each individual operation to better assess the specific characteristics deriving, for the most part, from the relative business plans. With regard to the LGD parameter, following the activities conducted by the Internal Validation function, a regulatory floor of 15% was introduced for the above parameter, with respect to the results of the model in question.
Lastly, in line with the approach adopted last year, the calculation of expected losses as at 31 December 2021 evaluated the credit support actions introduced by the Italian Government towards businesses and households, through the banking system, in favour of which first application guarantees on loans granted to businesses are

[1] 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.)
[2] 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.

provided (Art. 13 of the Liquidity Decree) rather than subsidiary guarantees on 33% of the suspended instalments (Art. 56 of the Heal Italy Decree). In more detail, to calculate expected losses, the cash flows resulting from the enforcement of the above-cited state guarantees were taken into account, as better illustrated in the paragraph below "Expected Credit Loss - Stage 1 and Stage 2".

Use of any management overlays

In addition to the amendments illustrated (so-called in-model adjustments), at the time of preparation of the 2021 financial statements, the application of further "post model adjustments/management overlays" was deemed necessary. More specifically, greater value adjustments were recognised against performing credit exposures totalling 70.5 million, entirely related to the Parent Company, (56.0 million relating to cash exposures and 14.5 million to off-balance sheet exposures), of which 50.5 million against exposures classified as Stage 2. Said management overlay, which effectively neutralised the positive economic impacts that would otherwise have been recognised, was mainly justified by the fact that the estimation models applied may not fully capture the expected losses of the exposures that benefited from the state Covid-19 moratorium, which finished at the end of 2021, and in the foreseeable change in the risk parameters deriving from the new models being defined, also considering that the results deriving from the ECL calculation models are influenced by particularly positive macroeconomic scenarios, although a fair share is dependent on phenomena that are not yet fully consolidated and in any event still subject to extreme variability and uncertainty due to the evolution of the Covid-19 virus, the effective implementation of the National Recovery and Resilience Plan and the evolution of the global economic and political situation.

Measurement of expected 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 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 loss.

Framework stage assignment

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.

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).
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;
- economic sector.

Thus, the change in credit risk is measured by comparing the "Lifetime PD Ratio – LPDR" of individual exposures, as defined above, and the specific estimated internal thresholds. Exceeding these thresholds represents a significant increase in credit risk and the consequent transfer of the individual line of credit 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 operational model, after calculating the LPDR thresholds representing an SICR based on the lifetime PD, the Group verified whether said thresholds were consistent, to enable a classification between Stage 1 and Stage 2, with those calculated using as reference the LPDR parameter calculated among 12-month PD[2].
That move is justified by the opportunity, in operational terms, to coordinate the stage allocation model with the internal rating model adopted for the purpose of credit management and monitoring. In that regard, it is noted that the internal rating system classifies exposures in 11 rating classes, which, for the purpose of the credit disbursement processes, are grouped into 5 homogeneous risk bands ("Low", "Medium-low", "Medium", "Medium-high" and "High").
The use of the risk bands indicated above thus guarantees the integration and consistency of the process of measuring performing credit exposures with the other internal credit management processes (disbursement, pricing, monitoring and classification).
That being established, the quantitative stage allocation model entails the grouping of the exposures with homogeneous risk into five risk bands. More specifically:

- for the exposures classified in the "Low" risk band at the origination date, an increase in credit risk is considered significant when, at the reference date, the migration of the exposure to a "Medium-High" or "High" risk band is observed (migration of at least three risk bands);
- for the exposures classified in the "Medium-Low" risk band at the origination date, an increase in credit risk is considered significant when, at the reference date, the migration to a "Medium-High" or "High" risk band is observed (migration of at least two risk bands);
- for the exposures classified in the "Medium" risk band at the origination date, an increase in credit risk is considered significant when, at the reference date, the migration to the "High" risk band is observed (migration of at least two risk bands);
- for the exposures classified in the "Medium-High" risk band at the origination date, an increase in credit risk is considered significant when, at the reference date, the migration to the "High" risk band is observed (migration of one risk band);
- for exposures which were already classified in the "High" risk band at the origination date, it is not possible to recognise any significant increases in credit risk, based on the quantitative model, as the only worsening possible is effectively a change to default status. In that regard, for all customer segments, exclusively exposures that belong to rating classes 10 and 11 are classified in the "High" band.

[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) 680/2014, with which the EBA's ITS was incorporated (EBA/ITS/2013/rev1 of 24/07/2014).
[2] Based on the intersections considered significant for the model adopted, the threshold values permitted are all those contained in a range starting from the LPDR of the highest rating class belonging to the risk band with the highest risk among those that do not generate an SICR to the LPDR of the lowest rating class belonging to the risk band with the lowest risk among those that generate an SICR.

As already illustrated in the introductory paragraph "Changes due to Covid-19", the assignment of exposures to a specific risk band, made on the basis of the segment and the rating class, also considered, from 2020, forward-looking information, differentiated by economic sector. This enable the highly asymmetrical nature of the macroeconomic shock in different production sectors, generated by Covid-19, and the consequent different support measures promoted by the competent authorities, primarily moratoria, to be incorporated in the assessment of the SICR. More specifically, by including forward-looking factors, a recalibration of the trigger threshold was obtained, such that the classification in the lowest staging band can be anticipated, even as regards an SICR model based on the same risk bands illustrated above. From a prudential perspective, any improvements in the risk band, related to a positive outlook observed in certain isolated sectors, have been inhibited. Overall, this change increased the percentage of exposures classified as Stage 2 intercepted, relating to those economic sectors characterised by macroeconomic forecasts that are impacted in a particularly negative way by Covid-19.

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[1], but differently to loans not based on risk bands. 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 in question as at 31 December 2021.
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 regard to exposures due to banks, the methodology developed is also based on the calculation of the LPDR, but different to loans, it does not use the risk bands.

As already illustrated, for the assessment of the SICR, in 2021, a new quantitative criterion called the "threefold effect" was introduced. This criterion represents a "backstop indicator" insofar as it envisages the automatic classification as Stage 2 of all loans granted by the Bank 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.

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

- the presence of a number of consecutive days past-due/overdue surpassing 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;
- 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, illustrated above, save for the option of override by the competent company functions, which must be suitably justified. More specifically, all counterparties whose rating, on the reference date, is higher than a specific threshold are classified as Stage 2; in more detail, this regards rating threshold "11" for the retail segment and rating threshold "10" for the remaining segments;
- 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, as illustrated above.

[1] Data from the CreditEdge platform of the Moody's rating agency.

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 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 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 table below shows the percentage breakdown of exposures allocated to Stage 2 on the basis of various classification triggers, which highlights that the breakdown of the exposures classified therein is influenced by both quantitative criteria based on the change in the probability of default, including therein the "threefold increase" rule introduced in 2021 as illustrated above, and 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: Private Individuals	of which: Banks	of which: unrated counterparties
Quantitative criteria	48.17%	50.09%	68.77%	54.28%	36.30%	59.30%	100.00%	3.87%
Qualitative criteria	51.34%	49.91%	30.79%	45.52%	63.37%	40.34%	-	93.15%
Exposures over 30 days past due	0.49%	-	0.44%	0.20%	0.33%	0.36%	-	2.98%
Total Stage 2	**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;

[1] In cases 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.

- 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[1] 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.

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, as already illustrated in the previous paragraph dedicated to the impacts of the Covid-19 pandemic, Banco BPM considered the government measure on state guarantees in the calculations of the ECL. 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 to the transaction was therefore eliminated on said share and a "Stato Italia" (Italian State) 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 2021, in line with that envisaged by internal processes, the risk parameters were updated to incorporate the matrix relating to the last available year (September 2020 - September 2021) in their estimates.

Estimating the PD parameter

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 conditioned, from a Forward-Looking perspective, by macroeconomic projections, through the use of forward-looking default rates at economic sector level, as well as through the application of the satellite models recently developed by the Group for those sectors for which moratoria were granted to an extent of less than 6%, as already specified at the beginning of this section, using the values of the macro pre-Covid variables (fourth quarter of 2019) as a starting point for the first forward-looking year. 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 AIRB 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;

[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%.

- the determination of future PiT matrices for the first three years following the reporting date, obtained on the basis of PiT matrices conditioned on the basis of macroeconomic scenarios, through the application of shocks resulting from forward-looking sector-based rates of default, integrated from June 2021 by a new version of internal PD satellite models applied to certain sectors, in which the moratoria had limited impact, and the effects resulting from the credit support measures (new loans covered by state guarantees);
- the latter are able to express the sensitivity of the PD levels with respect to changes in the main income statement items and consider the mitigation measures and, in particular, the various liquidity decrees issued by the Italian Government;
- 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.

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.

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 2021 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 losses it is necessary to take forward-looking information into account, conditioning the risk parameters according to the different macroeconomic scenarios in which it is expected to operate.
It is important to note that the Covid-19 pandemic had a particularly significant on macroeconomic variables, resulting in a decrease of Italian GDP in 2020 of around 9%. In 2021, this downturn was followed by an equally significant rebound, corresponding to around 6.5%. Faced with changes of this amplitude, which have rarely been seen in the past, the rate of default of the counterparties financed by the Bank was completely flat, and even recorded an overall downtrend against the pre-pandemic period. As satellite models were estimated in periods in which modest changes in macroeconomic variables had a notable impact on the credit risk of the borrowing counterparties, the mere application of satellite models fuelled with the cited changes in GDP, would have led to an

[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%.

irregular trend, insofar as there would have been significant increases in provisions in 2020, followed by equally significant releases in the subsequent periods of recovery (2021), that do not correspond to the real situation of the Bank's borrowers. On the other hand, neither a pandemic with such an enormous impact on Italy's economic activity, nor the introduction of such extensive government support measures in terms of duration and number of beneficiaries, had ever been experienced in the past.
With a view to overcoming these potential inconsistencies, in the forward-looking approach[1] applied to calculate ECL, in line with IFRS 9, sector-based satellite models were adopted, which enabled the highly diverse consequences of the pandemic on the different sectors of the Italian economy to be reflected, fed with the expected trajectories of the macro variables which actually linked the pre-pandemic levels (2019) to the post-pandemic ones (2022).
More specifically, note that from 30 June 2020, the Bank had utilised non-proprietary sector-based 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 on the different economic sectors.
In 2021, in addition to the usual update of the time series of risk parameters, a new proprietary sector-based satellite risk model was developed, which has partly replaced the sector-based satellite model acquired from third parties and used for the financial statement valuations of the previous year. In any event, the latter continued to be used to calculate the effects on the risk parameters of the business sectors that most benefited from the moratoria introduced by the Italian Government following the pandemic crisis[2].
Lastly, to calculate the ECL as at 31 December 2021, the macroeconomic scenarios and the relative probabilities of occurrence were updated, based on the analyses conducted by the Scenario Council[3], in line with the processes already in use last year. To this end, the macroeconomic forecasts supplied by the leading provider, available in October 2021, were considered with reference to three different scenarios: "baseline", "adverse" and "favourable".
In order to allocate probabilities of occurrence to the above-mentioned scenarios, those implicit in the construction of the same were used as a base of reference, as supplied by the provider. Considering the uncertainty as how the health crisis would develop, plus the potential negative impact of an energy crisis, we decided, on a discretionary basis, to increase the probability of occurrence of the "adverse" scenario from the 25% indicated by the provider to 30%, allocating the latter the 5% probability that the provider attributed to an additional "extreme" negative scenario, which the Bank did not consider at the time as retained extreme. The probabilities of occurrence of the three macroeconomic scenarios considered are indicated below:

- "Baseline": 50%;
- "Adverse": 30%;
- "Favourable": 20%.

Furthermore, in 2021, the governance model for the process to update the macroeconomic scenarios was defined in more detail. On the basis of this model, it is envisaged that the macroeconomic scenarios are to be updated at least every six months (for the closure at year-end and at the first half of each year). The update may be made more frequently (quarterly) if the monitoring of the forecasts relating to GDP with respect to those implied in the scenarios utilised, indicates that a specific threshold[4] has been surpassed.

[1] 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.)
[2] 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.
[3] 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.
[4] Threshold established as a change in GDP of over 0.5%.

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 2021-2024 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	2021 (*)	2022	2023	2024
adverse	GDP Italy	5.9	2.4	1.9	1.5
baseline	**GDP Italy**	**6.2**	**4.0**	**2.8**	**2.0**
favourable	GDP Italy	6.2	5.8	3.5	2.4
adverse	Unemployment rate	9.8	10.9	11.7	11.7
baseline	**Unemployment rate**	**9.8**	**10.2**	**10.0**	**9.0**
favourable	Unemployment rate	9.7	9.8	8.7	6.9
adverse	Index of residential property prices	1.4	0.6	0.4	0.6
baseline	**Index of residential property prices**	**1.4**	**1.5**	**1.9**	**1.9**
favourable	Index of residential property prices	1.4	1.9	2.8	3.0
adverse	Household consumption	4.8	2.8	1.5	1.4
baseline	**Household consumption**	**5.0**	**4.0**	**2.8**	**2.6**
favourable	Household consumption	5.0	5.7	4.2	3.3
adverse	Construction investments	21.4	4.5	3.7	1.3
baseline	**Construction investments**	**21.9**	**8.4**	**7.2**	**3.9**
favourable	Construction investments	21.9	11.9	11.3%	6.1
adverse	3-month Euribor	-0.55	-0.56	-0.39	-0.16
baseline	**3-month Euribor**	**-0.55**	**-0.55**	**-0.37**	**-0.10**
favourable	3-month Euribor	-0.51	-0.46	-0.19	0.13
adverse	ECB rate	0.00	0.00	0.00	0.25
baseline	**ECB rate**	**0.00**	**0.00**	**0.00**	**0.25**
favourable	ECB rate	0.00	0.00	0.12	0.50
adverse	Return on Italian 10-year government bonds	0.74	1.10	1.59	1.91
baseline	**Return on Italian 10-year government bonds**	**0.73**	**1.08**	**1.33**	**1.64**
favourable	Return on Italian 10-year government bonds	0.70	1.02	1.20	1.45
adverse	BTP/Bund Spread	1.12	1.24	1.43	1.43
baseline	**BTP/Bund Spread**	**1.08**	**1.03**	**0.97**	**0.94**
favourable	BTP/Bund Spread	1.05	0.80	0.46	0.36
adverse	Italian consumer price index	1.8	1.5	1.1	1.4
baseline	**Italian consumer price index**	**1.8**	**1.5**	**1.5**	**1.7**
favourable	Italian consumer price index	1.8	1.7	1.6	1.9
adverse	Imports	13	9	3	4
baseline	**Imports**	**13**	**12**	**7**	**6**
favourable	Imports	14	17	12	7
adverse	Exports	13	6	5	4
baseline	**Exports**	**13**	**9**	**6**	**3**
favourable	Exports	13	13	7	4
adverse	Public administration expenditure	1.4	0.4	0.0	-0.2
baseline	**Public administration expenditure**	**1.5**	**0.7**	**0.1**	**-0.2**
favourable	Public administration expenditure	1.4	0.5	0.1	-0.2

(*) the figures for 2021 encompass, for the fourth quarter, the last estimate available at the time, and cannot therefore be considered final.

Following the global recession in 2020, economic growth resumed at fairly different paces between the various geographical areas, with the industrialised countries and China, albeit just initially, showing the fastest growth pace. This trend evolved after the summer due to the new wave of cases and, from the end of November, by the faster spread of the Omicron variant.

The "Baseline" scenario envisages that partial restrictions will still impact sequential growth in the first and last months of 2021, essentially penalising the service sectors subject to social distancing rules, while the manufacturing and construction sectors will be little affected by the fourth wave. The 6.2% increase is largely due to the central quarters of the year, with sequential growth of 2.7% and 2.6% respectively.

2021 will benefit significantly from the extension of the support measures for income and credit, which will continue to distort, and in some cases, invert, the trends of several indicators such as: bank loans, bad loans and unemployment. The availability of vaccines, immunisation process timing and the emergence of new variants are influencing the evolution of the scenario, which projects the following:

- Italian GDP showed strong recovery in both the second and third quarters, but slowed down in the fourth due to the new wave of cases, although this did not prevent an average growth of +6.2% for the year. The rebound of economic activity will enable the pre-crisis levels to be recovered by the first half of 2022;
- the unemployment rate will rise to 10.2% in 2022, then fall to 10% after 2023;
- inflation will remain under 2%, confirming policy interest rates which will become positive before 2025;
- the return on Italian government bonds will rise in 2022, up to 1.6% in 2024, with a modest BTP Bund spread on average, around 100 bps, also thanks to the initial action of the ECB.

As regards the "Adverse" scenario, a slower recovery from the pandemic is envisaged, due to the worsening of the epidemiological situation in Autumn/Winter with the introduction of several limited restrictions. The increase in the number of cases and the consequent restrictions would lead to a slight slowdown of the economy, which would continue for a fair part of next year.
This is associated with a problematic implementation of the NRRP, which would translate into a period of relatively moderate economic growth from 2022, even in the absence of further periods of crisis. Italy's GDP would be 2 percentage points lower from 2023, the year in which the Italian economy recovers pre-Covid levels of activity.
This new phase would see the Italian economy aligned with that of the EU, although penalised by an unemployment rate of close to 12%, which slows down consumption, while a considerably lower level of confidence will significantly reduce investments.
More specifically, the following is expected:

- Italian GDP showing a more modest recovery in 2022 of +2.4%, and which does not surpass 2% in the following years, despite the tax incentives guaranteed by the NRRP, a trend that sees Italy aligned with the EU; growth of global GDP -2.6% lower with respect to the baseline scenario at year-end;
- substantial increase in the rate of unemployment as early as 2022 (10.9%), but above all from 2023, stabilising at 11.7% in the following years;
- spending trend for private investments practically halved from 2022 (both machinery and construction) also due to the termination of tax incentives;
- return on 10-year Italian government bonds which rises steadily, first due to a wider BTP Bund spread, then due to the effect of the recovery of the returns on the 10-year German bond. Returns surpass 1.9% in 2024, due to a disappointing growth which diverges and slows down the improvement of the fundamentals of public debt post-Covid, after the same has reached 156% of GDP in 2020.

Lastly the "Favourable" scenario assumes a faster end to the pandemic crisis with substantial growth in Italy and Europe already in 2021, due to a strong recovery of consumption and investment, which doesn't meet any new obstacles at just one year from the start of the pandemic. Specifically:

- GDP up by 5.8% in 2022, which stayed well above the country's historic levels even in the following years, and returning below 3% only in 2024;
- unemployment rate down as early as 2023 at 8.7%, and which improves significantly in the following two years, reaching levels that have not been recorded recently in Italy;
- return of Italian 10-year government bonds, which rises steadily only due to the effect of the normalisation of market interest rates (Bund with positive returns from 2022), in the presence of a BTP Bund spread that is constantly decreasing, and returns to pre-sovereign crisis levels. The rapid improvement of the fundamentals is due to economic growth rates that improve the public debt to GDP ratio.

Sensitivity analysis of expected losses

The assumptions underlying the sensitivity analysis

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 stated in the paragraph "Significant accounting policies and uncertainties regarding the use of estimates in the preparation of consolidated financial statements, contained in "Part A – Accounting policies", the determination of expected losses on performing loans effectively entails the use of significant judgements, with specific reference to the models used to measure losses and the relative risk parameters, the triggers deemed expressive of significant loan impairment, and the selection of macroeconomic scenarios and the assignment to the latter of the relative probabilities of occurrence.
In this regard, the inclusion of forward-looking factors 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 the expected losses resulting from the selection of different macroeconomic scenarios, since the 2020 financial statements, the Bank has provided a sensitivity analysis on the expected losses of performing loans. For the 2020 financial statements, the analyses had been developed - keeping the probability assigned to the baseline scenario unchanged (60%) - based on the assignment of a 5% higher probability to the "adverse" and "favourable" scenarios, with respect to the assumed assignment of an equal probability to both scenarios considered for the preparation of the financial statements (20%).
This approach was revised in 2021, also in order to implement the recommendation contained in the report published by the ESMA on 15 December 2021 on the effective application of the requirements in terms of disclosure envisaged by IFRS 7 and IFRS 9. In particular, for the 2021 financial statements, the sensitivity analyses were conducted by allocating a weighting of 100% to each single macroeconomic scenario ("baseline", "adverse", "favourable") with respect to the financial statement results resulting from the application of the multi-scenario model, as illustrated below.
In this regard, note that the sensitivity analyses conducted for the 2020 financial statements are not reported insofar as they are not comparable, because they were drawn up on the basis of different assumption, as illustrated above.

<u>Quantitative results of sensitivity analyses of ECL</u>

Given the high uncertainty characterising the economic-financial context in question, and transposing the recommendations provided by the ESMA in a letter dated 29 October 2021[1], expected losses relating to performing exposures underwent sensitivity analysis with a view to analysing their variability with respect to different macroeconomic scenarios that condition the risk parameters in the calculation model. The selection of a multi-factor sensitivity, obtained by varying more than one parameter simultaneously, 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 above-mentioned analyses were conducted to represent the impacts, both in terms of ECL and of stage allocation, following the adoption of a single macroeconomic scenario 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% and, effectively, 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.

[1] Public Statement by ESMA entitled: "European common enforcement priorities for 2021 annual financial reports" (ESMA32-63-1186).

The results of the sensitivity analyses of expected losses conducted on the portfolio of loans to customers, which represent over 90% of the expected losses recognised in the financial statements on performing exposures. Said results were obtained by comparing the expected losses of the financial statements, calculated on the basis of a multi-scenario approach, with those that would have been recognised if each scenario was adopted with a 100% probability of occurrence, with or without impacts on the allocation between credit quality stages. It should be clarified that the above impacts were calculated using the models implemented in ECL calculation procedures as reference, therefore not including the interventions on single specific positions and the post-model adjustments/management overlays previously illustrated.

Figures as at 31 December 2021 *(thousands of euro)*	Weighted scenario	Simulation of alternative scenarios with the same stage allocation			Simulation of alternative scenarios with an impact on stage allocation		
	Financial statement balances	Adverse	Baseline	Favourable	Adverse	Baseline	Favourable
GROSS LOANS	**106,577,184**	**106,577,184**	**106,577,184**	**106,577,184**	**106,577,184**	**106,577,184**	**106,577,184**
Stage **1** - Reverse repurchase agreements	3,658,922	3,658,922	3,658,922	3,658,922	3,658,922	3,658,922	3,658,922
Stage **1** - Other loans	91,228,746	91,228,746	91,228,746	91,228,746	90,071,475	91,504,663	92,074,383
Stage **2** *(*)*	11,689,516	11,689,516	11,689,516	11,689,516	12,846,787	11,413,599	10,843,879
TOTAL VALUE ADJUSTMENTS	**(454,331)**	**(500,786)**	**(444,333)**	**(404,787)**	**(504,781)**	**(444,137)**	**(404,139)**
Stage **1** - Reverse repurchase agreements	-	-	-	-	-	-	-
Stage **1** - Other loans	(124,342)	(131,668)	(122,775)	(117,384)	(128,924)	(123,045)	(118,643)
Stage **2** *(*)*	(329,989)	(369,118)	(321,558)	(287,403)	(375,858)	(321,092)	(285,496)
PERFORMING LOANS AT AMORTISED COST	**106,122,853**	**106,076,398**	**106,132,851**	**106,172,397**	**106,072,403**	**106,133,047**	**106,173,045**
% Breakdown	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Stage **1** - Reverse repurchase agreements	3.43%	3.43%	3.43%	3.43%	3.43%	3.43%	3.43%
Stage **1** - Other loans	85.60%	85.60%	85.60%	85.60%	84.51%	85.86%	86.39%
Stage **2** *(*)*	10.97%	10.97%	10.97%	10.97%	12.05%	10.71%	10.17%
% Coverage	**0.43%**	**0.47%**	**0.42%**	**0.38%**	**0.47%**	**0.42%**	**0.38%**
Stage **1** - Reverse repurchase agreements	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Stage **1** - Other loans	0.14%	0.14%	0.13%	0.13%	0.14%	0.13%	0.13%
Stage **2** *(*)*	2.82%	3.16%	2.75%	2.46%	2.93%	2.81%	2.63%
Absolute change adjustments of alternative scenarios vs. weighted scenario		**(46,455)**	**9,998**	**49,544**	**(50,450)**	**10,194**	**50,192**
Stage **1** - Other loans		(7,326)	1,567	6,958	(4,582)	1,297	5,699
Stage **2** *(*)*		(39,129)	8,431	42,586	(45,869)	8,897	44,493
% change adjustments of alternative scenarios vs. weighted scenario		**10.22%**	**(2.20%)**	**(10.90%)**	**11.10%**	**(2.24%)**	**(11.05%)**
Stage **1** - Other loans		5.89%	(1.26%)	(5.60%)	3.68%	(1.04%)	(4.58%)
Stage **2** *(*)*		11.86%	(2.56%)	(12.91%)	13.90%	(2.70%)	(13.48%)

(*) including acquired or originated impaired loans

The main results of the above-cited sensitivity analyses are summarised below:

- assignment of a 100% probability of occurrence to the adverse scenario: in this case, and with the same stage allocation, the ECL would report an increase of +46.5 million with respect to that calculated by adopting the multi-scenario approach (+10.22% in percentage terms). If the impact in terms of a different stage allocation is also considered, the amount of the ECL would be 50.5 million higher than that calculated adopting the multi-scenario approach (+11.10% in percentage terms), against an increase in the percentage of exposures classified as Stage 2 of +1.08%. In this case, the average percentage coverage of performing credit exposures would increase by 4 bps;
- assignment of a 100% probability of occurrence to the baseline scenario: in this case, and with the same stage allocation, the amount of ECL would be -10 million lower with respect to the amount of ECL calculated by adopting the multi-scenario approach (-2.20% in percentage terms). If the impact in terms of a different stage allocation is also considered, the amount of the ECL would be -2.24% lower against a slight fall in the percentage of exposures classified as Stage 2 (0.26% in percentage terms). In this case, the average percentage coverage of performing credit exposures would decrease by -1 bp;
- assignment of a 100% probability of occurrence to the favourable scenario: in this case, and with the same stage allocation, the amount of ECL would be -49.5 million lower with respect to the amount of ECL calculated by adopting the multi-scenario approach (-10.90% in percentage terms). If the impact in terms of a different stage allocation is also considered, the amount of the ECL would be -50.2 million lower (-11.05% in percentage terms), against a fall in the percentage of exposures classified as Stage 2 of -0.80%. In this case, the average percentage coverage of performing credit exposures would decrease by -5 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" in Part "A.2 - Key financial statement items". 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 "Part A – Accounting policies", 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 "lump-sum" 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 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, 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 2019 an in-depth reorganisation of the management of the Group's non-performing loans was completed, which led to 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. Thus, as a result of that agreement, the management of bad loans is now mainly conducted by a leading player in the sector, while the management of the remaining non-performing exposures is handled by specialised internal personnel.
Also, in 2019, and as a result of the transfer of the business segment mentioned above, management of all the non-performing exposures was unified within the structure 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 exception of exposures under a certain threshold, to specialist managers, who may work, depending on the importance of the exposure, for the CLO or for the Loans offices of the Network (Divisions and Business Areas). 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, as well as the related economic results;
- management of positions 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 or by managers of Release S.p.A., 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. During 2019 the Bank raised that threshold 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 losses obtained in this way are periodically reviewed and continuously monitored.
The process described above is not applied to bad loans with a total exposure equal to or less than the materiality threshold of 1 million euro, for which the automatic valuation model was used, aimed at replicating the methodology applied by managers above the materiality threshold. That model, developed and maintained by the Credit Governance structure, is subject to validation by the Risk Functions.

With regard instead to Past Due and Unlikely to Pay (UTP) positions, the credit assessment to determine the amount of expected losses considers different methods depending on the status and size of the exposure:
- for Past Due positions, irrespective of their amount, as well as for UTP positions within pre-determined amount limits (equivalent to those applied for bad loans), the collective valuation model is applied;
- for UTP positions that exceed the above threshold, the loss forecasts are evaluated analytically by the manager using a similar process to the one described above for the non-performing portfolio.

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

Strategy for disposal of non-performing credit exposures

The strategy to manage non-performing exposures - 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 respective Boards 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 losses, as illustrated in more detail in the paragraph entitled "Methods for determining impairment losses on IFRS 9 Financial Instruments" in "Part A - Accounting policies" of these Notes.
With regard to the derisking exercise undertaken by the Group in 2021, and in particular the objectives of the large-scale disposal of non-performing exposures outstanding as at 31 December 2021, please refer to that illustrated in "Derisking activities" contained in the significant events during the year in the Group 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. 2nd level controls are also implemented, through the CLO structures of Monitoring and Control and Credit Governance;
- second-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. Since December 2019, following the aforementioned change to the Regulations, the structure has provided opinions on the following Most Significant Transactions (MST) in the credit area: proposals to i) change provisions; ii) assign forbearance measures, and iii) 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 "Guidance to 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 the content of "Part A - Accounting policies" 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 part "A.2 - Key financial statement items" and in the Introduction to this section.

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
2021	2,222,384	791,004	3,013,387
2020	435,583	418,119	853,702
2019	230,886	568,149	799,034
2018	123,271	501,669	624,939
2017	100,481	236,919	337,400
2016	72,657	234,351	307,008
2015	16,589	215,769	232,359
2014	26,504	131,287	157,791
2013	5,741	321,681	327,423
2012	1,326	12,730	14,056
2011	1,051	1,455	2,506
2010	1,746	12,049	13,795
previous years	6,961	4,342	11,304
Total	**3,245,180**	**3,449,524**	**6,694,704**

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	2,297,955	1,991,460	4,289,414
2	523,655	663,564	1,187,218
>2	423,571	794,501	1,218,072
Total	**3,245,180**	**3,449,524**	**6,694,704**

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	306,819	23,026	1,823	130,819	93,544	15,094	32,612	89,032	1,965,565	301	2,451	80,639
2. Financial assets measured at fair value through other comprehensive income	-	-	-	-	-	-	-	-	-	-	-	-
3. Financial assets held for sale	3	15	78	94	128	2,334	10	9	5,701	-	-	-
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**
Total 31/12/2020 (*)	**893,683**	**189,676**	**63,388**	**150,867**	**226,515**	**248,858**	**41,852**	**119,125**	**3,051,361**	**199**	**4,776**	**226,552**

(*) The figures relating to the previous year have been restated to take into account the amendments introduced by the 7th update of Circular no. 262 of the Bank of Italy.

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						Stage 3 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	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 (*)	**383**	**159,899**	**2,085**	**-**	**-**	**162,367**	**2**	**313,199**	**673**	**-**	**-**	**313,874**	**93**	**3,906,461**	**-**	**14,029**	**3,885,209**	**37,053**
Increases in financial assets acquired or originated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Derecognitions other than write-offs	-	(147)	(358)	-	-	(505)	-	(53)	(231)	-	-	(284)	-	(1,089,138)	-	(7,224)	(1,096,362)	-
Net credit impairment losses/recoveries	(362)	(30,148)	1,018	772	-	(28,720)	(2)	26,097	(60)	124	-	26,159	(93)	508,300	-	-	508,207	-
Contractual modification without derecognition	-	11	-	-	-	11	-	1,637	-	-	-	1,637	-	6,873	-	-	6,873	-
Changes in estimation methodology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Write-offs not recognised directly in the income statement	-	(1,046)	-	-	-	(1,046)	-	(15,190)	-	-	-	(15,190)	-	(488,111)	-	-	(488,111)	-
Other changes	-	(907)	-	-	-	(907)	-	(3,411)	-	-	-	(1,637)	-	51,838	-	(4,987)	45,169	-
Total value adjustments - closing balance	**21**	**127,662**	**2,745**	**772**	**-**	**131,200**	**-**	**322,279**	**382**	**124**	**-**	**324,559**	**-**	**2,896,223**	**-**	**1,818**	**2,860,985**	**37,053**
Recoveries from collections on financial assets subject to write-off	-	-	-	-	-	-	-	-	-	-	-	-	-	13,386	-	-	13,386	-
Write-offs recorded directly in the income statement	-	-	-	-	-	-	-	(4,349)	-	-	-	(4,349)	-	(61,627)	-	-	(61,627)	-

(*) The figures relating to the previous year have been restated to take into account the amendments introduced by the 7th update of Circular no. 262 of the Bank of Italy.

Causes/risk stages	Total value adjustments - Acquired or originated impaired financial assets					Total provisions for commitments to disburse funds and financial guarantees given				Tot.
	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 or originated impaired	
Total value adjustments - opening balance (*)	**417,726**	**-**	**-**	**415,953**	**1,773**	**23,406**	**8,021**	**24,743**	**44**	**4,870,764**
Increases in financial assets acquired or originated	X	X	X	X	X	-	-	-	-	**-**
Derecognitions other than write-offs	(144,482)	-	-	(144,482)	-	-	-	-	-	**(1,241,633)**
Net credit impairment losses/recoveries	48,003	-	-	39,825	8,178	(9,842)	(475)	(3,772)	270	**539,830**
Contractual modification without derecognition	-	-	-	-	-	-	-	-	-	**8,521**
Changes in estimation methodology	-	-	-	-	-	-	-	-	-	**-**
Write-offs not recognised directly in the income statement	(40,389)	-	-	-	(40,389)	-	-	-	-	**(544,736)**
Other changes	(20,806)	-	-	(20,806)	-	-	-	-	-	**21,727**
Total value adjustments - closing balance	**260,052**	**-**	**-**	**290,490**	**(30,438)**	**13,564**	**7,546**	**20,971**	**314**	**3,654,473**
Recoveries from collections on financial assets subject to write-off	-	-	-	-	-	-	-	-	-	**13,386**
Write-offs recorded directly in the income statement	(1,091)	-	-	-	-	-	-	-	-	**(67,067)**

(*) The figures relating to the previous year have been restated to take into account the amendments introduced by the 7th update of Circular no. 262 of the Bank of Italy.

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 exposure/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	6,303,562	1,862,573	697,257	94,638	178,624	22,574
2. Financial assets measured at fair value through other comprehensive income	5,221	30,757	-	-	-	-
3. Financial assets held for sale	1,855	910	4,107	54	1,828	252
4. Commitments to disburse funds and financial guarantees given	1,699,593	240,435	23,077	3,639	38,876	1,708
Total 31/12/2021	**8,010,231**	**2,134,675**	**724,441**	**98,331**	**219,328**	**24,534**
Total 31/12/2020 (*)	**3,707,130**	**1,988,257**	**600,915**	**207,512**	**424,423**	**39,782**

(*) The figures relating to the previous year have been restated to take into account the amendments introduced by the 7th update of Circular no. 262 of the Bank of Italy.

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

Portfolio/quality	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
A. Loans measured at amortised cost	**2,214,210**	**246,405**	**164,007**	**895**	**49,073**	**192**
A.1 subject to forbearance measures compliant with GL	18,343	2,712	1,435	408	299	-
A.2 subject to current moratorium measures no longer compliant with GL and not assessed as forborne	1,419,098	45,913	138,369	23	25,368	-
A.3 subject to other forbearance measures	15,641	-	2,965	259	489	-
A.4 new loans	761,128	197,780	21,238	205	22,917	192
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 31/12/2021	**2,214,210**	**246,405**	**164,007**	**895**	**49,073**	**192**
Total 31/12/2020	**869,242**	**333,091**	**27,662**	**7,477**	**25,144**	**474**

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	**28,220,078**	**28,207,322**	**12,756**	**-**	**-**	**(17)**	**(17)**	**-**	**-**	**-**	**28,220,061**	**-**
a) Non-performing	-	X	-	-	-	-	X	-	-	-	-	-
b) Performing	28,220,078	28,207,322	12,756	X	-	(17)	(17)	-	X	-	28,220,061	-
A.2 OTHER	**14,625,195**	**14,222,741**	**45,745**	**-**	**-**	**(2,590)**	**(2,527)**	**(64)**	**-**	**-**	**14,622,605**	**-**
a) Bad loans	-	X	-	-	-	-	X	-	-	-	-	-
- of which: forborne exposures	-	X	-	-	-	-	X	-	-	-	-	-
b) Unlikely to pay	-	X	-	-	-	-	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	14,625,195	14,222,741	45,745	X	-	(2,590)	(2,527)	(64)	X	-	14,622,605	-
- of which: forborne exposures	-	-	-	X	-	-	-	-	X	-	-	-
TOTAL (A)	**42,845,273**	**42,430,063**	**58,501**	**-**	**-**	**(2,607)**	**(2,544)**	**(64)**	**-**	**-**	**42,842,666**	**-**
B. OFF-BALANCE SHEET CREDIT EXPOSURES												
a) Non-performing	-	X	-	-	-	-	X	-	-	-	-	-
b) Performing	5,256,110	1,885,546	20,750	X	-	(326)	(236)	(1)	X	-	5,255,784	-
TOTAL (B)	**5,256,110**	**1,885,546**	**20,750**	**-**	**-**	**(326)**	**(236)**	**(1)**	**-**	**-**	**5,255,784**	**-**
TOTAL (A+B)	**48,101,383**	**44,315,609**	**79,251**	**-**	**-**	**(2,933)**	**(2,780)**	**(65)**	**-**	**-**	**48,098,450**	**-**

(*) 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	2,196,291	X	-	2,076,358	102,250	(1,289,617)	X	-	(1,204,744)	(71,974)	906,674	427,545
- of which: forborne exposures	533,675	X	-	512,547	21,023	(298,817)	X	-	(281,553)	(17,237)	234,858	36,963
b) Unlikely to pay	4,353,819	X	-	3,817,641	345,099	(1,934,756)	X	-	(1,670,046)	(178,103)	2,419,063	-
- of which: forborne exposures	2,904,491	X	-	2,477,207	324,517	(1,255,384)	X	-	(1,060,387)	(163,297)	1,649,107	-
c) Non-performing past-due exposures	65,890	X	-	65,731	96	(15,669)	X	-	(15,642)	(24)	50,221	-
- of which: forborne exposures	11,358	X	-	11,282	76	(1,613)	X	-	(1,596)	(17)	9,745	-
d) Performing past-due exposures	609,404	332,408	273,484	X	413	(32,132)	(644)	(31,471)	X	(17)	577,272	-
- of which: forborne exposures	64,803	2	64,667	X	134	(3,035)	-	(3,030)	X	(4)	61,768	-
e) Other performing exposures	134,582,538	121,693,443	11,534,997	X	156,515	(429,188)	(128,009)	(291,247)	X	(9,934)	134,153,350	-
- of which: forborne exposures	3,180,377	1,032	3,110,716	X	47,849	(102,676)	(5)	(101,210)	X	(1,461)	3,077,701	-
TOTAL (A)	**141,807,942**	**122,025,851**	**11,808,481**	**5,959,730**	**604,373**	**(3,701,362)**	**(128,653)**	**(322,718)**	**(2,890,432)**	**(260,052)**	**138,106,580**	**427,545**
B. OFF-BALANCE SHEET CREDIT EXPOSURES												
a) Non-performing	812,157	X	-	540,530	6,064	(87,194)	X	-	(20,971)	(313)	724,963	-
b) Performing	60,457,390	39,951,589	2,857,607	X	3,612	(43,621)	(13,327)	(7,545)	X	(1)	60,413,769	-
TOTAL (B)	**61,269,547**	**39,951,589**	**2,857,607**	**540,530**	**9,676**	**(130,815)**	**(13,327)**	**(7,545)**	**(20,971)**	**(314)**	**61,138,732**	**-**
TOTAL (A+B)	**203,077,489**	**161,977,440**	**14,666,088**	**6,500,260**	**614,049**	**(3,832,177)**	**(141,980)**	**(330,263)**	**(2,911,403)**	**(260,366)**	**199,245,312**	**427,545**

(*) 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 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. BAD LOANS	**22,486**	**-**	**-**	**22,486**	**-**	**(8,893)**	**-**	**-**	**(8,893)**	**-**	**13,593**	**-**
b) Subject to forbearance measures compliant with GL	-	-	-	-	-	-	-	-	-	-	-	-
b) Subject to moratorium measures no longer compliant with GL and not subject to forbearance measures	6,339	-	-	6,339	-	(3,841)	-	-	(3,841)	-	2,498	-
b) Subject to other forbearance measures	1,830	-	-	1,830	-	(579)	-	-	(579)	-	1,251	-
d) New loans	14,317	-	-	14,317	-	(4,473)	-	-	(4,473)	-	9,844	-
B. UNLIKELY TO PAY LOANS	**289,633**	**-**	**-**	**277,091**	**11,840**	**(85,165)**	**-**	**-**	**(81,776)**	**(3,021)**	**204,468**	**-**
b) Subject to forbearance measures compliant with GL	4,881	-	-	4,520	360	(1,160)	-	-	(1,100)	(60)	3,721	-
b) Subject to moratorium measures no longer compliant with GL and not subject to forbearance measures	216,602	-	-	204,422	11,480	(66,705)	-	-	(63,375)	(2,961)	149,897	-
b) Subject to other forbearance measures	15,470	-	-	15,470	-	(4,504)	-	-	(4,504)	-	10,966	-
d) New loans	52,680	-	-	52,679	-	(12,796)	-	-	(12,797)	-	39,884	-
C. NON-PERFORMING PAST-DUE LOANS	**4,432**	**-**	**-**	**4,432**	**-**	**(857)**	**-**	**-**	**(857)**	**-**	**3,575**	**-**
b) Subject to forbearance measures compliant with GL	89	-	-	89	-	(5)	-	-	(5)	-	84	-
b) Subject to moratorium measures no longer compliant with GL and not subject to forbearance measures	1,188	-	-	1,188	-	(391)	-	-	(391)	-	797	-
b) Subject to other forbearance measures	227	-	-	227	-	(40)	-	-	(40)	-	187	-
d) New loans	2,928	-	-	2,928	-	(421)	-	-	(421)	-	2,507	-
D. OTHER PERFORMING PAST-DUE LOANS	**103,334**	**59,550**	**43,784**	**-**	**-**	**(1,258)**	**(80)**	**(1,179)**	**-**	**-**	**102,076**	**-**
b) Subject to forbearance measures compliant with GL	320	139	181	-	-	(7)	-	(7)	-	-	313	-
b) Subject to moratorium measures no longer compliant with GL and not subject to forbearance measures	32,737	15,015	17,722	-	-	(926)	(20)	(907)	-	-	31,811	-
b) Subject to other forbearance measures	3,233	-	3,233	-	-	(82)	-	(82)	-	-	3,151	-
d) New loans	67,044	44,396	22,648	-	-	(243)	(60)	(183)	-	-	66,801	-
E. OTHER PERFORMING LOANS	**20,000,768**	**16,211,587**	**3,782,688**	**-**	**5,923**	**(82,375)**	**(7,235)**	**(74,790)**	**-**	**(349)**	**19,918,393**	**-**
b) Subject to forbearance measures compliant with GL	82,783	52,341	30,442	-	-	(827)	(115)	(711)	-	-	81,956	-
b) Subject to moratorium measures no longer compliant with GL and not subject to forbearance measures	3,299,650	1,105,891	2,187,295	-	5,893	(69,819)	(1,965)	(67,505)	-	(349)	3,229,831	-
b) Subject to other forbearance measures	111,064	-	111,065	-	-	(877)	-	(877)	-	-	110,187	-
d) New loans	16,507,271	15,053,355	1,453,886	-	30	(10,852)	(5,155)	(5,697)	-	-	16,496,419	-
TOTAL (A+B+C+D+E)	**20,420,653**	**16,271,137**	**3,826,472**	**304,009**	**17,763**	**(178,548)**	**(7,315)**	**(75,969)**	**(91,526)**	**(3,370)**	**20,242,105**	**-**

(*) 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.

The loans affected by these support measures totalled 20,420.7 million (22,704.9 million as at 31 December 2020), in terms of gross exposure, and entirely relate to the Parent Company.
More specifically, these loans are classified for 20,419.4 million in the accounting portfolio of "Financial assets at amortised cost", as shown in table "4.4a Loans at amortised cost subject to Covid-19 support measures: gross value and total value adjustments" contained in Part B of these Notes. The residual amount of 1.3 million refers to exposures subject to moratoria classified in the accounting portfolio "Financial assets mandatorily measured at fair value through profit and loss".
For an illustration of the content of the different types of moratoria envisaged in the table, along with the moratoria granted by the Group, and of the relative credit quality of those still active, please refer to the content of the paragraph entitled "Risks, uncertainties and impacts of the Covid-19 pandemic" contained in "Part A - Accounting policies" of these Notes. In this regard, note that the moratoria represented in sub-items a) b), amounting in total to 3,644.6 million (of which 3,643.3 million relate to the portfolio of assets at amortised cost) were fully expired as at 1 January 2022.
For further details on the types of measures granted by the Group to support its customers, please refer to the section dedicated to the significant events during the year in the Report on operations. 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	**116**	**-**	**-**
- of which: exposures transferred but not derecognised	-	-	-
B. Increases	**-**	**-**	**-**
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	-	-	-
C. Decreases	**(116)**	**-**	**-**
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	(116)	-	-
D. Gross exposure: closing balance	**-**	**-**	**-**
- 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 2021, 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	**3,602,612**	**5,217,616**	**62,278**
- of which: exposures transferred but not derecognised	29,104	11,581	1,205
B. Increases	**596,846**	**1,208,557**	**86,895**
B.1 entries from performing exposures	75,551	873,774	75,416
B.2 entries from acquired or originated impaired financial assets	-	-	-
B.3 transfers from other categories of non-performing loans	471,174	45,772	1,241
B.4 contractual modification without derecognition	-	855	42
B.5 other increases	50,121	288,156	10,196
C. Decreases	**(2,003,167)**	**(2,072,354)**	**(83,283)**
C.1 exits to performing exposures	(4,087)	(161,272)	(8,571)
C.2 write-offs	(177,470)	(414,662)	(220)
C.3 collections	(150,184)	(554,069)	(18,765)
C.4 gains on disposal	(396,551)	(152,849)	-
C.5 losses on disposal	(401,221)	(57,980)	-
C.6 transfers to other categories of non-performing loans	(328)	(463,400)	(54,459)
C.7 contractual modification without derecognition	-	(7,760)	(9)
C.8 other decreases	(873,326)	(260,362)	(1,259)
D. Gross exposure: closing balance	**2,196,291**	**4,353,819**	**65,890**
- of which: exposures transferred but not derecognised	18,968	9,141	622

With reference to transactions for the sale of non-performing loans, the item "other decreases" includes the gross amount of the exposures subject to transfer exceeding the sum of the realizable value and any loss on assignment.

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	**4,305,689**	**1,805,566**
- of which: exposures transferred but not derecognised	10,184	10,651
B. Increases	**951,414**	**2,247,987**
B.1 entries from non-forborne performing exposures	307,727	2,118,049
B.2 entries from forborne performing exposures	289,639	X
B.3 entries from forborne non-performing exposures	X	126,884
B.4 entries from non-forborne non-performing exposures	696	-
B.4 other increases	353,352	3,054
C. Decreases	**(1,807,579)**	**(808,373)**
C.1 exits to non-forborne performing exposures	X	(439,954)
C.2 exits to forborne performing exposures	(126,884)	X
C.3 exits to forborne non-performing exposures	X	(289,639)
C.4 write-offs	(362,233)	-
C.5 collections	(431,214)	(78,780)
C.6 gains on disposal	(189,027)	-
C.7 losses on disposal	(196,136)	-
C.8 other decreases	(502,085)	-
D. Gross exposure: closing balance	**3,449,524**	**3,245,180**
- of which: exposures transferred but not derecognised	7,307	6,666

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	**93**	**-**	**-**	**-**	**-**	**-**
- of which: exposures transferred but not derecognised	-	-	-	-	-	-
B. Increases	**-**	**-**	**-**	**-**	**-**	**-**
B.1 value adjustments to acquired or originated impaired 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	-	-	-	-	-	-
B.4 other increases	**(93)**	**-**	**-**	**-**	**-**	**-**
C.1 recoveries from valuation	(93)	-	-	-	-	-
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	**-**	**-**	**-**	**-**	**-**	**-**
- 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	**2,131,994**	**526,505**	**2,313,037**	**1,453,690**	**16,386**	**1,678**
- of which: exposures transferred but not derecognised	15,555	845	1,371	703	144	6
B. Increases	**907,941**	**360,355**	**924,071**	**679,589**	**15,752**	**3,847**
B.1 value adjustments from acquired or originated impaired financial assets	-	X	-	X	-	X
B.2 other value adjustments	304,217	101,086	829,096	570,544	9,824	1,343
B.3 losses on disposal	401,221	165,303	57,980	30,833	-	-
B.4 transfers from other categories of non-performing exposures	180,669	73,110	9,584	3,041	5,320	295
B.5 contractual modification without derecognition	-	-	7,760	7,760	9	9
B.6 other increases	21,834	20,856	19,651	67,411	599	2,200
C. Decreases	**(1,750,318)**	**(588,043)**	**(1,302,352)**	**(877,895)**	**(16,469)**	**(3,912)**
C.1 recoveries from valuation	(56,286)	(20,058)	(335,003)	(230,035)	(4,570)	(503)
C.2 recoveries from collection	(47,712)	(3,696)	(88,958)	(74,326)	(398)	(53)
C.3 gains on disposal	(178,151)	(58,212)	(21,335)	(4,038)	-	-
C.4 write-offs	(177,470)	(13,698)	(414,662)	(348,535)	(220)	-
C.5 transfers to other categories of non-performing exposures	(3,810)	-	(180,524)	(73,132)	(11,239)	(3,314)
C.6 contractual modification without derecognition	-	-	(855)	(855)	(42)	(42)
C.7 other decreases	(1,286,889)	(492,379)	(261,015)	(146,974)	-	-
D. Total value adjustments - closing 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

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						Unrated	Total
	AAA/AA-	A+/A-	BBB+/BBB-	BB+/BB-	B+/B-	below B-		
A. Financial assets at amortised cost	**5,350,202**	**4,843,509**	**13,322,185**	**2,980,077**	**620,857**	**361,288**	**116,735,586**	**144,213,704**
- Stage 1	5,350,202	4,787,221	13,171,600	2,386,211	490,798	182,696	99,493,224	125,861,952
- Stage 2	-	56,288	150,585	573,776	128,989	71,513	10,802,528	11,783,679
- Stage 3	-	-	-	20,090	1,070	44,081	5,898,459	5,963,700
- Acquired or originated impaired	-	-	-	-	-	62,998	541,375	604,373
B. Financial assets measured at fair value through other comprehensive income	**4,335,694**	**2,670,667**	**2,658,270**	**102,366**	**118,314**	**-**	**453,539**	**10,338,850**
- Stage 1	4,332,454	2,641,065	2,628,210	102,366	118,314	-	450,542	10,272,951
- Stage 2	3,240	29,602	30,060	-	-	-	2,997	65,899
- Stage 3	-	-	-	-	-	-	-	-
- Acquired or originated impaired	-	-	-	-	-	-	-	-
C. Financial assets held for sale	**-**	**-**	**-**	**-**	**-**	**-**	**126,657**	**126,657**
- Stage 1	-	-	-	-	-	-	113,692	113,692
- Stage 2	-	-	-	-	-	-	4,652	4,652
- Stage 3	-	-	-	-	-	-	8,313	8,313
- Acquired or originated impaired	-	-	-	-	-	-	-	-
Total (A+B+C)	**9,685,896**	**7,514,176**	**15,980,455**	**3,082,443**	**739,171**	**361,288**	**117,315,782**	**154,679,211**
D. Commitments to disburse funds and financial guarantees given	**110,363**	**1,097,968**	**2,847,561**	**1,855,676**	**194,696**	**13,719**	**39,145,715**	**45,265,698**
- Stage 1	110,363	1,087,385	2,717,791	1,644,789	184,844	5,629	36,086,332	41,837,133
- Stage 2	-	10,583	129,770	210,887	6,881	7,950	2,512,287	2,878,358
- Stage 3	-	-	-	-	2,971	140	537,420	540,531
- Acquired or originated impaired	-	-	-	-	-	-	9,676	9,676
Total (D)	**110,363**	**1,097,968**	**2,847,561**	**1,855,676**	**194,696**	**13,719**	**39,145,715**	**45,265,698**
Total (A+B+C+D)	**9,796,259**	**8,612,144**	**18,828,016**	**4,938,119**	**933,867**	**375,007**	**156,461,497**	**199,944,909**

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. It should be noted that, where there are two assessments of the same customer, the most prudent one is adopted; in the case 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) 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	**623**	**188,827**	**743,466**	**1,230,497**	**125,530**	**725**	**-**	**-**	**10,510,598**	**12,800,266**
- Stage 1	623	188,827	743,466	1,205,520	125,273	725	-	-	10,510,399	12,774,833
- Stage 2	-	-	-	24,977	257	-	-	-	199	25,433
- Stage 3	-	-	-	-	-	-	-	-	-	-
- Acquired or originated impaired	-	-	-	-	-	-	-	-	-	-
B. Financial assets measured at fair value through other comprehensive income	**2,076**	**122,579**	**540,723**	**609,980**	**207,734**	**-**	**-**	**-**	**10,097**	**1,493,189**
- Stage 1	-	107,339	540,723	606,984	207,734	-	-	-	10,097	1,472,877
- Stage 2	2,076	15,240	-	2,996	-	-	-	-	-	20,312
- 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	**2,699**	**311,406**	**1,284,189**	**1,840,477**	**333,264**	**725**	**-**	**-**	**10,520,695**	**14,293,455**
D. Commitments to disburse funds and financial guarantees given										
- Stage 1	2,000	207,327	582,358	617,822	373,178	7,378	-	-	97,625	1,887,688
- Stage 2	-	-	-	13,177	-	-	-	-	7,573	20,750
- Stage 3	-	-	-	-	-	-	-	-	-	-
- Acquired or originated impaired	-	-	-	-	-	-	-	-	-	-
Total commitments to disburse funds and financial guarantees given	**2,000**	**207,327**	**582,358**	**630,999**	**373,178**	**7,378**	**-**	**-**	**105,198**	**1,908,438**
Total	**4,699**	**518,733**	**1,866,547**	**2,471,476**	**706,442**	**8,103**	**-**	**-**	**10,625,893**	**16,201,893**

Exposures to customers	Internal rating classes							Total
	LOW	MEDIUM-LOW	MEDIUM	MEDIUM-HIGH	HIGH	Default	Unrated	
A. Financial assets at amortised cost	**28,022,883**	**33,515,952**	**18,289,459**	**4,749,270**	**2,236,183**	**4,956,107**	**236,228**	**92,006,082**
- Stage 1	27,570,423	31,096,062	14,369,683	2,513,126	319,310	-	205,705	76,074,309
- Stage 2	450,106	2,405,782	3,895,566	2,197,768	1,902,011	-	30,523	10,881,756
- Stage 3	-	-	-	-	52	4,576,634	-	4,576,686
- Acquired or originated impaired	2,354	14,108	24,210	38,376	14,810	379,473	-	473,331
B. Financial assets measured at fair value through other comprehensive income	**168,500**	**18,821**	**14,504**	**-**	**-**	**-**	**-**	**201,825**
- Stage 1	168,500	12,497	14,504	-	-	-	-	195,501
- Stage 2	-	6,324	-	-	-	-	-	6,324
- Stage 3	-	-	-	-	-	-	-	-
- Acquired or originated impaired	-	-	-	-	-	-	-	-
C. Financial assets held for sale	**275**	**1,975**	**2,244**	**881**	**899**	**581**	**-**	**6,855**
- Stage 1	275	1,939	2,175	859	847	-	-	6,095
- Stage 2	-	36	69	22	52	-	-	179
- Stage 3	-	-	-	-	-	581	-	581
- Acquired or originated impaired	-	-	-	-	-	-	-	-
Total (A + B + C)	**28,191,658**	**33,536,748**	**18,306,207**	**4,750,151**	**2,237,082**	**4,956,688**	**236,228**	**92,214,762**
D. Commitments to disburse funds and financial guarantees given								
- Stage 1	21,101,507	8,839,796	4,796,691	437,220	45,308	-	100,245	35,320,767
- Stage 2	92,033	1,086,049	1,053,101	266,624	220,573	-	247	2,718,627
- Stage 3	-	-	-	-	-	511,192	-	511,192
- Acquired or originated impaired	42	81	2,813	632	3	6,064	-	9,635
Total (D)	**21,193,582**	**9,925,926**	**5,852,605**	**704,476**	**265,884**	**517,256**	**100,492**	**38,560,221**
Total (A+B+C+D) by segment	**49,385,240**	**43,462,674**	**24,158,812**	**5,454,627**	**2,502,966**	**5,473,944**	**336,720**	**130,774,983**
Grand total	**-**	**-**	**-**	**-**	**-**	**1,478,772**	**51,490,393**	**52,969,165**
Total	**49,385,240**	**43,462,674**	**24,158,812**	**5,454,627**	**2,502,966**	**6,952,716**	**51,827,113**	**183,744,148**

Exposures	Internal rating classes							Total
	LOW	MEDIUM-LOW	MEDIUM	MEDIUM-HIGH	HIGH	Default	Unrated	
Large Corporate	8,675,647	3,746,152	4,794,461	105,034	145,741	204,994	-	17,672,029
Mid Corporate Plus	8,704,867	8,172,753	3,347,267	907,526	288,166	1,092,039	16,169	22,528,787
Mid Corporate	13,251,613	8,062,187	4,796,724	1,875,190	596,158	1,347,718	27,486	29,957,076
Small Businesses	9,332,829	7,354,240	8,722,590	1,966,611	646,779	1,957,004	233,813	30,213,866
Private	9,420,284	16,127,342	2,497,770	600,266	826,122	872,189	59,252	30,403,225
Total Exposures by segment	**49,385,240**	**43,462,674**	**24,158,812**	**5,454,627**	**2,502,966**	**5,473,944**	**336,720**	**130,774,983**

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				Personal guarantees (2)									Total (1)+(2)
							Credit derivatives					Unsecured loans				
								Other derivatives								
			Real estate - Mortgages	Property - 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:	**513,592**	**513,584**	**-**	**666**	**479,507**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**525**	**1,243**	**481,941**
1.1. fully secured	513,441	513,434	-	666	479,507	-	-	-	-	-	-	-	-	525	1,097	481,795
- of which non-performing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2. partially secured	151	150	-	-	-	-	-	-	-	-	-	-	-	-	146	146
- of which non-performing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Secured off-balance sheet credit exposures:	**64,998**	**64,985**	**-**	**-**	**42,722**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**713**	**4,133**	**7,573**	**55,141**
2.1. fully secured	47,754	47,751	-	-	42,722	-	-	-	-	-	-	-	285	1,052	3,692	47,751
- of which non-performing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2. partially secured	17,244	17,234	-	-	-	-	-	-	-	-	-	-	428	3,081	3,881	7,390
- 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
							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)+(2)
1. Secured on-balance sheet credit exposures:	**85,990,163**	**83,370,748**	**42,097,393**	**1,016,061**	**4,588,410**	**1,995,237**	**-**	**-**	**-**	**-**	**-**	**18,227,753**	**145,068**	**402,776**	**6,683,033**	**75,155,731**
1.1. fully secured	68,464,262	66,082,790	42,090,203	1,016,061	4,408,979	1,746,405	-	-	-	-	-	8,922,957	40,225	360,963	6,357,627	64,943,420
- of which non-performing	4,953,948	2,871,432	1,953,737	342,976	4,398	143,111	-	-	-	-	-	108,706	811	15,689	197,334	2,766,762
1.2. partially secured	17,525,901	17,287,958	7,190	-	179,431	248,832	-	-	-	-	-	9,304,796	104,843	41,813	325,406	10,212,311
- of which non-performing	336,580	126,688	5,363	-	7,004	815	-	-	-	-	-	45,435	1,210	15,125	21,180	96,132
2. Secured off-balance sheet credit exposures:	**11,872,950**	**11,840,838**	**758,205**	**51**	**1,106,426**	**685,457**	**-**	**-**	**-**	**-**	**-**	**848,486**	**226,624**	**547,775**	**5,978,366**	**10,151,390**
2.1. fully secured	8,531,427	8,506,828	731,816	51	950,934	565,733	-	-	-	-	-	323,956	126,256	363,033	5,189,217	8,250,996
- of which non-performing	88,923	76,517	12,567	-	2,086	2,284	-	-	-	-	-	1,041	-	820	57,573	76,371
2.2. partially secured	3,341,523	3,334,010	26,389	-	155,492	119,724	-	-	-	-	-	524,530	100,368	184,742	789,149	1,900,394
- of which non-performing	78,868	73,099	180	-	546	3,103	-	-	-	-	-	3,397	-	7	35,434	42,667

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	**952,145**	**1,047,192**	**(435,368)**	**611,824**	**37,551**
A.1. Used in operations	53,726	62,766	(38,266)	24,500	-
A.2. For investment purposes	898,419	984,426	(397,102)	587,324	37,551
A.3. Inventories	-	-	-	-	-
B. Equity instruments and debt securities	**15,554**	**15,554**	**(6,057)**	**9,497**	**-**
C. Other assets	**-**	**-**	**-**	**-**	**-**
D. Non-current assets and disposal groups held for sale	**44,595**	**50,299**	**(26,431)**	**23,868**	**-**
D.1. Property, plant and equipment	44,595	50,299	(26,431)	23,868	-
D.2. Other assets	-	-	-	-	-
Total 31/12/2021	**1,012,294**	**1,113,045**	**(467,856)**	**645,189**	**37,551**
Total 31/12/2020	**987,205**	**1,086,368**	**(355,690)**	**730,678**	**5,257**

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	-	-	11,298	(10,636)	-	-	688,938	(1,074,784)	206,438	(204,196)
- of which: forborne exposures	-	-	716	(816)	-	-	194,032	(273,430)	40,111	(24,570)
A.2 Unlikely to pay	1,164	(1,814)	47,443	(72,324)	-	-	1,772,365	(1,693,071)	598,091	(167,548)
- of which: forborne exposures	10	(24)	11,607	(13,176)	-	-	1,257,844	(1,162,646)	379,646	(79,538)
A.3 Non-performing past-due exposures	1	(1)	109	(16)	-	-	6,768	(2,595)	43,343	(13,057)
- of which: forborne exposures	-	-	-	-	-	-	1,561	(536)	8,184	(1,077)
A.4 Performing exposures	27,352,568	(7,438)	16,251,642	(75,661)	201,625	(276)	57,477,104	(276,285)	33,649,308	(101,936)
- of which: forborne exposures	2,554	(55)	15,376	(677)	-	-	2,320,565	(78,493)	800,974	(26,486)
Total (A)	**27,353,733**	**(9,253)**	**16,310,492**	**(158,637)**	**201,625**	**(276)**	**59,945,175**	**(3,046,735)**	**34,497,180**	**(486,737)**
B. Off-balance sheet credit exposures										
B.1 Non-performing exposures	12,773	(815)	1,274	(439)	-	-	700,550	(84,463)	10,366	(1,477)
B.2 Performing exposures	7,737,104	(159)	4,220,154	(3,620)	162,379	(21)	42,950,574	(34,510)	4,518,809	(5,332)
Total (B)	**7,749,877**	**(974)**	**4,221,428**	**(4,059)**	**162,379**	**(21)**	**43,651,124**	**(118,973)**	**4,529,175**	**(6,809)**
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)**
Total (A+B) 31/12/2020	**34,965,769**	**(10,687)**	**24,046,760**	**(226,015)**	**397,914**	**(367)**	**103,602,924**	**(4,234,648)**	**38,468,123**	**(591,024)**

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	901,276	(1,275,046)	4,646	(13,304)	513	(120)	-	(949)	239	(197)
A.2 Unlikely to pay	2,400,534	(1,898,865)	17,906	(34,443)	60	(10)	562	(1,436)	1	(3)
A.3 Non-performing past-due exposures	50,206	(15,661)	12	(5)	2	(2)	1	(1)	-	-
A.4 Performing exposures	118,595,406	(457,445)	11,488,427	(1,873)	4,115,070	(1,603)	400,656	(381)	131,063	(18)
Total (A)	**121,947,422**	**(3,647,017)**	**11,510,991**	**(49,625)**	**4,115,645**	**(1,735)**	**401,219**	**(2,767)**	**131,303**	**(218)**
B. Off-balance sheet credit exposures	-	-	-	-	-	-	-	-	-	-
B.1 Non-performing exposures	713,938	(86,577)	10,278	(17)	-	-	739	(600)	8	-
B.2 Performing exposures	54,217,385	(43,265)	3,457,315	(191)	1,447,386	(114)	57,841	(31)	246,714	(20)
Total (B)	**54,931,323**	**(129,842)**	**3,467,593**	**(208)**	**1,447,386**	**(114)**	**58,580**	**(631)**	**246,722**	**(20)**
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)**
Total (A+B) 31/12/2020	**185,533,226**	**(5,027,713)**	**11,481,269**	**(31,998)**	**3,325,599**	**(1,220)**	**397,580**	**(1,152)**	**345,902**	**(291)**

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	372,021	(512,043)	132,334	(208,970)	259,940	(352,902)	136,981	(201,131)
A.2 Unlikely to pay	1,315,116	(1,105,715)	393,769	(355,952)	459,211	(331,678)	232,438	(105,520)
A.3 Non-performing past-due exposures	16,465	(6,322)	10,767	(2,666)	12,695	(3,722)	10,279	(2,951)
A.4 Performing exposures	54,297,863	(252,072)	23,600,760	(103,103)	34,640,721	(78,485)	6,056,062	(23,785)
Total (A)	**56,001,465**	**(1,876,152)**	**24,137,630**	**(670,691)**	**35,372,567**	**(766,787)**	**6,435,760**	**(333,387)**
B. Off-balance sheet credit exposures								
B.1 Non-performing exposures	287,287	(49,591)	157,111	(18,467)	235,500	(15,611)	34,040	(2,908)
B.2 Performing exposures	26,567,791	(31,946)	13,458,983	(5,158)	12,206,882	(4,975)	1,983,729	(1,186)
Total (B)	26,855,078	(81,537)	13,616,094	(23,625)	12,442,382	(20,586)	2,017,769	(4,094)
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)**
Total (A+B) 31/12/2020	**81,116,455**	**(2,525,744)**	**37,874,529**	**(1,025,959)**	**58,001,024**	**(1,089,275)**	**8,541,218**	**(386,735)**

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	-	-	-	-	-	-	-	-	-	-
A.3 Non-performing past-due exposures	-	-	-	-	-	-	-	-	-	-
A.4 Performing exposures	40,834,332	(1,727)	1,782,264	(687)	158,709	(62)	22,581	(33)	44,778	(98)
Total (A)	**40,834,332**	**(1,727)**	**1,782,264**	**(687)**	**158,709**	**(62)**	**22,581**	**(33)**	**44,778**	**(98)**
B. Off-balance sheet credit exposures										
B.1 Non-performing exposures	-	-	-	-	-	-	-	-	-	-
B.2 Performing exposures	932,539	(79)	2,384,259	(106)	114,421	(20)	520,794	(53)	204,555	(68)
Total (B)	**932,539**	**(79)**	**2,384,259**	**(106)**	**114,421**	**(20)**	**520,794**	**(53)**	**204,555**	**(68)**
Total (A+B) 31/12/2021	**41,766,871**	**(1,806)**	**4,166,523**	**(793)**	**273,130**	**(82)**	**543,375**	**(86)**	**249,333**	**(166)**
Total (A+B) 31/12/2020	**12,054,901**	**(1,558)**	**5,283,645**	**(1,062)**	**299,386**	**(112)**	**553,607**	**(121)**	**297,722**	**(148)**

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 transposes the standards defined by the Basel Committee on Banking Supervision.
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 2021, 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 32 risk positions classified as "large exposures" for a total ("non-weighted") amount of 689,746.5 million corresponding to a net ("weighted") exposure of 20,804.2 million.

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

- the Ministry of Economy and Finance for 35,828.2 million (657.8 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 34,108.3 million (32.4 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;
- three Central Governments of foreign countries for a total of 13,142.4 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 38,231.8 million (124.0 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 25 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.

	31/12/2021	**31/12/2020**
a) Amount (book value) (*)	689,746,479	410,816,906
b) Amount (weighted value) (*)	**20,804,227**	**9,804,654**
c) Number	32	25

(*) figures in thousands of euro

C. Securitisation transactions

1. Traditional securitisations acting as originator

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.

In that regard, it must be stated that the structuring of the securitisation transactions originated by the Group and its issues of covered bonds is overseen by a dedicated organisational structure that is part of the Finance function of the Parent Company. The collateralised portfolios of the transactions performed are constantly monitored by way of monthly and quarterly reports detailing the performance of principal and interest collections and the status of receivables.

During 2021 the Group continued finalising its own securitisation transactions through the *en bloc* sale of bad loans for the purpose of implementing derisking actions. In particular, the securitisation transactions finalised during the past years since 2018 have entailed:

- the subscription of Senior securities issued by the SPE and the sale to third parties of the Mezzanine and Junior tranches, in compliance with the requirements of prudential regulations. In relation to such holding, the assigned receivables were derecognised from the financial statements, since the risks and rewards of the financial assets sold were substantially transferred;
- the state guarantee for Senior securities was obtained (the Guarantee for Securitisation of Bad Loans - GACS pursuant to Decree no. 18 of 14 February 2016 converted into Italian Law no. 49 of 8 April 2016 and the subsequent Decree of the Ministry of the Economy and Finance of 3 August 2016).

Lastly, note that the disclosure on "self-securitisation" transactions is contained in Part E - Section 2 - Risks of prudential consolidation "1.4 - Liquidity risk". In these transactions, the Group fully subscribed the securities issued by the SPE, with the objective of using them to obtain liquidity, through monetary policy transactions with the Eurosystem or through repurchase agreements with market counterparties.

QUALITATIVE INFORMATION

The following table shows securitisation transactions in place as at 31 December 2021.

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
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

The securitisation transactions that are "fully derecognised" are represented by the transactions, for which Banco BPM Group substantially transferred the risks and rewards of the assets sold to the SPEs, as it sold 95% of the junior tranche and 95% of the mezzanine tranche on the market.

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

New transactions of the period

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") was 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	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 of 15.4 million, corresponding to 4.5% of the nominal value of the Senior Class A securities outstanding on each payment date.
Said reserve was established by means of a Limited Recourse Loan disbursed by Banco BPM to the special purpose entity Aurelia SPV, for a total 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.

With a value date of 29 June 2021, Banco BPM sold 95% of the Mezzanine tranche and 95% of the Junior tranche to a market counterparty, retaining the entire Senior tranche and 5% of the Mezzanine and Junior tranches, in accordance with the retention rule envisaged by prudential regulations (Reg. EU no. 575/2013, known as "CRR").

Following the finalisation of this transaction, a State Guarantee for the Securitisation of Bad Loans ("GACS") on the Senior securities was requested: on 23 December 2021, the decree with which the guarantee of the Ministry of Economy and Finance was released, was issued.

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 2021, of the securities subscribed by the Parent Company is summed up below:

Type	Type	Nominal issue value	Nominal share subscribed by the Group	Initial recognition value	Value as at 31/12/2021	Maturity	Rating	Interest rate
Class A Asset Backed Floating Rate Notes due July 2047	Senior	342,000	342,000	342,000	341,708	30/07/2047	DBRS: BBB Scope: BBB	Euribor 6M + 0.5%
Class B1 Asset Backed Floating Rate Notes due July 2047	Mezzanine	40,000	2,000	580	665	30/07/2047	Unrated	Euribor 6M + 8%
Class J Asset Backed Floating Rate and Variable Return Notes due July 2047	Junior	12,000	600	-	-	30/07/2047	Unrated	Euribor 6M + 10%
Total		**394,000**	**344,600**	**342,580**	**342,373**			

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.

Transactions closed during the year

BP Mortgages 1 (March 2007)

In July 2021, with the signing of the relative contracts, the early closures of the securitisation transaction finalised by the SPE BP Mortgages S.r.l. in April 2007 ("BP Mortgages 1") took place. More specifically, (i) on 29 June 2021, Banco BPM repurchased the entire residual portfolio of mortgage loans underlying the transaction and (ii) on the interest payment date of 20 July 2021, the SPE closed the transaction and repaid the outstanding securities in advance. On 19 July 2021, with the signing of the Termination Agreement, all the contracts signed and accounts opened within the context of the transaction were closed.

Italfinance Securitization Vehicle S.r.l. in liquidation

Following the early closure, in the previous year, of the last outstanding securitisation transaction, on 22 July 2021, the Shareholders' Meeting approved, with effect from 29 July 2021, the early dissolution and placement in liquidation of the SPE.

Existing and significant securitisation transactions during 2021

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 31/12/2021	Value 31/12/2020
Banco BPM	180,251	212,178

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 31/12/2021	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	47,434	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**	**127,952**			

(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 2021.

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, the former 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 2021, the amount of collateral paid in was 8.6 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.

Significant events during 2021 - Rating
On 21 December 2021, following the upgrade of Italy's rating, upgraded the rating of A2, B and C Class securities from "AA-" to "AA".

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 2021, is summarised below:

Type	Type	Nominal amount subscribed by Banco BPM on the issue date	Nominal amount subscribed by Banco BPM outstanding as at 31/12/2021	Value as at 31/12/2021	Maturity	Rating	Interest rate
Class A Asset Backed Floating Rate Notes due October 2040	Senior	84,037	67,404	67,688	01/10/2040	Unrated	Euribor (floor @0%) +2%
Class B1 Asset Backed Floating Rate Notes due October 2040	Mezzanine	901	754	771	01/10/2040	Unrated	Euribor (floor @0%) +9%
Class B2 Asset Backed Floating Rate Notes due October 2040	Mezzanine	451	451	465	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**	**69,060**	**69,375**			

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 tranches 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 2021, is summarised below:

Type	Type	Nominal amount subscribed by Banco BPM on the issue date	Nominal amount subscribed by Banco BPM outstanding as at 31/12/2021	Value as at 31/12/2021	Maturity	Rating as at 31 December 2021	Interest rate
Class A Asset Backed Floating Rate Notes due January 2041	Senior	32,343	29,675	29,650	31/01/2041	DBRS: BBB Scope: BBB	Euribor 6M + 0.5%
Class B1 Asset Backed Floating Rate Notes due January 2041	Mezzanine	269	269	82	31/01/2041	Unrated	Euribor 6M + 8%
Class J Asset Backed Variable Return Notes due January 2041	Junior	200	200	0	31/01/2041	Unrated	n.a.
Total		**32,812**	**30,144**	**29,732**			

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. 130/1999). 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 2021, is summarised below:

Type	Type	Nominal amount subscribed by Banco BPM on the issue date	Nominal amount subscribed by Banco BPM outstanding as at 31/12/2021	Value as at 31/12/2021	Maturity	Rating as at 31 December 2021	Interest rate
Class A Asset Backed Floating Rate Notes due July 2040	Senior	1,440,033	938,767	938,271	31/07/2040	DBRS: BB; Scope: BBB-	6M Euribor +0.6%
Class B Asset Backed Floating Rate Notes due July 2040	Mezzanine	11,078	11,078	4,483	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**	**962,288**	**942,753**			

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 2021, is summarised below:

Type	Type	Nominal amount subscribed by Banco BPM on the issue date	Nominal amount subscribed by Banco BPM outstanding as at 31/12/2021	Value as at 31/12/2021	Maturity	Rating as at 31 December 2021	Interest rate
Class B Asset Backed Floating Rate Notes due October 2038	Senior	1,656,504	921,361	920,243	29/10/2038	Moody's: Baa1; Scope: BBB-	6M Euribor +0.6%
Class B Asset Backed Floating Rate Notes due October 2038	Mezzanine	7,646	7,646	2,944	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.
Total		**1,666,699**	**931,556**	**923,187**			

2. 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 regulations 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 2021.

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

New synthetic securitisation transactions in the year

European Investment Fund synthetic securitisation 2021 - project Audrey

In December 2021, Banco BPM concluded its third synthetic securitisation transaction with the European Investment Fund (EIF).
The portfolio securitised was comprised by performing loans originated by Banco BPM to around 6,000 SMEs and Corporate customers, for 1,696 million.
Based on the structure of the transaction, the portfolio is virtually divided into 2 tranches based on the degree of risk: Senior and Junior, for an initial value of the portfolio of 1,567 million, broken down as follows:
- *Senior*: 1,476 million;
- *Junior*: 91 million.

In addition, to meet the requirement to retain a minimum economic interest of at least 5% (retention), 129 million is expected to be initially withheld from the entire portfolio.

Specifically, the Senior portion is not secured in any way, while the Junior portion is guaranteed by the European Investment Fund (EIF) and counter-guaranteed by the European Investment Bank (EIB), through the use of funds from the European Guarantee Fund (EGF).
Against said guarantee, a commitment is also envisaged for the Bank, to establish, within 18 months of the start of the transaction, a portfolio of new loans amounting to around 954 million to be disbursed with a view to supporting investments and working capital, to SMEs (with a workforce of up to 249 employees, who report an annual turnover not exceeding 50 million and/or total annual financial statement result not exceeding 43 million, operating in any economic sector with the exception of some business sectors excluded by the EIB as retained "sensitive").
These loans will start to be disbursed in 2022.

As at 31 December 2021, the securitised portfolio amounted to 1,615.1 million and Banco BPM's net exposure was 1,552.9 million, of which 1,428.2 million was represented by Senior securities and 124.7 million by retention.

Large Corporate synthetic securitisation 2021 – project Brigitte

In December 2021, Banco BPM concluded its fourth synthetic securitisation transaction, the first with a market investor.
The portfolio securitised was comprised of performing loans originated by Banco BPM to around 100 SMEs belonging to the Corporate segment, for 2,857 million.
Based on the structure of the transaction, the portfolio is virtually divided into 2 tranches based on the degree of risk: Senior and Junior, for an initial value of the portfolio of 2,200 million, broken down as follows:

- *Senior*: 2,046 million;
- *Junior*: 154 million.

In addition, to meet the requirement to retain a minimum economic interest of at least 5% (retention), 657 million is expected to be initially withheld from the entire portfolio.
Specifically, the Senior portion is not secured in any way, while the Junior portion is guaranteed by a market investor through a Funded Financial Guarantee.

As at 31 December 2021, the securitised portfolio amounted to 2,769.3 million and Banco BPM's net exposure was 2,657.4 million, of which 2,005.4 million was represented by Senior securities and 652.0 million by retention.

Synthetic securitisation transactions concluded during the year

European Investment Fund synthetic securitisation 2019

In June 2019, Banco BPM concluded its first synthetic securitisation transaction with the European Investment Fund (EIF).
The portfolio securitised was composed of performing mortgage loans originated by Banco BPM to Corporate customers.
Based on the structure of the transaction, the portfolio was virtually divided into 3 tranches based on the degree of risk: Senior, Mezzanine and Junior, for an initial value of the portfolio of 1,656.6 million, broken down as follows:

- *Senior*: 1,589.1 million;
- *Mezzanine*: 55.0 million;
- *Junior*: 12.5 million.

The Junior and Senior portions were not secured in any way, while the Mezzanine portion had been guaranteed by the European Investment Fund (EIF) and counter-guaranteed by the European Investment Bank (EIB). In addition, 5% of the entire portfolio, equal to 59.5 million, at the start of the transaction, had been envisaged to be withheld to meet the requirement to retain a minimum economic interest (retention).

In August 2021, Banco BPM exercised the early termination option, contractually envisaged, thus closing the transaction in question.

Outstanding synthetic securitisation transactions

European Investment Fund synthetic securitisation 2020

In December 2020, Banco BPM concluded its second synthetic securitisation transaction with the European Investment Fund (EIF).
The portfolio securitised was composed of performing loans originated by Banco BPM to SMEs and Corporate customers, for 1,894.9 million.
Based on the structure of the transaction, the portfolio was divided into 3 tranches based on the degree of risk: Senior, Mezzanine and Junior, for an initial value of the portfolio of 1,702.4 million, broken down as follows:

- *Senior*: 1,608.8 million;
- *Mezzanine*: 76.6 million;
- *Junior*: 17.0 million.

In addition, to meet the requirement to retain a minimum economic interest of at least 5% (retention), 192.5 million is expected to be initially withheld from the entire portfolio.
In particular, the Junior and Senior portions were not secured in any way, while the Mezzanine portion was guaranteed by the European Investment Fund (EIF) and counter-guaranteed by the European Investment Bank (EIB).
Against said guarantee, the transaction envisaged Banco BPM making 462 million available (of which 77 million to be disbursed within 6 months of signature of the guarantee contract) in subsidised loans to be disbursed, with a view to supporting investments and working capital, to Midcap companies, with a workforce of up to 2,999 employees and, at least 50%, to SMEs with a workforce of up to 249 employees, operating in any economic sector (with the exception of some business sectors excluded by the EIB as retained "sensitive").
The disbursement of these loans was completed in 2021.

As at 31 December 2021, the securitised portfolio amounted to 1,060.0 million and Banco BPM's net exposure was 1,028.7 million, of which 892.1 million was represented by Senior securities, 17.2 million by Junior securities and 119.4 million by retention.

3. 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) 2017/2402, and as senior investor.
Transactions started in FY 2021 with the performance of two transactions, through Banca Akros, acting as Arranger, finalised through the special purpose vehicle SUN SPV S.r.l. established pursuant to Italian Law 130/1999, as illustrated below.

QUALITATIVE INFORMATION

Securitisations in the energy sector

The securitisation programme regards performing trade receivables for a maximum revolving amount of around 50 million 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: 100% of the Senior security, 5% of the Mezzanine and Junior securities.

Class – Type	Nominal issue value	BANCO BPM	
		Nominal value	Drawn down 31/12/2021
Senior security (*)	42,703	42,703	27,717
Mezzanine security (*)	5,402	271	176
Junior security	1,500	75	75
Total	**49,605**	**43,049**	**27,968**

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

Securitisations in the steel sector

The securitisation programme regards performing trade receivables for a maximum revolving amount of 30 million, originated by a Group customer operating in the steel and other non-ferrous materials sectors, vis-à-vis customers in various European jurisdictions.
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 and the part subscribed by Banco BPM: 100% of the Senior security, 5% of the Mezzanine and Junior securities.

Class – Type	Nominal issue value	BANCO BPM	
		Nominal value	Drawn down 31/12/2021
Senior security (*)	26,350	26,350	26,160
Mezzanine security (*)	2,626	132	131
Junior security	948	48	48
Total	**29,924**	**26,530**	**26,339**

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

4. Investments in traditional securitisations

QUALITATIVE INFORMATION

During 2021, on behalf of institutional customers of Banco BPM (supervised entities and financial intermediaries), the Group structured three credit securitisation transactions; again for these transactions, Banca Akros acted as Arranger.

The transactions envisaged the issue of different classes of ABS (Asset Backed Securities) by several SPEs established pursuant to Italian Law 130/1999.
Banco BPM intervened by purchasing all or part of the Senior tranche alone.

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 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	Drawn down 31/12/2021
Senior security	16,500	15,675	15,675
Junior security	9,068	-	-
Total	**25,568**	**15,675**	**15,675**

The securitisation is currently at the stage of redeeming the securities. The investment as at 31 December 2021 amounted to 8.7 million

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.

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	Drawn down 31/12/2021
Class A - Senior (*)	180,000	31,200	28,626
Class B - Mezzanine (*)	20,000	-	-
Class C -Junior (*)	25,000	-	-
Total	**225,000**	**31,200**	**28,626**

(*) 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.

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	Drawn down 31/12/2021
Class A1, A2 – Senior	134,700	35,000	191
Class B – Upper Mezzanine	23,300	-	-
Class Y – Lower Mezzanine	7,800	-	-
Class J – Junior	4,200	-	-
Total	**170,000**	**35,000**	**191**

(*) 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

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	**2,416,525**	**(1,919)**	**9,410**	**-**	**451**	**-**
Non-performing assets:						
A.1 Bad loans	2,416,525	(1,919)	9,410	-	451	-
Performing assets:						
A.2 Leases	-	-	-	-	-	-
B. Partially derecognised						
C. Not derecognised	**4,356,774**	**(1,895)**	**29,487**	**-**	**92,224**	**(65)**
Performing assets:						
C.1 Residential mortgage loans	31,044	-	29,487	-	75,044	-
C.2 Loans to businesses (*)	4,325,730	(1,895)	-	-	17,180	(65)

(*) The sub-item "Loans to businesses" relates to the synthetic securitisation transaction. As at 31 December 2021 the value of the retention by Banco BPM came to 896.1 million.

The part of the table relative to the guarantees issued and the credit facilities 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	Senior
	Book value	Losses/ Recoveries	Book value	Losses/ Recoveries	Book value	Losses/ Recoveries
A.1 BNT PORT 14-42 TV		-			28,571	
Agricultural and animal husbandry loans						
A.2 PHARMA FIN.SR3 TV 28	1,274	-				-
Other						
A.3 PHARMA FIN.SRL TV 28		-	603			-
Other						
A.4 PHARMA FIN.EUR TV 28		-	4,524			-
Other						
A.5 *FAW3 SPV 23 A-1-S 2% (*)*	8,001	(12)				-
Other						
A.6 SUN SPV 21-28 TV A	27,703	(14)				
Trade receivables						
A.7 SUN SPV 21-29 TV A	26,142	(19)				
Trade receivables						
A.8 SUN SPV 21-28 TV B			176			
Trade receivables						
A.9 SUN SPV 21-28 TV J					75	
Trade receivables						
A.10 SUN SPV 21-29 TV B			131			
Trade receivables						
A.11 SUN SPV 21-29 TV J					48	
Trade receivables						
A.12 PERSEVERANZA SPV 21-31 TV A	28,683	(24)				
Loans with SMEGF guarantee						
A.13 IGLOO 21-31 TV A1	191					
Loans with SMEGF guarantee						
A.14 SPV PROJ 21-28 TV A	8,672	(7)				
Project finance loans						
A.15 Luzzati			381			
Non-performing loans						
A.16 Luzzati					5	
Non-performing 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.

In addition to that shown in the table, note that the Mezzanine security of the Berenice Securitisation held through the Voluntary Scheme, was fully written down during the year. For further details, refer to the paragraph entitled "Other significant aspects relating to Group accounting policies" contained in Part A - "Accounting policies" of these Notes.

Exposures deriving from third party securitisation transactions amounted to 135.2 million, of which 35.8 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 99.4 million in the portfolio of "Financial assets at amortised cost".
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 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 2021, 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 28.6 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	146,703	-	14,039	-	-	254,486
BP Mortgages giu 2007	Milan	accounting	181,055	-	36,215	47,434	64,408	16,165

C.4 Prudential consolidation - SPE for non-consolidated securitisation

As at 31 December 2021 the non-consolidated SPEs were Red Sea SPV S.r.l., an SPE established for the transaction regarding the sale of bad loans called "Project Exodus" finalised during 2018 and Leviticus SPV S.r.l. an SPE established for the transaction regarding the sale of a portfolio of bad loans called the "Project ACE", finalised during 2019, Tiberina SPV S.r.l., an SPE established for the transaction regarding the sale of a portfolio of UTP and bad loans called "Project Django" and Titan SPV S.r.l., an SPE established for the transaction regarding the sale of a portfolio of bad loans called "Project Titan" and Aurelia SPV S.r.l., an SPE established for the transactions regarding the sale of a portfolio of bad loans called "Project Rockets", as illustrated above.

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.

(thousands of euro)	Red Sea SPV	Leviticus SPV	Tiberina SPV	Titan SPV	Aurelia SPV
Total assets	**970,251**	**992,184**	**69,375**	**37,399**	**358,237**
Other financial assets mandatorily measured at fair value	2,944	4,483	1,687	82	665
Loans to customers	966,396	987,675	67,688	37,317	357,479
Other assets	911	27			93
Total liabilities	**7,300**	**149,900**	**-**	**3,676**	**266**
Due to customers	7,299	149,900		3,676	-
Other liabilities	1	-	-	-	266
(thousands of euro)	Red Sea SPV	Leviticus SPV	Tiberina SPV	Titan SPV	Aurelia SPV
Net interest income	1,221	1,771	1,702	20	85

It is also specified that no financial support was provided during the year.

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

In 2021, 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 - SPEs for consolidated 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 2021, 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 (180.3 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.
By effect of the consolidation of the equity of the SPE, this last liability is not posted in the consolidated financial statements. Otherwise, the liabilities will be posted under the securities issued by the SPE not subscribed by companies of the Group.

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	**1,050,924**	**-**	**1,050,924**	**X**	**990,489**	**-**	**990,489**
1. Debt securities	292,837	-	292,837	X	292,903	-	292,903
2. Equity instruments	758,087	-	758,087	X	697,586	-	697,586
3. Loans	-	-	-	X	-	-	-
4. Derivatives	-	-	-	X	-	-	-
B. Other financial assets mandatorily measured at fair value	**3,932**	**3,932**	**-**	**200**	**-**	**-**	**-**
1. Debt securities	-	-	-	-	-	-	-
2. Equity instruments	-	-	-	X	-	-	-
3. Loans	3,932	3,932	-	200	-	-	-
C. Financial assets designated at fair value	**-**	**-**	**-**	**-**	**-**	**-**	**-**
1. Debt securities	-	-	-	-	-	-	-
2. Loans	-	-	-	-	-	-	-
D. Financial assets measured at fair value through other comprehensive income	**3,844,865**	**-**	**3,844,865**	**-**	**3,856,895**	**-**	**3,856,895**
1. Debt securities	3,844,865	-	3,844,865	-	3,856,895	-	3,856,895
2. Equity instruments	-	-	-	X	-	-	-
3. Loans	-	-	-	-	-	-	-
E. Financial assets at amortised cost	**7,369,837**	**176,319**	**7,193,518**	**22,775**	**7,394,578**	**45,482**	**7,349,096**
1. Debt securities	7,193,518	-	7,193,518	-	7,349,096	-	7,349,096
2. Loans	176,319	176,319	-	22,775	45,482	45,482	-
Total 31/12/2021	**12,269,558**	**180,251**	**12,089,307**	**22,975**	**12,241,962**	**45,482**	**12,196,480**
Total 31/12/2020	**9,220,720**	**318,520**	**8,902,200**	**32,292**	**8,914,259**	**88,525**	**8,825,734**

"Fully recognised financial assets sold" amounted to 539.9 million in book value underlying funding repurchase agreements of the Parent Company, shown in the table in "Associated financial liabilities" for 459.0 million, but are not represented in the Balance Sheet liabilities as they are subject to offsetting pursuant to IAS 32.

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

As at 31 December 2021 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	
			31/12/2021	31/12/2020
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	**-**	**-**	**-**	**-**
1. Debt securities	-	-	-	-
2. Equity instruments	-	-	-	-
3. Loans	-	-	-	-
C. Financial assets designated at fair value	**3,932**	**-**	**3,932**	**4,531**
1. Debt securities	-	-	-	-
2. Loans	3,932	-	3,932	4,531
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)	**187,050**	**-**	**187,050**	**333,148**
1. Debt securities	-	-	-	-
2. Loans	187,050	-	187,050	333,148
Total financial assets	**190,982**	**-**	**190,982**	**337,679**
Total associated financial liabilities	**45,482**	**-**	**X**	**X**
Net value as at 31/12/2021	**145,500**	**-**	**190,982**	**X**
Net value as at 31/12/2020	**249,154**	**-**	**X**	**337,679**

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

Based on that established by Bank of Italy Communication of 23 December 2019, 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 related 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 concerns 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

Back2 Bonis (Cuvée transaction – Wave 4)

Objectives and main characteristics of the fund
The multi-originator transaction called Cuvée was finalised on 20 December 2021, through the sale of loans to Ampre S.r.l. - an SPE established pursuant to the law on securitisations (Italian Law no. 130/99) - and the simultaneous subscription of the units of a mutual investment fund managed by Prelios SGR, called Back2Bonis, released through the contribution to the same fund of the loans due from Ampre against the loans sold. Ampre then issued a single untranched security as payment of its debt towards the fund.
Ampre signed a servicing mandate with Amco, which acted as special and master servicer of the securitisation SPE, and a real estate advisory mandate with Prelios Integra, a Group company of the SGR, with a view to efficiently managing the real estate portfolio guaranteeing the loans.
More specifically, the transaction in question regards the sale of a portfolio of Real Estate Small & Medium Size loans classified as Unlikely to Pay (hereinafter also UTP), resulting from loans granted to companies operating in the

real estate sector, or to real estate funds, with different risk profiles in terms of territorial distribution, intended use and lifecycle of the underlying real estate assets.
The aim of the transaction is to guarantee the more proactive and effective management of the loans guaranteed through i) the disbursement of new financing where retained necessary to develop and complete the real estate assets, ii) the eventual repossession of said assets, through a datio in solutum mechanism, and iii) the better and more effective sale of the same, by exploiting the specific expertise of the Group of the assignee SGR.

Amount of loans sold and Banco BPM's stake

The participants in the transaction sold their credit exposures to the fund for a total gross value of 124 million; the total loans managed therefore exceed 1.1 billion, confirming its market leadership.
Banco BPM sold 9 exposures classified as UTP to the SPE, for a gross value of 76.3 million, corresponding to an initial assignment value of 21.7 million. Against the cited transaction, Banco BPM received 46.483 units of the Back2bonis fund. More specifically, this assignment involved several counterparties from which the Cuvéè Fund had already purchased portions of loans from other banks: the aim of Banco BPM's assignment was therefore, inter alia, to increase Cuvèe'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.

Accounting treatment

On 20 December 2021, the loans sold were derecognised from the financial statements, as a balancing entry to the recognition of the units of the Back2bonis fund.
The fair value of the Back2bonis fund, based on the Discounted Cash Flow method (DCF) illustrated in the paragraph below, was 19.1 million, showing a decrease of around 11.8% with respect to the contribution value indicated by the SGR at the time of the contribution (21.7 million).
Considering the recognition value of the loans as at 1 January 2021 and the collections to be repaid, the sale transaction entailed the recognition of a negative economic effect, attributable to the loans sold, of 12.1 million.

As at 31 December 2021, the total fair value of the fund also including the units relating to previous sales, was 54.4 million.

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:

$$WACC = Ke * (E/(D+E)) + Kd * (1-t) * (D/(D+E))$$

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 instruments 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*).

Considering the specific characteristics of the instruments being measured – illiquid instruments in small enterprises - in determining the cost of capital (Ke), an additional risk premium was considered, established on discretionary basis, and variable based on the type of credit, ranging from 2% for guaranteed exposures to 4% for unsecured exposures.
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 Back2bonis 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).

Back2bonis 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%**	+4.12 million (+7.6%)	+2.7 million (+5%)	+1.36 million (+2.5%)
	0	+1.34 million (+2.5%)	-	-1.29 million (-2.4%)
	-5%	-1.45 million (-2.7%)	-2.7 million (-5%)	-3.95 million (-7.3%)

QUANTITATIVE INFORMATION

Breakdown of units of mutual investment funds held as at 31 December 2021

As at 31 December 2021, the value of mutual investment funds in the financial statements deriving from the transactions in question totalled 180.5 million (164.6 million as at 31 December 2020), 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	**Book value as at 31/12/2021(*)**	**Asset Management Company**	**First closing date/subsequent contributions**	**Fund investment policy**
IDeA Corporate Credit Recovery I	1,445	Dea Capital Alternative Funds SGR	23 June 2016 27 June 2017 4 July 2019	Past due loans, unlikely to pay or corresponding or similar categories of loans and/or loans subject to restructuring, due from 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	17,774	Dea Capital Alternative Funds SGR	28 December 2017 18 February 2019	Past due loans, unlikely to pay or corresponding or similar categories of loans and/or loans subject to restructuring, due from 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 – Shipping segment	81,027	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, due from 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	25,874	Clessidra SGR	25 September 2019	Past due loans, unlikely to pay, forborne performing and non-performing loans, performing high risk loans due from 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	54,385	Prelios SGR	23 December 2019 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 loans mainly classifiable as "unlikely to pay", 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

(*) 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 15.9 million, is attributable to the increase of Back2bonis units due to the sale on 20 December 2021 (+18.1 million), to distributions received from the SGRs (-8.8 million), to the valuation

losses (-0.1 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 (+6.7 million).
The fair value measurement of the above funds is made on the basis of the NAV communicated periodically by the SGR (IDeA funds), or 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 ("Clessidra Restructuring Fund" and "Back2bonis" funds).

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 Loan 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 took on the role of sole Originator Bank for the assets pursuant to Art. 7-bis of Italian Law no. 130 of 30 April 1999, as well as the role of 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.

Derivative Contracts

The BPM CB2 Issue Programme has three derivative contracts in place called "Covered Bond Swaps" subscribed by the SPEs and market counterparties. Said swaps are interest rate swaps that hedge, at the 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 respective SPEs and the interest flows on the CBs issued. The "BP CB1" Programme has only one Covered Bond Swap contract in place, entered into by the SPE and UBS, while there are no Covered Bond Swap contracts in place for the "BPM CB1" Programme.

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 CB. The infringement of the regulatory and contractual tests leads to an obligation for the assigning 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, for the "BP CB1" programme, the amounts collected are paid into current accounts held in the name of the SPE BPM Covered Bond S.r.l. at Banco BPM (Interim Account Bank) and then transferred daily to the accounts held in the name of the SPE, also at Banco BPM (Transaction Account Bank). Banco BPM also acts as Administrative Servicer, namely it provides administrative services and fulfils tax-related requirements on behalf of the SPE BP Covered Bond S.r.l.

For the "BPM CB1" and "BPM CB2" programmes, the amounts collected are paid into current accounts held respectively in the name of BPM Covered Bond S.r.l. and BPM Covered Bond 2 S.r.l. at Banco BPM and then transferred daily to the accounts, also at Banco BPM, held in the name of the SPEs. Effective 1 July 2021, Banco BPM has also acted as Administrative Servicer, namely it performs the administrative, accounting and tax functions on behalf of both SPEs.

QUANTITATIVE INFORMATION

Existing and significant programmes during 2021

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 took on the role of 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 2021:

Bank	Value as at 31/12/2021	Value as at 31/12/2020
Banco BPM	3,426,788	3,964,753

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 31/12/2021	Value as at 31/12/2020
Banco BPM	129,767	281,252

In 2021, the mortgage loans portfolio generated collections totalling 594.2 million, of which 536.7 million represented principal and 57.5 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 11,700 million was redeemed. Therefore, as at 31 December 2021, the securities issued and outstanding amounted to 3,250 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
05/04/2013	6th Series 1st tranche (2)	150,000	4.000%	31/03/2023	99.482	Aa3/A
08/01/2014	7th Series 1st tranche (3) (5)	1,000,000	Eur 3M + 100 bps	31/03/2023(*)	100.000	Aa3/A
05/03/2015	9th Series 1st tranche (4)	1,000,000	0.75%	31/03/2022	99.917	Aa3/A
28/03/2018	12th Series 1st Tranche (3)	1,000,000	Eur 1M + 30 bps	30/06/2025 (**)	100.000	Aa3/A
		3,250,000				

(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) The securities were subscribed by institutional investors.
(5) 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 2021.

Other information

In April 2021, the Final Terms of the Twelfth Series retained were amended in order to extend the maturity from 30 June 2021 to 30 June 2025.

In June 2021, Banco BPM repurchased the positions classified as bad loans as at 31 May 2021 "en bloc" and the relative price was paid to the SPE in July 2021.

During the year, the SPE redeemed part of the Subordinated Loan granted by Banco BPM for a total amount of 250 billion in advance (of which 200 million on the Guarantor Payment Date of 30 September 2021 and 50 million on the Guarantor Payment Date of 31 December 2021).

BPM Covered Bond Programme ("BPM CB1")

In previous years, a total of nine portfolios of eligible assets were sold to the SPE BPM Covered Bond S.r.l., with total residual debt of 12.1 billion.

In June 2021, 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 503 million to the SPE BPM Covered Bond S.r.l. ("Third Banco BPM Portfolio", tenth 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, took on the role of 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 2021:

Bank	Value as at 31/12/2021	Value as at 31/12/2020
Banco BPM	5,158,058	5,429,849

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 31/12/2021	Value as at 31/12/2020
Banco BPM	115,868	466,801

In 2021, the mortgage loans portfolio generated collections totalling 839.3 million, of which 770.8 million represented principal and 68.5 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 6,100 million, of which 600 million in 2021 as the partial early repayment of the Ninth Series, fully held by Banco BPM.

Thus, as at 31 December 2021, there are five 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 5,050 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	19/11/2022	100.00	Aa3
07/11/2016	8th Series	1,000,000	3-month Euribor + 30 bps	07/11/2025 (*)	100.00	Aa3
26/04/2018	9th Series	1,900,000	3-month Euribor + 30 bps	26/04/2025 (**)	100.00	Aa3
23/11/2018	10th Series	600,000	3-month Euribor + 90 bps	23/11/2022	100.00	Aa3
25/09/2019	11th Series	650,000	3-month Euribor + 80 bps	25/03/2025	100.00	Aa3
Total		**5,050,000**				

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

Other information

With reference to the Ninth Series retained of CBs issued (i) on 7 January 2021 an early partial repayment was carried out for 600 million and (ii) in April 2021 the Final Terms were amended in order to extend the maturity from 26 April 2021 to 26 April 2025. Furthermore, in October 2021, the maturity date of the Eighth Series retained was extended from 7 November 2021 to 7 November 2025.

On the Guarantor Payment Dates of 15 January, 15 April, 15 July and 15 October 2021, the subordinated loan granted by Banco BPM to the SPE was repaid for a total of 840 million.

In June 2021, Banco BPM repurchased the positions classified as bad loans as at 31 May 2021 "en bloc" and the relative price was paid to the SPE in July 2021.

Events occurring after the end of the year

The subordinated loan granted by Banco BPM to the SPE was repaid for 230 million on the Guarantor Payment Date of 17 January 2022.

BPM Covered Bond 2 Programme ("BPM CB2")

During previous years, ten residential and landed mortgage loan portfolios were sold to the SPE BPM Covered Bond 2 S.r.l. for a total value of 9.2 billion.

In June 2021, by signing the related contracts, Banco BPM sold a new portfolio of residential mortgage loans, excluding disbursements to employees of the Group, for a total residual debt of 2,498 million to the SPE BPM Covered Bond S.r.l. ("Sixth Banco BPM Portfolio", eleventh 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, took on the role of 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 2021:

Bank	**Value as at 31/12/2021**	**Value as at 31/12/2020**
Banco BPM	7,280,076	5,772,963

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 31/12/2021**	**Value as at 31/12/2020**
Banco BPM	65,447	296,338

In 2021, the mortgage loans portfolio generated collections totalling 1,084.7 million, of which 977.5 million represented principal and 107.2 million represented interest.

Bonds issued by Banco BPM

As part of the BPM CB2 Programme, Banco BPM issued six CB Series, which are listed on the Luxembourg Stock Exchange, for a total nominal value of 4,250 million. All bonds issued by the programme have been placed on the capital market.

Therefore, as at 31 December 2021, the bonds issued and outstanding break down as follows:

Date of issue	**Series/Tranche**	**Notional value**	**Coupon**	**Maturity**	**Issue Price (flat quotation)**	**Moody's Rating (*)**
14/09/2015	1st Series	1,000,000	0.875%	14/09/2022	99.872	Aa3
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	0.5%	05/12/2025	100.000	Aa3
Total		**4,250,000**				

(*) Rating as at 31 December 2021.

Other information

On the Guarantor Payment Dates of 18 January, 19 April, 19 July and 18 October 2021, the subordinated loan granted by Banco BPM to the SPE was repaid for a total of 1,090 million.

In June 2021, Banco BPM repurchased the positions classified as bad loans as at 31 May 2021 "en bloc" and the relative price was paid to the SPE in July 2021.

Events occurring after the end of the year

The subordinated loan granted by Banco BPM to the SPE was repaid for 230 million on the Guarantor Payment Date of 18 January 2022.

Accounting representation

On the consolidated financial statements of Banco BPM S.p.A. (as Issuer Parent Company and transferor 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 transferor banks to the SPEs continue to be posted under the balance sheet assets under item "40b - Loans to customers", and the relative interest is posted under item 10 of the income statement "Interest and similar income". As at 31 December 2021 the book value of the mortgages is (i) 3,428 million for the BP CB1 programme, (ii) 5,151 million for the BPM CB1 programme and (iii) 7,274 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 10c of the Liabilities) and valued according to the fair value hedge accounting rules, hedged by the interest rate hedge 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 2021 amounts to (i) 1,283.5 million relative to the BP CB programme, (ii) 500 million relative to the BPM CB1 programme and (iii) 4,282.6 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 2021, 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 0.45% 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 2.57% 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.

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 and of LGD for Corporate and Private Customer portfolios, and EAD for the retail segment.
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 segment, the latest backtesting showed a good discriminatory range of models, both in terms of single modules and final integrating ratings, 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 was better than 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, for which the Internal Validation Function did not identify any significant problems for the estimates produced on corporate and private customer models.

Testing was conducted in relation to retail CCF, the outcome of which did not identify any significant problems for the estimates produced on the retail model.

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 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 positions in the Parent Company;
- the centralisation in the subsidiary Banca Akros of the risk positions and the operating flows associated with trading and market making of securities, currency, OTC derivatives and other financial instruments.

With regard to the internal model to calculate capital absorption against market risk, following the request submitted in 2019 by Banco BPM Group, on 16 November 2020, the Supervisory Authority granted the authorisation to extend it to the specific risk of debt securities, therefore from the reporting date of 31 December 2020, Banco BPM Group uses the extended model to calculate the capital requirement for Market Risk. Said requirement is therefore calculated on the basis of VaR, Stressed VaR – including the specific risk of debt securities – and IRC (Incremental Risk Charge). During 2021, significant refinements were made to the internal model, with a view to fulfilling the Obligations of previous inspections by the Supervisory Authority: the changes regarded, in particular, the measurement of foreign exchange positions, the quality of VaR, Stressed VaR and IRC market parameter data, the process of identifying and managing Risks Not In Model Engine (RNIME) and the IRC calculation method. As regards the latter metric, a limitation is in place with a 10% Add-On on an individual and consolidated basis, until several relative methodological findings have been resolved.

Parent Company's Portfolio

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

- the investment portfolio, which represents the major source of generic interest-rate risk and credit spread risk, that are recorded in the accounting category Trading, almost completely a bond portfolio. At the end of 2021, the Parent Company's bond portfolio amounted to a nominal value of approximately 414 million (nominal short position), equally split between Italian and foreign government bonds and by a marginal share of financial and Italian corporate securities. The sensitivity (delta) 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 bp, was approximately -19 thousand euro, deriving from a net prevalence of exposures on the various nodes of the Euro rate curve. This portfolio also presents an overall exposure to credit spread risk of about +77 thousand euro, considering a 1 basis point shock. That exposure is the result of a long exposure subject to sensitivity on German government securities. The position in Italian government securities is marginal. In addition to the bond portfolio, there is the price risk component of the equity trading portfolio, which has a small exposure of approximately 6 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. Other activities to be reported during the year include the market making conducted on the Systematic Internaliser to support the liquidity of retail bond issues of the Group and third parties, which was carried out as part of the larger function of market maker on bonds.
More specifically, bond exposure, excluding Banco BPM issues, amounted to a nominal value of around 114 million at the end of the year, 76% (86 million) of which was represented by Financial securities (mainly Italian), 33% (37 million) by Corporate bonds, 15% (17.1 million) by Supranational bonds, and the remainder by a short position in Italian (-5%; -5.4 million) and foreign (-18%; -20.9 million) government bonds, the latter mainly German bonds.
The exposure to credit spread risk was approximately -25 thousand euro overall (net of Banco BPM issues), considering a shock of 1 basis point, deriving mainly from financial securities (credit spread sensitivity: approximately -25 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 + 30 thousand euro, assuming a parallel change in the interest rate curve of 1 basis point. The greatest exposure to interest rate risk was recorded on the EUR (33 thousand euro, positive rho) and CHF (2 thousand euro, positive rho) 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 interest rate and credit spread, exchange rate and price risks. 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 share portfolio is equivalent to a delta equivalent short position of about +10 million, concentrated in the Eurozone (+26 million), USA (-15 million) and Asia (-2 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 2021 the exposure was positive, corresponding to around 1 million, 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 process 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.
Specifically, for the identification, measurement, management and operating control of the risk positions of the Banks of the Group, the Parent Company's Finance Function and Banca Akros make use of sophisticated position-keeping and risk control systems that provide constant control over exposure levels and over the accurate verification of compliance with the operating limits defined by the Board of Directors of the Parent Company and the Boards of Directors of the 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 specific level of confidence.
The VaR is the main risk measure used by the Group to quantify exposure to market risk. It is calculated by applying a historical simulation model and a full revaluation of market factors approach (the value of the portfolio under analysis is completely revalued based on the results of the simulation of the underlying market parameters). The application of the full revaluation approach perfectly captures the convexity of derivative instruments without making any type of approximation. 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 January and December 2020 for Banca Akros, (August 2011 - August 2012 for the Parent Company) as the most severe scenario (in the fourth quarter of 2021). 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.
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 and 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 of the metric more reactive to the most recent changes in market parameters, and by equal-weighting historic observations (Lambda = 1). For regulatory purposes, equal-weighting measurement is used, while for operational purposes, the higher between the VaR calculated with the cited decay factor and the equal-weighted one is prudentially used.
The measurement of operational risk includes the interest rate risk and the specific risk of debt securities, as well as the equity and exchange rate risks. In addition, operational risk measurement includes dividend and correlation risks, through stress testing techniques and without the benefit of diversification with respect to VaR metrics.
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).

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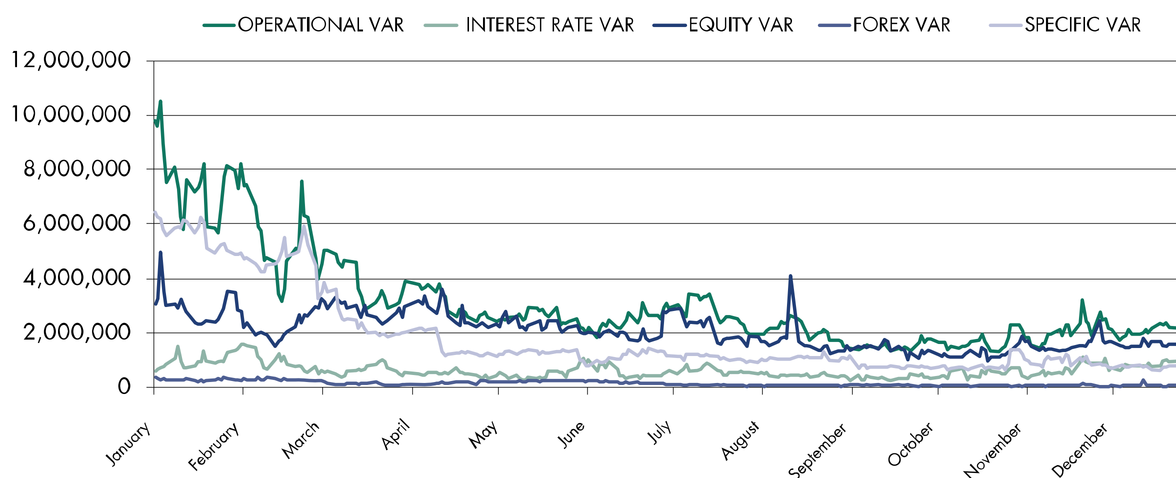
Regulatory trading book: internal models and other sensitivity analysis methods

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 2021, referring to the regulatory trading book of Banco BPM Group.

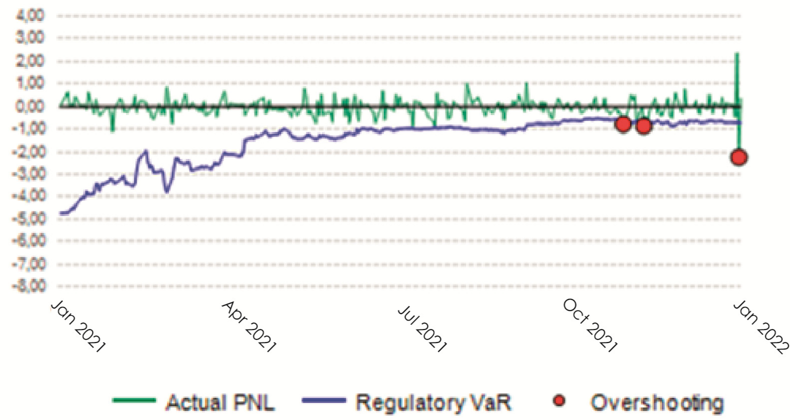


Regulatory trading books	2021			
(in millions of euro)	**31 December**	**average**	**maximum**	**minimum**
Interest Rate Risk	3.459	0.638	3.459	0.257
Exchange Rate Risk	0.044	0.140	0.377	0.020
Equity Risk	1.553	2.044	4.967	0.970
Dividend and Correlation Risk	0.765	0.660	1.140	0.245
Specific Debt Securities Risk	0.765	1.841	6.438	0.595
Total uncorrelated	**6.587**			
Diversification effect	-2.572			
Combined risk (*)	**4.015**	**3.094**	**10.497**	**1.312**

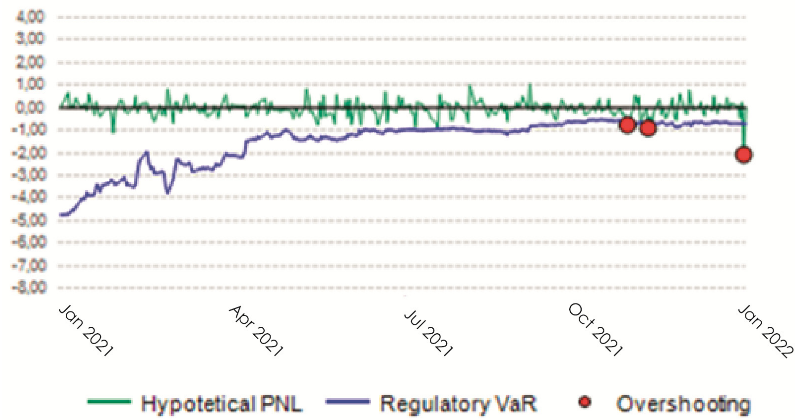
(*) Overall operational VaR

Looking at the graph and the table shown above, it can be noted that the risk component identified in the second half of 2021 is that related to generic risk on equity instruments (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) and, to a lesser extent, that relating to the specific risk on debt securities. Changes in these securities mostly account for trends in the Group's overall risks. More specifically, the portfolio showed a lower level of risk in the second half of the year, due to lesser importance of the specific risk component, following its exit from relevant scenarios for the calculation of VaR in March/April 2020 and the significant reduction of the exposure in Italian government securities in the second half of the year.
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 instruments, 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 using a decay factor used in operational approaches.

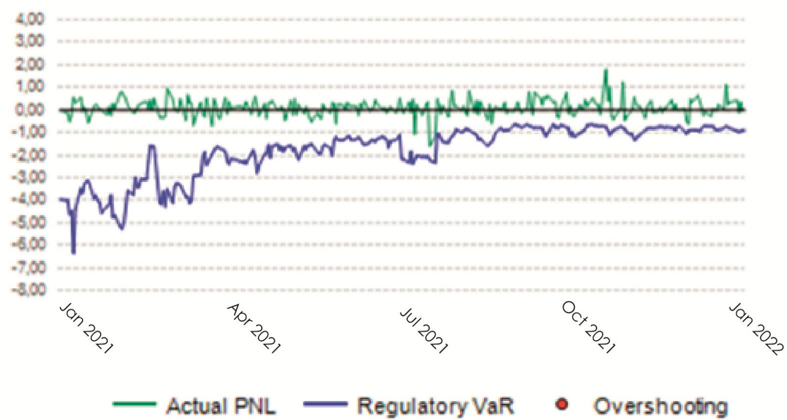
Actual backtesting Banco BPM



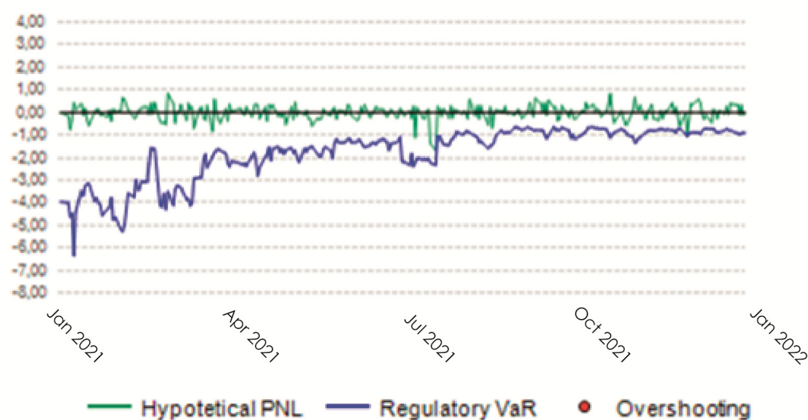
Theoretical backtesting Banco BPM



Actual backtesting Banca Akros



Theoretical backtesting Banca Akros



As regards Banca Akros, in 2021, no Actual or Theoretical Backtesting exceptions were recorded on the Trading book.
As regards the Parent Company, in 2021, 3 Actual and Theoretical P&L Backtesting exceptions were recorded on the Trading book, mainly due to the narrowing of the credit spread of German and Spanish government securities, against a long sensitivity position.

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 horizon for Banca Akros and the Parent Company. The results of the analysis showed that the model has a good capacity to predict the number of backtesting overruns, above all following the introduction of specific risk.
Additionally, the adequacy of the scaling method used to quantify the capital requirement, as required by regulations, was reviewed.
To verify the severity of the stressed period used in the Stressed VaR risk measurement, appropriate analysis is 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.
Lastly, the Internal Validation function validates sample pricing models and performs benchmark models in order to evaluate the robustness of those in production.
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), with an overall result of the self-assessment process considered adequate.
During the year, 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 interest rate risk and price risk measurement methods

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.
In 2021, the usual periodic maintenance and update of internal models was conducted, in particular the introduction of conditional cash-flows for prepayment models and on-demand items, also identifying transactional deposits for the latter; Furthermore, discounting through the €STR curve was introduced.
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 following a parallel shock of the spot rate curves of +/- 40 bps over a time horizon of twelve months (income perspective) in keeping with both a dynamic and static approach to financial statements;
- the change in economic value following a parallel shock of spot interest rate curves of +/- 200 basis points 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 operating limit.

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.

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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	**19,937,921**	**64,151,056**	**7,246,517**	**5,925,350**	**23,929,452**	**16,462,224**	**9,069,338**	**1,133**
1.1 Debt securities	111,840	2,080,745	2,408,158	2,825,158	9,618,949	10,760,553	593,203	-
- with early redemption option	7,005	1,460,043	33,784	139,154	367,965	323,077	28,214	-
- other	104,835	620,702	2,374,374	2,686,004	9,250,984	10,437,476	564,989	-
1.2 Loans to banks	531,375	10,950,467	222,251	2,963	9,595	-	-	-
1.3 Loans to customers	19,294,706	51,119,844	4,616,108	3,097,229	14,300,908	5,701,671	8,476,135	1,133
- current accounts	8,400,208	-	864	4,182	87,369	1,040	-	-
- other loans	10,894,498	51,119,844	4,615,244	3,093,047	14,213,539	5,700,631	8,476,135	1,133
- with early redemption option	3,342,603	46,388,215	3,865,697	2,869,055	13,338,087	5,562,256	8,416,786	-
- other	7,551,895	4,731,629	749,547	223,992	875,452	138,375	59,349	1,133
2. On-balance sheet liabilities	**106,988,226**	**3,940,242**	**324,847**	**1,477,354**	**47,903,562**	**1,607,849**	**326,161**	**-**
2.1 Due to customers	103,981,145	624,736	289,509	352,954	525,178	286,760	302,722	-
- current accounts	101,352,760	6	2	1,102	5,000	-	-	-
- other payables	2,628,385	624,730	289,507	351,852	520,178	286,760	302,722	-
- with early redemption option	-	-	-	-	-	-	-	-
- other	2,628,385	624,730	289,507	351,852	520,178	286,760	302,722	-
2.2 Due to banks	2,881,883	85,040	22,533	16,065	38,779,276	9,059	1,798	-
- current accounts	79,823	-	-	-	-	-	-	-
- other payables	2,802,060	85,040	22,533	16,065	38,779,276	9,059	1,798	-
2.3 Debt securities	125,179	3,230,466	12,805	1,108,335	8,599,108	1,312,030	21,641	-
- with early redemption option	36,886	999,879	55	104,979	796,755	1,194,874	226	-
- other	88,293	2,230,587	12,750	1,003,356	7,802,353	117,156	21,415	-
2.4 Other liabilities	19	-	-	-	-	-	-	-
- with early redemption option	-	-	-	-	-	-	-	-
- other	19	-	-	-	-	-	-	-
3. Financial derivatives	**3,143,914**	**14,415,664**	**2,841,661**	**7,041,107**	**12,680,474**	**9,281,486**	**1,647,565**	**-**
3.1 With underlying security	2,200,000	-	37,500	-	7,500	-	-	-
- Options	-	-	37,500	-	7,500	-	-	-
+ Long positions	-	-	22,500	-	4,500	-	-	-
+ Short positions	-	-	15,000	-	3,000	-	-	-
- Other	2,200,000	-	-	-	-	-	-	-
+ Long positions	2,200,000	-	-	-	-	-	-	-
+ Short positions	-	-	-	-	-	-	-	-
3.2 Without underlying security	943,914	14,415,664	2,804,161	7,041,107	12,672,974	9,281,486	1,647,565	-
- Options	1,291	96,842	36,748	13,404	68,525	19,811	12,689	-
+ Long positions	1,291	91,927	28,079	301	184	93	2,780	-
+ Short positions	-	4,915	8,669	13,103	68,341	19,718	9,909	-
- Other derivatives	942,623	14,318,822	2,767,413	7,027,703	12,604,449	9,261,675	1,634,876	-
+ Long positions	437,623	4,816,500	2,731,825	6,926,500	6,888,894	2,820,385	1,150,000	-
+ Short positions	505,000	9,502,322	35,588	101,203	5,715,555	6,441,290	484,876	-
4. Other off-balance sheet transactions	**31,340,628**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
+ Long positions	15,670,314	-	-	-	-	-	-	-
+ Short positions	15,670,314	-	-	-	-	-	-	-

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	**150,387**	**1,051,370**	**295,330**	**4,903**	**1,410,281**	**1,839,495**	**1,372**	**-**
1.1 Debt securities	19,957	250,191	1,770	-	1,401,744	1,837,263	-	-
- with early redemption option	236	-	-	-	8,803	16,059	-	-
- other	19,721	250,191	1,770	-	1,392,941	1,821,204	-	-
1.2 Loans to banks	18,667	145,314	762	1,956	-	-	-	-
1.3 Loans to customers	111,763	655,865	292,798	2,947	8,537	2,232	1,372	-
- current accounts	79,565	-	-	-	-	2	-	-
- other loans	32,198	655,865	292,798	2,947	8,537	2,230	1,372	-
- with early redemption option	6,337	279,308	247,085	1,470	6,642	1,524	1,372	-
- other	25,861	376,557	45,713	1,477	1,895	706	-	-
2. On-balance sheet liabilities	**881,636**	**3,895,745**	**213,378**	**3,461**	**-**	**-**	**-**	**-**
2.1 Due to customers	818,793	145,820	133,619	812	-	-	-	-
- current accounts	815,606	36	133,619	812	-	-	-	-
- other payables	3,187	145,784	-	-	-	-	-	-
- with early redemption option	-	-	-	-	-	-	-	-
- other	3,187	145,784	-	-	-	-	-	-
2.2 Due to banks	62,843	3,749,925	79,759	2,649	-	-	-	-
- current accounts	2,369	-	-	-	-	-	-	-
- other payables	60,474	3,749,925	79,759	2,649	-	-	-	-
2.3 Debt securities	-	-	-	-	-	-	-	-
- with early redemption option	-	-	-	-	-	-	-	-
- other	-	-	-	-	-	-	-	-
2.4 Other liabilities	-	-	-	-	-	-	-	-
- with early redemption option	-	-	-	-	-	-	-	-
- other	-	-	-	-	-	-	-	-
3. Financial derivatives	**-**	**1,602,508**	**66,219**	**738,301**	**1,465,654**	**941,374**	**-**	**-**
3.1 With underlying security	-	-	-	-	-	-	-	-
- Options	-	-	-	-	-	-	-	-
+ Long positions	-	-	-	-	-	-	-	-
+ Short positions	-	-	-	-	-	-	-	-
- Other	-	-	-	-	-	-	-	-
+ Long positions	-	-	-	-	-	-	-	-
+ Short positions	-	-	-	-	-	-	-	-
3.2 Without underlying security	-	1,602,508	66,219	738,301	1,465,654	941,374	-	-
- Options	-	-	-	-	-	-	-	-
+ Long positions	-	-	-	-	-	-	-	-
+ Short positions	-	-	-	-	-	-	-	-
- Other derivatives	-	1,602,508	66,219	738,301	1,465,654	941,374	-	-
+ Long positions	-	1,602,508	66,219	738,301	-	-	-	-
+ Short positions	-	-	-	-	1,465,654	941,374	-	-
4. Other off-balance sheet transactions	**-**	**122,511**	**934**	**17,697**	**-**	**-**	**-**	**-**
+ Long positions	-	51,940	934	17,697	-	-	-	-
+ Short positions	-	70,571	-	-	-	-	-	-

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.
In light of a market scenario characterised by the persistence of rates close to zero and negative on short-term maturities, for the purpose of the sensitivity analyses the risk measurement metrics are monitored by applying a floor to the development of the future rates used for the calculation.
The table below shows exposure to interest rate risk at the end of 2021 in accordance with operational risk measurements.

Risk ratios (%)	2021				2020	
	31 December	average	maximum	minimum	31 December	average
For shift + 100 bp						
Financial margin at risk/Financial margin	*22.7%*	*23.3%*	*26.9%*	*19.2%*	14.1%	14.5%
For shift - 100 bp (EBA floor)						
Financial margin at risk/Financial margin	*-8.5%*	*-6.4%*	*-4.9%*	*-8.9%*	-5.6%	-6.8%
For shift + 100 bp						
Economic value at risk/Economic value of capital	*-0.2%*	*-0.2%*	*4.2%*	*-1.8%*	1.4%	-0.5%
For shift - 100 bp (EBA floor)						
Economic value at risk/Economic value of capital	*0.4%*	*0.6%*	*2.6%*	*-0.4%*	1.7%	0.9%

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.

1.2.3 Exchange rate risk

QUALITATIVE INFORMATION

A. General aspects, management procedures and exchange rate risk measurement methods

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 2021, adding all the exchange rate positions against the euro, was substantially at break-even, corresponding to around +270 thousand euro (long foreign currency, short euro), concentrated mainly in the USD (US Dollar, exposure: -630 thousand euro), CHF (Swiss Franc, exposure: -730 thousand euro), AUD (Australian Dollar, exposure: +840 thousand euro) and GBP (Pound, exposure: +790 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 2021 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	GBP	JPY	CHF	HKD	OTHER
A. Financial assets	**5,200,782**	**54,607**	**121,106**	**109,468**	**29,577**	**128,761**
A.1 Debt securities	3,510,814	-	-	22,269	-	10,347
A.2 Equity instruments	509,393	33,237	104,446	64,733	27,757	96,169
A.3 Loans to banks	136,472	5,204	13,852	15,390	494	18,211
A.4 Loans to customers	1,044,103	16,166	2,808	7,076	1,326	4,034
A.5 Other financial assets	-	-	-	-	-	-
B. Other assets	**53,880**	**20,212**	**6,955**	**28,674**	**190**	**28,381**
C. Financial liabilities	**4,835,718**	**68,714**	**11,005**	**20,070**	**66**	**58,648**
C.1 Due to banks	3,869,123	7,251	109	127	1	18,564
C.2 Due to customers	966,595	61,463	10,896	19,943	65	40,084
C.3 Debt securities	-	-	-	-	-	-
C.4 Other financial liabilities	-	-	-	-	-	-
D. Other liabilities	**21,817**	**757**	**106**	**1,205**	**23**	**2,617**
E. Financial derivatives						
- Options						
+ Long positions	105,557	2,049	-	3,368	-	15,585
+ Short positions	138,518	389	6,480	208	-	3,134
- Other derivatives						
+ Long positions	14,465,957	243,410	212,829	6,847	32,513	168,239
+ Short positions	14,446,272	235,572	218,770	94,889	36,167	180,242
Total assets	**19,826,176**	**320,278**	**340,890**	**148,357**	**62,280**	**340,966**
Total liabilities	**19,442,325**	**305,432**	**236,361**	**116,372**	**36,256**	**244,641**
Imbalance (+/-)	**383,851**	**14,846**	**104,529**	**31,985**	**26,024**	**96,325**

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 info-providers;
- 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 info-providers) 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	**358,949**	**(140,244)**	**1,465,624**	**(1,605,868)**
of which: Listed/Quoted Derivatives	355,272	71,417	247,175	(175,758)
of which: Certificates valued using internal models developed by the financial engineering department of Banca Akros	26	(168,280)	-	(168,280)
of which: OTC derivatives valued using the proprietary models of the Front Office system	3,237	(241,685)	572,044	(813,729)
of which: OTC derivatives valued using internal models developed by the financial engineering department of Banca Akros	412	197,465	645,566	(448,101)
of which: OTC derivatives valued using external contributors	2	839	839	-

1.3.1 Trading derivative instruments

A. FINANCIAL DERIVATIVES

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

Underlying assets/Derivative types	Total 31/12/2021				Total 31/12/2020			
	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	37,085,821	37,208,379	15,243,424	1,425,919	36,507,566	29,788,462	13,716,474	937,200
a) Options	-	22,849,540	2,268,340	14,324	-	13,418,203	2,466,080	86,200
b) Swaps	37,085,821	14,358,839	11,097,296	-	36,507,566	16,370,259	9,432,029	-
c) Forwards	-	-	78,000	-	-	-	57,000	-
d) Futures	-	-	1,799,788	1,411,595	-	-	1,761,365	851,000
e) Other	-	-	-	-	-	-	-	-
2. Equity instruments and share indices	-	10,882,157	1,409,667	1,134,792	-	10,636,861	1,627,201	1,001,981
a) Options	-	10,882,157	968,990	1,102,154	-	10,636,861	1,256,943	964,593
b) Swaps	-	-	-	-	-	-	-	-
c) Forwards	-	-	-	-	-	-	-	-
d) Futures	-	-	440,677	32,638	-	-	370,258	37,388
e) Other	-	-	-	-	-	-	-	-
3. Currencies and gold	-	28,279,994	1,380,863	-	-	36,605,277	1,164,478	-
a) Options	-	57,793	316,632	-	-	199,349	269,441	-
b) Swaps	-	3,890	16,267	-	-	-	15,138	-
c) Forwards	-	28,218,311	1,032,915	-	-	36,405,928	875,202	-
d) Futures	-	-	-	-	-	-	-	-
e) Other	-	-	15,049	-	-	-	4,697	-
4. Commodities	-	80,511	14,262	-	-	38,027	9,623	-
5. Other	-	-	-	-	-	-	-	-
Total	**37,085,821**	**76,451,041**	**18,048,216**	**2,560,711**	**36,507,566**	**77,068,627**	**16,517,776**	**1,939,181**

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

Derivative types	Total 31/12/2021				Total 31/12/2020			
	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	-	861,792	25,514	59,666	-	680,670	52,748	47,922
b) Interest rate swaps	344,233	273,266	119,470	-	457,759	473,689	249,740	-
c) Cross currency swaps	-	-	-	-	-	-	-	-
d) Equity swaps	-	-	-	-	-	-	-	-
e) Forwards	-	604,711	8,082	-	-	1,064,054	7,873	-
f) Futures	-	-	-	-	-	-	-	-
g) Other	-	31,620	8,279	-	-	10,872	1,706	-
Total	**344,233**	**1,771,389**	**161,345**	**59,666**	**457,759**	**2,229,285**	**312,067**	**47,922**
2. Negative fair value								
a) Options	-	636,046	193,276	29,350	-	587,065	370,671	41,616
b) Interest rate swaps	417,310	361,161	34,845	-	635,395	563,899	27,193	-
c) Cross currency swaps	-	-	-	-	-	-	-	-
d) Equity swaps	-	-	-	-	-	-	-	-
e) Forwards	-	577,384	9,963	-	-	1,187,272	11,201	-
f) Futures	-	-	-	-	-	-	-	-
g) Other	-	35,553	3,848	-	-	10,176	1,945	-
Total	**417,310**	**1,610,144**	**241,932**	**29,350**	**635,395**	**2,348,412**	**411,010**	**41,616**

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	2,112,888	389,739	12,740,797
- positive fair value	X	1	2,892	128,366
- negative fair value	X	-	1,038	40,454
2) Equity instruments and share indices				
- notional value	X	440,677	59,184	909,806
- positive fair value	X	-	6,730	5,658
- negative fair value	X	-	849	182,610
3) Currencies and gold				
- notional value	X	582,124	15,049	783,690
- positive fair value	X	1,041	202	8,483
- negative fair value	X	4,177	-	8,955
4) Commodities				
- notional value	X	199	-	14,063
- positive fair value	X	-	-	7,973
- negative fair value	X	-	-	3,848
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	37,085,821	23,098,466	12,278,364	1,831,551
- positive fair value	344,233	323,568	117,211	13,790
- negative fair value	417,309	300,540	148,504	3,731
2) Equity instruments and share indices				
- notional value	-	7,587,555	3,294,602	-
- positive fair value	-	547,782	132,200	-
- negative fair value	-	411,258	132,284	-
3) Currencies and gold				
- notional value	-	21,983,329	6,052,649	244,017
- positive fair value	-	470,904	132,969	1,381
- negative fair value	-	434,380	140,048	3,847
4) Commodities				
- notional value	-	63,401	6,630	10,480
- positive fair value	-	25,851	668	5,064
- negative fair value	-	34,484	1,022	47
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	28,892,527	49,181,762	11,463,335	89,537,624
A.2 Financial derivatives on equity instruments and share indices	4,355,307	7,594,126	342,391	12,291,824
A.3 Financial derivatives on currencies and gold	29,608,984	51,873	-	29,660,857
A.4 Financial derivatives on commodities	94,773	-	-	94,773
A.5 Other financial derivatives	-	-	-	-
Total 31/12/2021	**62,951,591**	**56,827,761**	**11,805,726**	**131,585,078**
Total 31/12/2020	**60,335,220**	**52,783,943**	**16,974,808**	**130,093,971**

OTC financial 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 said transaction (Regulation (EU) no. 575/2013), solely for management purposes, the Parent Company and Banca Akros use internal methods to estimate exposures to the risk of possible default of counterparties in OTC derivative transactions. This method entails a simplified approach to estimate the exposure to counterparty risk in derivatives, with regard to existing positions with counterparties who have a signed "collateral agreement" (Credit Support Annex – CSA); the above approach, known as the "Shortcut Method", entails assessing possible changes of the Mark to Market for 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 lending process chains of the Parent Company and of Banca Akros, with a daily monitoring and reporting system. For the purposes of Prudential supervision, the Group adopts the standardised approach SA-CCR, which came into force in June 2021, to estimate exposure for the entire derivatives scope.
For the remainder of the perimeter exposed to counterparty risk (Repurchase Agreements, Securities lending and medium/long-term loans), the amount of exposure is calculated using the standardised approach, also adopted for Supervisory Reporting.
In accordance with the Basel 3 Framework Regulation, additional capital requirements regarding the following are to be calculated:

- Own funds for the Credit Value Adjustment (CVA) through the adoption of the standardised method, as established by (EU) Regulation no. 575/13 for banks that are not authorised to use the internal model method (IMM) for counterparty risk;
- exposures relating to operations with Qualified Central Counterparties (QCCP) by adopting the methods envisaged by Arts. 306-308 of EU Regulation no. 575/2013.

Furthermore, from September 2021, the Group has met the obligation envisaged by European Legislation (Delegated Regulation (EU) 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.

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	-	84,000
b) Credit spread products	-	-
c) Total rate of return swaps	-	-
d) Other	-	-
Total 31/12/2021	**-**	**84,000**
Total 31/12/2020	**47,000**	**-**
2. Protection sold		
a) Credit default products	-	-
b) Credit spread products	-	-
c) Total rate of return swaps	-	-
d) Other	-	-
Total 31/12/2021	**-**	**-**
Total 31/12/2020	**-**	**-**

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

Derivative types	Total 31/12/2021	Total 31/12/2020
1. Positive fair value		
a) Credit default products	139	311
b) Credit spread products	-	-
c) Total rate of return swaps	-	-
d) Other	-	-
Total	**139**	**311**
2. Negative fair value		
a) Credit default products	2,151	1,105
b) Credit spread products	-	-
c) Total rate of return swaps	-	-
d) Other	-	-
Total	**2,151**	**1,105**

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	52,000	32,000	-	-
– positive fair value	72	67	-	-
– negative fair value	1,706	445	-	-
2) Protection sold				
– notional value	-	-	-	-
– positive fair value	-	-	-	-
– 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	Total
1 Protection sold		-	-	-	-
2 Protection bought		-	84,000	-	84,000
Total	**31/12/2021**	**-**	**84,000**	**-**	**84,000**
Total	**31/12/2020**	**-**	**47,000**	**-**	**47,000**

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 "Part A – Accounting policies" and the comment under table of the item "30. Financial liabilities designated at fair value" of "Part B – Information on the balance sheet" 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 partial repayments of mortgages or 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 31/12/2021				Total 31/12/2020			
	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	**15,909,028**	**13,421,874**	**2,100,000**	**-**	**18,758,867**	**10,680,235**	**2,100,000**	**-**
a) Options	-	205,000	-	-	-	206,002	-	-
b) Swaps	15,909,028	10,373,833	2,100,000	-	18,758,867	7,974,158	2,100,000	-
c) Forwards	-	2,843,041	-	-	-	2,500,075	-	-
d) Futures	-	-	-	-	-	-	-	-
e) Other	-	-	-	-	-	-	-	-
2. Equity instruments and share indices	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
a) Options	-	-	-	-	-	-	-	-
b) Swaps	-	-	-	-	-	-	-	-
c) Forwards	-	-	-	-	-	-	-	-
d) Futures	-	-	-	-	-	-	-	-
e) Other	-	-	-	-	-	-	-	-
3. Currencies and gold	**-**	**-**	**28,659**	**-**	**-**	**-**	**-**	**-**
a) Options	-	-	-	-	-	-	-	-
b) Swaps	-	-	-	-	-	-	-	-
c) Forwards	-	-	28,659	-	-	-	-	-
d) Futures	-	-	-	-	-	-	-	-
e) Other	-	-	-	-	-	-	-	-
4. Commodities	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5. Other	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total	**15,909,028**	**13,421,874**	**2,128,659**	**-**	**18,758,867**	**10,680,235**	**2,100,000**	**-**

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

Derivative types	Positive and negative fair value							
	Total 31/12/2021				Total 31/12/2020			
	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	91,581	104,390	6,858	-	122,738	67,256	7,746	-
c) Cross currency swaps	-	-	-	-	-	-	-	-
d) Equity swaps	-	-	-	-	-	-	-	-
e) Forwards	-	15,756	-	-	-	-	-	-
f) Futures	-	-	-	-	-	-	-	-
g) Other	-	-	-	-	-	-	-	-
Total	**91,581**	**120,146**	**6,858**	**-**	**122,738**	**67,256**	**7,746**	**-**
Negative Fair Value								
a) Options	-	33	-	-	-	269	-	-
b) Interest rate swaps	171,765	146,606	-	-	318,539	344,436	-	-
c) Cross currency swaps	-	-	-	-	-	-	-	-
d) Equity swaps	-	-	-	-	-	-	-	-
e) Forwards	-	19	1,131	-	-	45,173	-	-
f) Futures	-	-	-	-	-	-	-	-
g) Other	-	-	-	-	-	-	-	-
Total	**171,765**	**146,658**	**1,131**	**-**	**318,539**	**389,878**	**-**	**-**

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	2,100,000	-	-
- positive fair value	X	6,858	-	-
- negative fair value	X	-	-	-
2) Equity instruments and share indices				
- notional value	X	-	-	-
- positive fair value	X	-	-	-
- negative fair value	X	-	-	-
3) Currencies and gold				
- notional value	X	28,659	-	-
- positive fair value	X	-	-	-
- negative fair value	X	1,131	-	-
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	15,909,028	10,663,544	2,758,330	-
- positive fair value	91,581	97,378	22,768	-
- negative fair value	171,765	103,900	42,759	-
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	5,598,154	14,114,208	11,718,540	31,430,902
A.2 Financial derivatives on equity instruments and share indices	-	-	-	-
A.3 Financial derivatives on currencies and gold	28,659	-	-	28,659
A.4 Financial derivatives on commodities	-	-	-	-
A.5 Other financial derivatives	-	-	-	-
Total 31/12/2021	**5,626,813**	**14,114,208**	**11,718,540**	**31,459,561**
Total 31/12/2020	**6,915,845**	**15,436,364**	**9,186,892**	**31,539,101**

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:	**6,333,213**	**-**	**(57,689)**	**-**	**-**	**-**
1.1 Debt securities and interest rates	6,333,213	-	(57,689)	-	-	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:	**9,993,965**	**-**	**1,982**	**-**	**-**	**2,875**
1.1 Debt securities and interest rates	9,993,965	-	1,982	-	-	X
1.2 Equity instruments and share indices	-	-	-	-	-	X
1.3 Currencies and gold	-	-	-	-	-	X
1.4 Loans	-	-	-	-	-	X
1.5 Other	-	-	-	-	-	X
Total 31/12/2021	**16,327,178**	**-**	**(55,707)**	**-**	**-**	**2,875**
Total 31/12/2020	**16,899,958**	**-**	**380,685**	**-**	**-**	**47,279**
B. Liabilities						
1. Financial liabilities at amortised cost - hedging of:	**1,538,986**	**-**	**(6,694)**	**-**	**-**	**(47,812)**
1.1 Debt securities and interest rates	1,538,986	-	(6,694)	-	-	X
1.2 Currencies and gold	-	-	-	-	-	X
1.3 Other	-	-	-	-	-	X
Total 31/12/2021	**1,538,986**	**-**	**(6,694)**	**-**	**-**	**(47,812)**
Total 31/12/2020	**3,699,591**	**-**	**8,629**	**-**	**-**	**122,009**

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	**-**	**16,416**	**-**
1.1 Debt securities and interest rates	-	16,416	-
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) 31/12/2021	**-**	**(16,416)**	**-**
Total (A) 31/12/2020	**-**	**(4,287)**	**-**
B. Foreign investment hedges	**X**	**(603)**	**-**
Total (A+B) 31/12/2021	**-**	**(17,019)**	**-**
Total (A+B) 31/12/2020	**-**	**(4,088)**	**-**

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	**(4,287)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Fair value changes (effective portion)	(18,119)	-	-	-	-	-	-	-	-	-
Reclassifications to income statement	-	-	-	-	-	-	-	-	-	-
of which: future transactions no longer expected	-	-	-	-	-	X	X	X	X	X
Other changes	5,990	-	-	-	-	-	-	-	-	-
of which: transfers at the initial book value of hedged instruments	-	-	-	-	-	X	X	X	X	X
Closing balance	**(16,416)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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 1,710 million USD (equal to 1,509.8 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 1,700 million USD (1,501 million euro) and in the "Financial assets measured at fair value through other comprehensive income" portfolio for a nominal value of 10 million USD (8.8 million euro).
For further details on the disclosure related to the reform in 2021, with the introduction of the disclosure obligation envisaged by stage 2 of the IBOR Reform pursuant to standard IFRS 7, paragraphs 24I and 24J, 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	52,683,349	-	-	-
- net positive fair value	-	-	-	-
- net negative fair value	153,480	-	-	-
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 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, instead, during the year, both the liquidity and funding risk profiles benefited from the expansionary measures adopted by the European Central Bank (e.g. extension of the types of collateral accepted by the Central Bank to guarantee refinancing operations) as well as by the positive trend of customer funding.

A. General aspects, management processes and measurement methods of 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. Usually, two types of Liquidity Risk are identified: Liquidity and Funding Risk, namely the risk that the Group is not able, in the short term (liquidity) and long term (funding), to meet its payment commitments and its obligations in an efficient manner due to the inability to obtain funds without prejudicing its core business activities and/or its financial situation; Market Liquidity Risk represents the risk that the Group is not able to liquidate an asset, without generating losses in the capital account due to the poor depth of the reference market and/or due to the timing required to conduct the transaction.
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 the Liquidity risk profile of the Group. 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. Stress tests are conducted on a monthly basis, in order to test the Group's ability to withstand unfavourable scenarios and 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.
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 2020, the liquidity profile of the new Banco BPM Group showed adequacy in the short and long term, complying with both internal and regulatory risk limits. The methods were also regularly maintained and updated (e.g. the behavioural models for on-demand deposits) and from June 2021, the quarterly reporting of the NSFR indicator to the Supervisory Authority began, which, from said date, is a regulatory requirement for banks with a minimum of 100% (in compliance with Regulation 2019/876 of the European Union (CRR-II).

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	From 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	**19,469,772**	**2,234,353**	**529,976**	**1,247,847**	**3,221,808**	**6,417,086**	**10,654,253**	**53,437,586**	**43,203,715**	**10,170,721**
A.1 Government securities	79,977	-	-	-	54	1,302,028	2,555,995	8,086,034	10,110,278	-
A.2 Other debt securities	38,199	767	-	41,461	56,223	95,034	401,861	2,471,632	4,020,462	209
A.3 UCIT units	969,092	-	-	-	-	-	-	-	-	-
A.4 Loans	18,382,504	2,233,586	529,976	1,206,386	3,165,531	5,020,024	7,696,397	42,879,920	29,072,975	10,170,512
- Banks	534,477	63,420	328,929	58,551	22,416	249,920	137,410	483,242	-	10,062,467
- Customers	17,848,027	2,170,166	201,047	1,147,835	3,143,115	4,770,104	7,558,987	42,396,678	29,072,975	108,045
On-balance sheet liabilities	**106,964,015**	**9,863,885**	**21,559**	**316,556**	**2,051,234**	**1,073,314**	**2,527,515**	**49,504,656**	**2,792,743**	**104,900**
B.1 Deposits and current accounts	103,629,041	19,609	20,831	42,876	145,678	250,221	278,066	108,241	-	-
- Banks	361,935	-	-	-	-	13,532	6,523	-	-	-
- Customers	103,267,106	19,609	20,831	42,876	145,678	236,689	271,543	108,241	-	-
B.2 Debt securities	125,246	166	728	7,648	1,862,372	638,789	2,043,984	9,751,730	2,113,888	104,900
B.3 Other liabilities	3,209,728	9,844,110	-	266,032	43,184	184,304	205,465	39,644,685	678,855	-
Off-balance sheet transactions										
C.1 Financial derivatives with exchange of capital										
- Long positions	49	636,335	497,171	1,686,393	5,543,583	5,269,684	3,734,748	122,519	88,330	-
- Short positions	78,457	501,660	385,415	1,830,613	4,010,853	3,616,524	3,939,002	2,018,393	812,194	-
C.2 Financial derivatives without exchange of capital										
- Long positions	1,504,121	-	304	1,747	19,810	8,266	39,750	-	-	-
- Short positions	1,567,774	70	607	2,631	7,952	10,689	22,222	-	-	-
C.3 Deposits and loans to be received										
- Long positions	15,075,539	-	-	-	-	-	-	-	-	-
- Short positions	15,075,539	-	-	-	-	-	-	-	-	-
C.4 Irrevocable commitments to disburse funds										
- Long positions	594,776	-	-	-	-	-	-	-	-	-
- Short positions	594,776	-	-	-	-	-	-	-	-	-
C.5 Financial guarantees given	94,793	119	32	1,829	7,277	7,530	20,585	210,453	83,793	-
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	139	-	-	-	-	-	-	-	-	-
- Short positions	2,151	-	-	-	-	-	-	-	-	-

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	From 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	**276,125**	**66,010**	**83,518**	**443,637**	**188,084**	**91,589**	**45,212**	**1,723,731**	**2,069,461**	**1,293**
A.1 Government securities	18,082	-	-	251,633	-	1,766	23	1,256,843	1,863,267	-
A.2 Other debt securities	2,024	-	-	-	-	4,545	-	164,614	45,916	-
A.3 UCIT units	122,472	-	-	-	-	-	-	-	-	-
A.4 Loans	133,547	66,010	83,518	192,004	188,084	85,278	45,189	302,274	160,278	1,293
- Banks	22,705	54,218	59,338	31,167	601	764%	1,966	-	-	-
- Customers	110,842	11,792	24,180	160,837	187,483	84,514	43,223	302,274	160,278	1,293
On-balance sheet liabilities	**881,370**	**624,954**	**1,063,694**	**1,839,645**	**367,603**	**213,810**	**3,472**	**-**	**-**	**-**
B.1 Deposits and current accounts	874,954	507,090	105,029	35,324	3,582	143,763	3,472	-	-	-
- Banks	59,766	507,090	105,029	35,324	3,546	9,728	2,655	-	-	-
- Customers	815,188	-	-	-	36	134,035	817	-	-	-
B.2 Debt securities	-	-	-	-	-	-	-	-	-	-
B.3 Other liabilities	6,416	117,864	958,665	1,804,321	364,021	70,047	-	-	-	-
Off-balance sheet transactions										
C.1 Financial derivatives with exchange of capital										
- Long positions	494	778,379	412,811	1,882,582	4,387,267	3,753,873	4,016,594	25,398	5,866	-
- Short positions	51	919,395	529,507	1,675,935	4,628,911	4,228,660	3,346,212	20,708	5,866	-
C.2 Financial derivatives without exchange of capital										
- Long positions	70,136	407	2,414	1,033	3,324	9,867	20,261	-	-	-
- Short positions	55,495	-	-	31	389	483	2,690	-	-	-
C.3 Deposits and loans to be received										
- Long positions	-	-	-	-	-	-	-	-	-	-
- Short positions	-	-	-	-	-	-	-	-	-	-
C.4 Irrevocable commitments to disburse funds										
- Long positions	-	-	-	-	51,940	934	17,697	-	-	-
- Short positions	-	70,571	-	-	-	-	-	-	-	-
C.5 Financial guarantees given	6,582	-	-	-	172	17,058	4,294	150	2,649	-
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 2021 are shown below.

Self-securitisation transactions

SPE	Originator	Securities issue date	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

Transactions closed during the year

Securitisation of mortgages, landed mortgages, agricultural loans and other loans granted to small and medium-sized enterprises – BPL Mortgages 7 (June 2014)

In June 2021, with the signing of the relative contracts, the closure of the securitisation transaction performed by the SPE BPL Mortgages S.r.l. and finalised in June 2014 ("BPL Mortgages 7") took place. More specifically, on 21 June 2021, Banco BPM repurchased the entire residual portfolio of mortgage loans underlying said transaction and, on 28 June 2021, an extraordinary payment date took place during which the SPE closed the transaction and made the early repayment of the securities still outstanding and entirely subscribed by Banco BPM. With the signing of the Termination Agreement, the contracts signed and accounts opened within the context of the transaction were closed.

Existing and significant self-securitisation transactions during 2021

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 17 November 2012, the Originator Banks sold an initial portfolio of performing residential landed and mortgage loans to the SPE BPL Mortgages S.r.l. for a value 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 31/12/2021	Value 31/12/2020
Banco BPM	2,633,424	2,993,003

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 31/12/2021	Interest rate	Maturity	Rating Moody's/DBRS (*)
A1	Senior	2,440,400	471,287	1-month Euribor + 0.3%	October 2058	Aa3/AH
B1	Junior (1)	1,148,455	392,765	Additional Return	October 2058	unrated
A2	Senior	995,100	409,184	1-month Euribor + 0.25%	October 2058	Aa3/AH
A3	Senior	1,504,300	914,578	1-month Euribor + 0.25%	October 2058	Aa3/AH
B3	Junior (1)	69,670	69,670	Additional Return	October 2058	unrated
Total		**6,157,925**	**2,257,484**			

(1) Unlisted Junior Securities.
(*) Rating as at 31 December 2021.

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.

Consumer credit securitisation – ProFamily SPV (February 2021)

On 16 December 2020, ProFamily S.p.A., now Banco BPM, 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 are subscribed in full by the Originator ProFamily S.p.A., now Banco BPM; the Senior securities are 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 31/12/2021	Value 31/12/2020
Banco BPM (former ProFamily S.p.A.)	783,955	910,878

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 31/12/2021	Interest rate	Maturity	Rating DBRS/Fitch (*)
A	Senior	860,000	677,441	1% per annum	December 2040	AH/A+
J	Junior (1)	100,932	100,932	5% per annum	December 2040	unrated
Total		**960,932**	**778,373**			

(1) Unlisted Junior Securities.
(*) Rating as at 31 December 2021.

Significant events during 2021 - Rating

On 21 December 2021, Fitch upgraded the rating of Senior securities from "A-" to "A+".

1.5 BANKING GROUP - OPERATIONAL RISKS

QUALITATIVE INFORMATION

A. General aspects, management processes and measurement methods of 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

From the date of the merger, Banco BPM Group was authorised by the European Supervisors to temporarily use, for regulatory purposes, a combination of the three regulatory methods, specifically the AMA (Advanced Measurement Approach), relating to the validated scope of the former Banco Popolare Group (former Banco Popolare segments of the Parent Company and Banca Aletti), the TSA (Traditional Standardised Approach) on the scope of the former Banca Popolare di Milano Group (segments of the former Parent Company BPM S.c.a r.l., former BPM S.p.A., ProFamily and Banca Akros) and the BIA (Basic Indicator Approach) for the other remaining companies making up Banco BPM Group. After the transition period for the above ECB authorisation ended, from the Reporting date of 31 December 2020, the Supervisory Authority asked the Group to fully adopt 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, to fulfil all of the requirements of the CRR 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 specific Group Regulations 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.

Impacts resulting from the Covid-19 pandemic

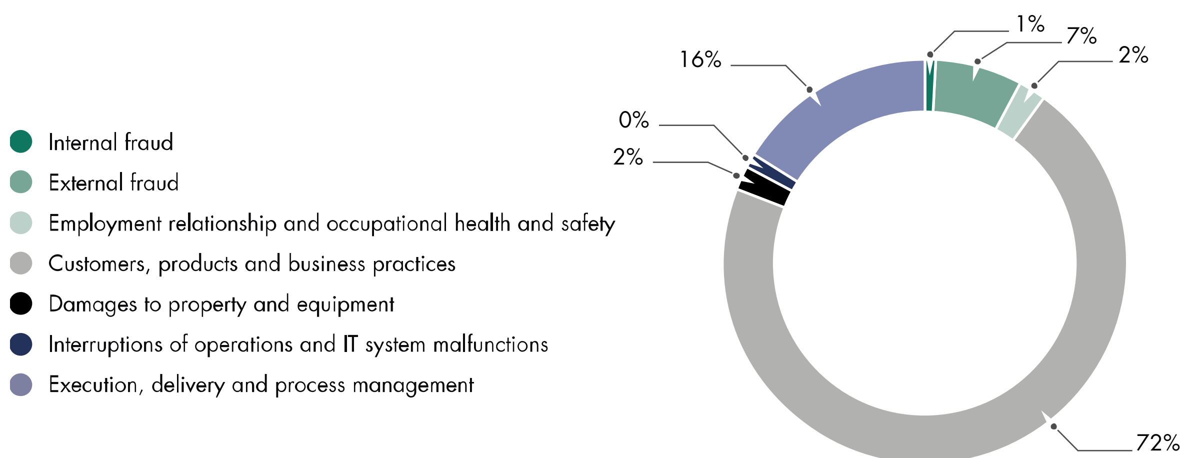
Banco BPM Group proactively managed the Covid-19 health emergency, with a view, first and foremost, to safeguarding the health of all of the people involved in its business activities (employees, customers, suppliers etc.), as well as guaranteeing adequate business continuity, in accordance with the 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.).

With specific reference to Banca Akros, with regard to Operational/Conduct Risk, a strategic indicator called "Cumulated yearly OpLoss / MINTER (%)" was defined in the Risk Appetite Framework, which represents the percentage of Operating Income absorbed by operating losses recognised in the last 12 months (providing a summary measurement of the monitoring and management of operational risk by the Group), with a relative limit, which in 2021, was always observed, therefore the indicator in question was always considered adequate.
Again as regards Operational/Conduct Risk, the managerial indicator "Cyber Risk Outlook" was included in the Risk Appetite Framework, providing a holistic and forward-looking vision of Cyber operational risks through a summary judgement (formulated by weighting the judgements assigned in single areas), with the relative limit, which in 2021 was also respected, and always considered adequate.

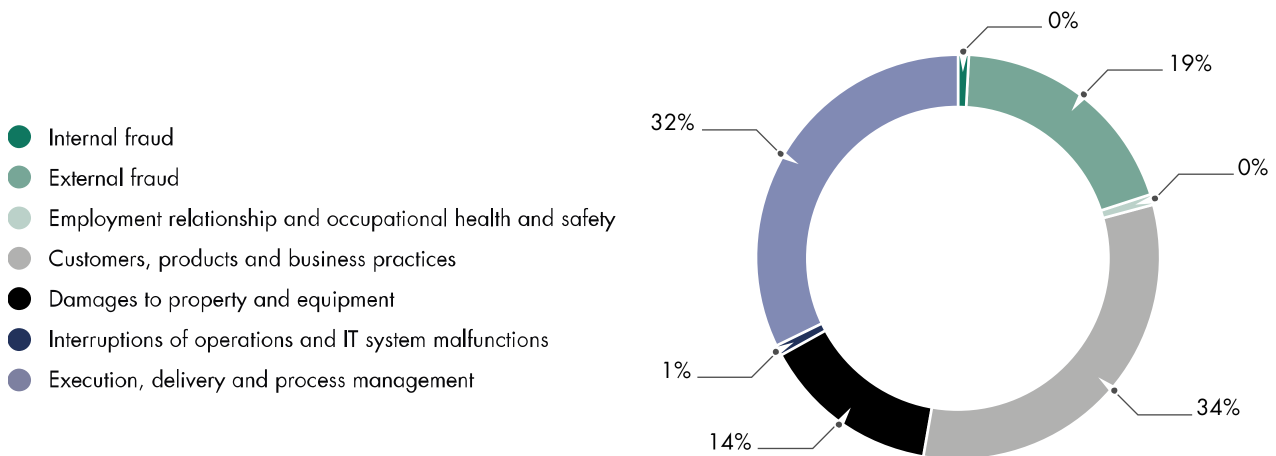
QUANTITATIVE INFORMATION

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 2012 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 relating to errors/inefficiency/delays in execution, delivery or management of processes, with a prevalence of losses due to anatocism (following the Court of Cassation ruling of 1999), erroneous application of conditions to customers and lack of documentation in the placement of financial products;
- 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. The prevalence in terms of impact regards traditional external fraud events (robberies and theft from ATMs).

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

The Group holds share capital in the Vera Assicurazioni, Vera Vita and Bipiemme Vita insurance companies, which is included in the scope of consolidation for companies carried at equity and shown in the consolidated assets under item 70 “Interests in associates and joint ventures”.

With regard to the risks of the segment in question, note that the weight of the above companies on total consolidated assets is of little significance.

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.