

1.2. MARKET RISKS

As already mentioned in the Introduction, the Intesa Sanpaolo Group policies on financial risk taking are defined by the Parent Company's Management Bodies, with the support of specific Committees, including the Steering Committee, chaired by the Managing Director and CEO and composed of the heads of the main corporate departments, and the Group Financial Risk Committee.

The Steering Committee, a Group body with a decision-making, reporting and consulting role, is also assigned the functions of assisting the Managing Director and CEO in the performance of his duties, strengthening the coordination and cooperation mechanisms between the various business, governance and control areas of the Bank and the Group, with a view to sharing the main business choices, and helping ensure coordinated and integrated risk management and the safeguarding of business value at Group level, including the correct functioning of the internal control system.

The Group Financial Risk Committee, chaired by the Chief Risk Officer and the Chief Financial Officer, is responsible for setting out the methodological and measurement guidelines for financial risks, establishing the operational limits and assessing the risk profile of the Group and its main operational units. The Committee also sets out the strategies for the management of the banking book to be submitted to the competent Bodies and establishes the guidelines on liquidity, interest rate and foreign exchange risk. The Committee operates on the basis of the operating and functional powers delegated by the Corporate Bodies and coordination of the Steering Committee.

The Group's overall financial risk profile and the eventual necessary changes are examined periodically by the Group Financial Risk Committee.

The Parent Company's Financial and Market Risks Head Office Department is responsible for the development of corporate risk measurement and monitoring methodologies as well as for the proposals on the Bank's and the Group's system of operational limits. It is also responsible in outsourcing for the risk measurement for certain operating units on the basis of specific service contracts.

The table below shows the items of the consolidated Balance Sheet that are subject to market risks, showing the positions for which managerial VaR is the main risk measurement metric (the managerial VaR is calculated on a wider scope than subject to the Internal Model for market risks. For more information refer to the paragraph below) and those for which the risks are monitored with other metrics. The latter mostly include the sensitivity analysis to the different risk factors (interest rate, credit spread, etc.).

(millions of euro)

	BOOK VALUE (supervisory scope)	MAIN RISK MEASUREMENT METRICS		
		VaR	Other	Risk factors measured using metrics included under Other
Assets subject to market risk	743,216	109,594	633,622	
Financial assets held for trading	53,619	53,437	182	Interest rate risk, credit spread, equity
Financial assets designated at fair value	3	1	2	Interest rate risk, credit spread
Other financial assets mandatorily measured at fair value	5,441	2,286	3,155	Interest rate risk, credit spread
Financial assets measured at fair value through other comprehensive income (ifrs 7 par. 8 lett. h)	57,865	53,807	4,058	Interest rate risk, equity
Due from banks	110,095	-	110,095	Interest rate risk
Loans to customers	505,956	-	505,956	Interest rate risk
Hedging derivatives	1,134	63	1,071	Interest rate risk
Investments in associates and companies subject to joint control	9,103	-	9,103	Equity risk
Liabilities subject to market risk	702,391	62,318	640,073	
Due to banks	115,690	-	115,690	Interest rate risk
Due to customers	423,674	-	423,674	Interest rate risk
Securities issued	93,754	-	93,754	Interest rate risk
Financial liabilities held for trading	59,153	59,116	37	Interest rate risk
Financial liabilities designated at fair value (ifrs 7 par. 8 lett. e)	3,032	3,032	-	-
Hedging derivatives	7,088	170	6,918	Interest rate risk

REGULATORY TRADING BOOK

1.2.1. INTEREST RATE RISK AND PRICE RISK

Consistent with the use of internal models and managerial models for risk management, the sections relative to interest rate and price risk have been grouped within the relevant portfolio.

Qualitative information

The quantification of trading risks (managerial calculation scope) is based on daily and periodic analysis of the vulnerability of the trading portfolio of Intesa Sanpaolo (including the IMI C&IB Division), which represents the main portion of the Group's market risks, to adverse market movements of the following risk factors:

- interest rates;
- equities and market indexes;
- investment funds;
- foreign exchange rates;
- implied volatilities;
- spreads in credit default swaps (CDSs);
- spreads in bond issues;
- correlation instruments;
- dividend derivatives;
- asset-backed securities (ABSs);
- commodities.

Some Group subsidiaries hold smaller trading portfolios with a marginal risk (approximately less than 1% of the Group's overall management risk). In particular, the risk factors of the international subsidiaries' trading books are local government bonds, positions in interest rates, and foreign exchange rates relating to linear pay-offs.

Managerial VaR

The analysis of market risk profiles relative to the trading book (managerial scope) uses various quantitative indicators and VaR is the most important. Since VaR is a synthetic indicator which does not fully identify all types of potential loss, risk management has been enriched with other measures, in particular simulation measures for the quantification of risks from illiquid parameters (dividends, correlation, ABS).

VaR estimates are calculated daily based on simulations of weighted historical time-series, a 99% confidence level and 1-day holding period.

In line with what has been approved by the BoD, with regard to the VaR limits for legal entities, the managerial VaR of the Trading component includes the HTCS portfolio of the IMI C&IB Division

With particular regard to the legal entity UBI Banca, following its consolidation within the Group, tactical solutions have been

implemented with regard to the managerial market risk measures in order to report those risks in Intesa Sanpaolo's portfolio. Specifically, the trading book is reported within the IMI C&IB Division, while the HTCS portfolio has been divided between the Group Treasury and Finance Department (liquidity portfolio) and the IMI C&IB Division (investment portfolio).

Sensitivity and greeks

Sensitivity measures make risk profiling more accurate, especially in the presence of option components. These measure the risk attributable to a change in the value of a financial position to predefined changes in valuation parameters including a one basis point increase in interest rates.

Level measures

Level measures are risk indicators which are based on the assumption of a direct relationship between the size of a financial position and the risk profile. These are used to monitor issuer/sector/country risk exposures for concentration analysis, through the identification of notional value, market value or conversion of the position in one or more benchmark instruments (so-called equivalent position).

Stress tests

Stress tests measure the value changes of instruments or portfolios due to changes in risk factors of unexpected intensity and correlation, or extreme events, as well as changes representative of expectations of the future evolution of market variables. Stress tests for management purposes are applied periodically to market risk exposures, typically adopting scenarios based on historical trends recorded by risk factors, for the purpose of identifying past worst-case scenarios, or defining variation grids of risk factors to highlight the direction and non-linearity of trading strategies.

Internal model validation

For some of the risk factors included in the managerial VaR measurements, with regard to the Parent Company's regulatory trading book, the Supervisory Authority has validated the internal models for the capital requirement of Intesa Sanpaolo.

More specifically, concerning market risk, the risk profiles validated are: (i) general/specific on debt securities and on equities; (ii) position risk on quotas of UCI underlying CPPI (Constant Proportion Portfolio Insurance) products and the hedge fund portfolios with a look through approach; (iii) position risk on dividend derivatives and (iv) commodity risk.

Stressed VaR

Capital absorption includes the requirement for stressed VaR. The requirement derives from the determination of the VaR associated with a market stress period. This period was identified considering the following guidelines, on the basis of the indications presented in the Basel document "Revision to the Basel 2 market risk framework":

- the period must represent a stress scenario for the portfolio;
- the period must have a significant impact on the main risk factors for the portfolio of Intesa Sanpaolo;
- the period must allow real time series to be used for all portfolio risk factors.

While using the historical simulation approach for VaR calculation, the latter point is a discriminating condition in the selection of the holding period. Actually, in order to ensure that the scenario adopted is effectively consistent and to avoid the use of driver or comparable factors, the historical period must ensure the effective availability of market data.

As at the date of preparation of this document, the period for the measurement of Stressed VaR for Intesa Sanpaolo was from 11 October 2011 to 28 September 2012.

Incremental Risk Charge (IRC)

The Incremental Risk Charge (IRC) is the maximum potential loss in the credit trading book resulting from an upgrade/downgrade or bankruptcy of the issuers, over a 1-year period, with a 99.9% confidence level. This measure is additional to VaR and enables the correct representation of the specific risk on debt securities and credit derivatives because, in addition to idiosyncratic risk, it also captures event and default risk.

Details are provided below of the estimates and evolution of managerial VaR of Intesa Sanpaolo (including the HTCS portfolio of the IMI C&IB Division), defined as the sum of VaR and of the simulation on illiquid parameters.

Quantitative information

Daily managerial VaR evolution

During the fourth quarter of 2020, the managerial market risks generated by the Group decreased compared to the average values of the third quarter of 2020. These decreased from 277.6 million euro (third quarter average) to 200.2 million euro. The trend was determined mainly by the IMI C&IB Division, which recorded a decrease in total VaR from 271.6 million euro to 201.0 million euro.

That effect is mainly attributable to the rolling scenario effects given the decreased volatility of the market as well as the reduction of HTCS securities of the IMI C&IB Division.

The Trading Book component recorded a total reduction in risk from 73.3 million euro to 59.0 million euro. It is noted that the contribution as at 31 December 2020 of the trading book of the legal entity UBI Banca, merged into the IMI C&IB Division, came to 0.795 million euro.

Daily managerial VaR of the trading book

	average 4th quarter	minimum 4th quarter	maximum 4th quarter	average 3rd quarter	average 2nd quarter	(millions of euro) average 1st quarter
Group Treasury and Finance Department	3.4	2.3	4.5	9.9	37.9	15.0
IMI C&IB Division	201.0	132.8	280.4	271.6	325.6	159.8
<i>of which IMI C&IB Division Trading Book</i>	52.5	35.5	72.1	59.6	47.7	26.1
Total	200.2	131.0	278.5	277.6	363.5	174.8
<i>of which Group Trading Book ^(a)</i>	59.0	40.9	79.8	73.3	85.6	41.1

Each line in the table sets out past estimates of daily VaR calculated on the historical quarterly time-series of the Group Treasury and Finance Department, the IMI C&IB Division and the Intesa Sanpaolo Group (including other subsidiaries) respectively; minimum and maximum values for the overall perimeter are estimated using aggregate historical time-series and therefore do not correspond to the sum of the individual values in the column.

(a) The Group Trading Book figure includes the managerial VaR of the Group Treasury and Finance Department, the IMI C&IB Division (Trading Book perimeter) and the other subsidiaries.

For all of 2020, the Group's average managerial VaR was 254.8 million euro, up compared to 151.5 million euro in 2019. The performance of this indicator – mainly determined by the IMI C&IB Division – derives from an increase in the risk measures, mainly due to the volatility in the markets as a result of the COVID-19 pandemic.

Daily managerial VaR of the trading book - Comparison 2020 – 2019

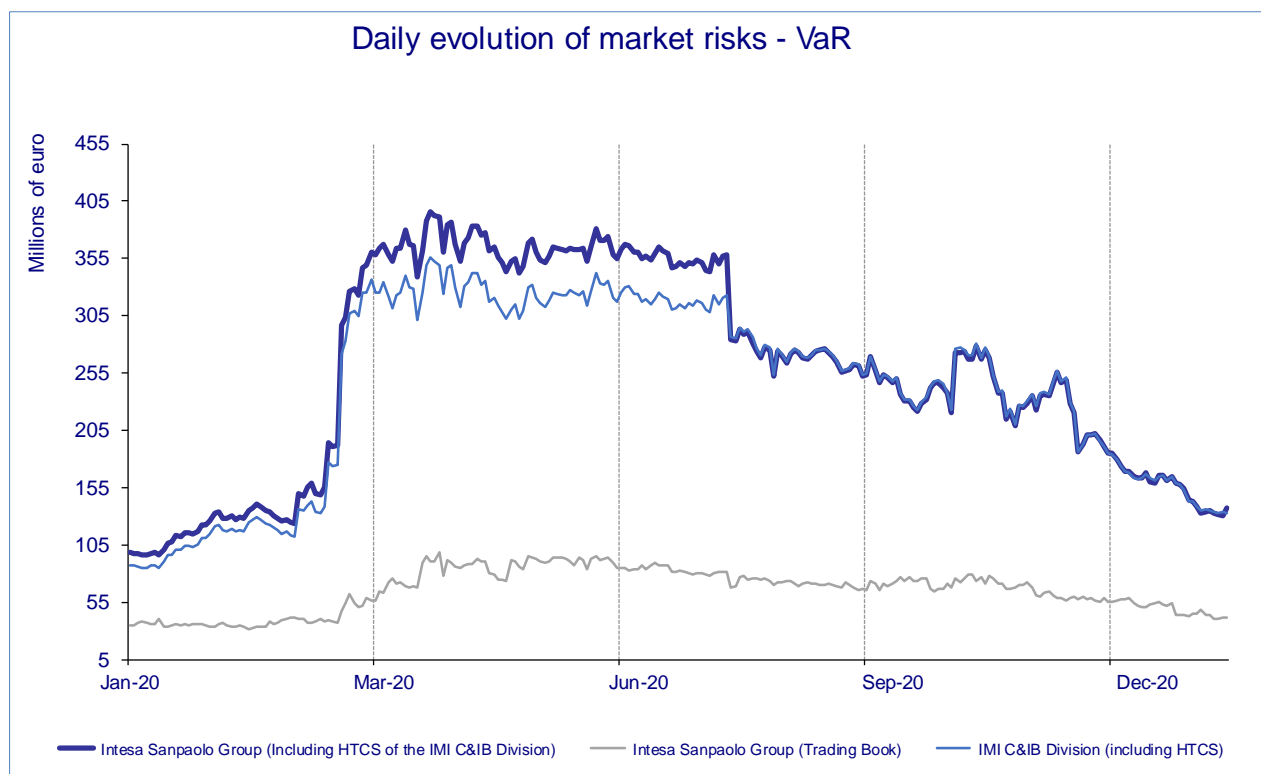
	2020				2019		
	average	minimum	maximum	last day	average	minimum	maximum
Group Treasury and Finance Department	16.5	2.3	42.6	2.7	15.4	10.7	19.0
IMI C&IB Division	239.9	85.0	356.3	133.2	136.0	84.1	192.3
<i>of which IMI C&IB Division Trading Book</i>	46.6	20.7	72.1	36.4	29.5	23.1	38.4
Total	254.8	96.1	395.9	137.6	151.5	95.1	208.8
<i>of which Group Trading Book ^(a)</i>	65.3	31.4	98.6	41.6	45.0	35.0	57.1

Each line in the table sets out past estimates of daily VaR calculated on the historical time-series of the year 2020 respectively of the Group Treasury and Finance Department, the IMI C&IB Division and the Intesa Sanpaolo Group (including other subsidiaries); minimum and maximum values for the overall perimeter are estimated using aggregate historical time-series and therefore do not correspond to the sum of the individual values in the column.

(a) The Group Trading Book figure includes the managerial VaR of the Group Treasury and Finance Department, the IMI C&IB Division (Trading Book perimeter) and the other subsidiaries.

For the Intesa Sanpaolo Group, up to June 2020 the trend in VaR in 2020 was mainly caused by the volatility on the financial markets due to the health emergency generated by the COVID-19 pandemic (the main effects were recorded on government securities in the HTCS portfolio of the IMI C&IB Division). Instead, since the third quarter, the measures have decreased due to the following:

- the merger by incorporation of Banca IMI into the Parent Company, which resulted in diversification (in July) of the Group managerial VaR (including the HTCS book);
- “rolling scenario” effect and reduction of the HTCS portfolio of the IMI C&IB Division in the following months. With reference to the rolling scenario effects, given the lower volatility of the markets, the most volatile scenarios were no longer part of the managerial VaR distributions.



The breakdown of the Group's risk profile in the fourth quarter of 2020 with regard to the different risk factors shows the prevalence of credit spread risk, which accounted for 76% of the Group's total managerial VaR (of which 65% just for the Trading Book component). As regards the single risk taking centres, a prevalence of interest rate and exchange rate risk is observed for the Group Treasury and Finance Head Office Department (48% and 42%, respectively), while the credit spread risk factor is prevalent for the IMI C&IB Division (77%).

Contribution of risk factors to total managerial VaR

4th quarter 2020	Shares	Hedge funds	Interest rates	Credit spreads	Foreign exchange rates	Other parameters	Commodities
Group Treasury and Finance Department	0%	0%	48%	10%	42%	0%	0%
IMI C&IB Division	3%	2%	16%	77%	0%	1%	1%
Total	3%	2%	16%	76%	1%	1%	1%

Each line in the table sets out the contribution of risk factors considering 100% the overall capital at risk, calculated as the average of daily estimates in the fourth quarter of 2020, broken down between the Group Treasury and Finance Department and IMI C&IB Division and indicating the distribution of the Group's overall capital at risk.

Risk control with regard to the activity of the Intesa Sanpaolo Group also uses scenario analyses and stress tests. The impact of selected scenarios relating to the evolution of stock prices, interest rates, credit spreads, foreign exchange rates and commodity prices at the end of December is summarised in the following table:

(millions of euro)

	EQUITY		INTEREST RATES		CREDIT SPREADS		FOREIGN EXCHANGE RATES		COMMODITIES	
	Crash	Bullish	+40bp	lower rate	-25bp	+25bp	-5%	+5%	Crash	Bullish
Total	43	-8	-247	134	690	-639	11	-6	2	-
of which HTCS of the IMI C&IB Division	-	-	-157	99	614	-586	-	-	-	-

More specifically:

- for stock market positions, there would be a loss of 8 million euro in the event of a sharp rise in equity prices and a decrease in volatility;
- for positions in interest rates, there would be a loss of 247 million euro in the event of an increase in rate curves of 40 bps (of which -157 million euro attributable to the HTCS portfolio of the IMI C&IB Division);
- for positions in credit spreads, a widening of credit spreads of 25 bps would entail a loss of 639 million euro (of which -586 million euro attributable to the HTCS portfolio of the IMI C&IB Division);
- for positions in exchange rates, there would be a loss of 6 million euro in the event of appreciation in the Euro against the other currencies;
- lastly, for positions in commodities, there would be gains both in the event of an increase (marginally positive values) and a decrease in commodity prices.

Backtesting

The soundness of the VaR calculation methods must be monitored daily via backtesting which, for the regulatory backtesting, compares:

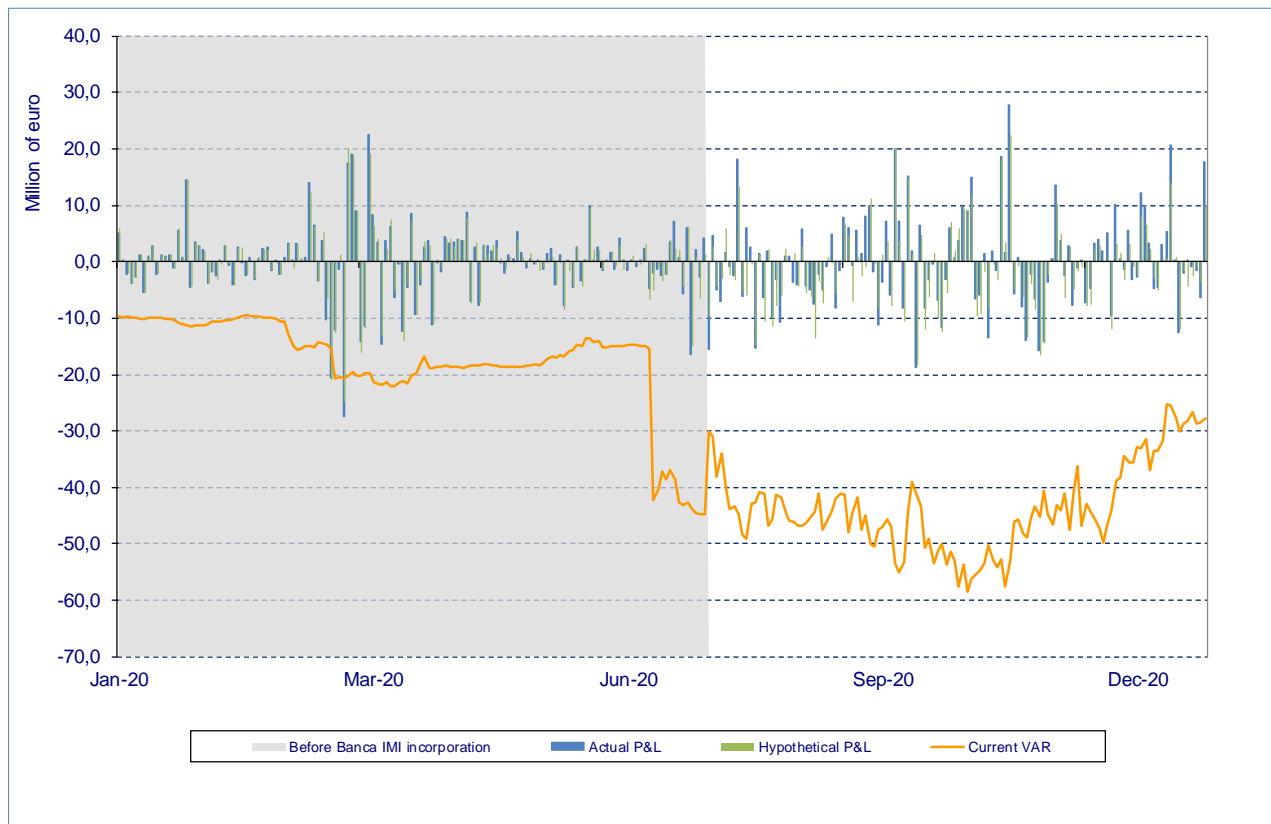
- the daily estimates of value at risk;
- the daily profits/losses based on backtesting which are determined using actual daily profits and losses achieved by individual desks, net of components which are not considered in backtesting: these include, for example, fees and financial costs of managing the positions that are regularly reported within the managerial area.

Backtesting allows verification of the model's capability of correctly seizing, from a statistical viewpoint, the variability in the daily valuation of trading positions, covering an observation period of one year (approximately 250 estimates). Any critical situations relative to the adequacy of the internal model are represented by situations in which daily profits/losses based on backtesting highlight more than four occasions, in the year of observation, in which the daily loss is higher than the value at risk estimate. Current regulations require that backtesting is performed by taking into consideration both the actual and hypothetical P&L series.

At 31 December 2020, the Intesa Sanpaolo Group did not benefit from the exclusion of overshootings from the calculation of the backtesting addend in view of the COVID-19 pandemic (Reg. 2020/873, Art. 500c). The exceptions set out below are the only cases recorded by Intesa Sanpaolo over the last twelve months.

The increase in the Parent Company's VaR shown in the graph below starting in July is attributable to the effects of the Banca IMI trading book integration.

During the fourth quarter⁴⁷, no backtesting exceptions were recorded. The two overshoots shown in the graph for the period January 2020 – December 2020 refer to the legal entity Intesa Sanpaolo before the Banca IMI integration. In the same period, Banca IMI recorded three exceptions. The most recent breaches were linked to the turmoil on the markets as a result of the COVID-19 crisis.



⁴⁷ The estimates do not include UBI's trading book.

Issuer risk

Issuer risk in the trading portfolio is analysed through level measures, i.e. in terms of mark to market, with exposures aggregated by rating class and sector, and is monitored through a system of operating limits based on both sector/rating classes and concentration indexes.

Breakdown of exposures by type of issuer

	TOTAL	OF WHICH					
		Corporate	Financial	Emerging	Covered	Government	Securitis.
Group Treasury and Finance Department	9%	1%	0%	0%	4%	95%	0%
IMI C&IB Division	91%	14%	38%	7%	2%	23%	16%
Total	100%	13%	35%	6%	2%	29%	15%

The table sets out in the Total column the contribution of the Group Treasury and Finance Department and the IMI C&IB Division to overall issuer risk exposures, breaking down the exposure by type of issuer. The scope corresponds to the trading portfolio with an issuer ceiling (excluding Italian Government bonds, AAA and own bonds) and including CDS (absolute value).

The breakdown of the portfolio subject to issuer risk shows the prevalence of securities in the government segment for the Group Treasury and Finance Department and in the financial and government segments for the IMI C&IB Division.

Operating limits

The structure of limits reflects the risk level deemed to be acceptable with reference to single business areas, consistent with operating and strategic guidelines defined by top management. The attribution and control of limits at the various hierarchical levels implies the assignment of delegated powers to the heads of business areas, aimed at achieving the best trade-off between a controlled risk environment and the need for operating flexibility. The functioning of the system of limits and delegated powers is underpinned by the basic concepts of hierarchy and interaction.

The application of such principles led to the definition of a structure of limits in which the distinction between first level and second level limits is particularly important:

- first level limits (VaR): at the level of individual legal entities, these are approved by the Board of Directors, concurrently with approval of the RAF. Limit absorption trends and the relative congruity analysis are periodically assessed by the Group Financial Risk Committee. Following approval, these limits are then allocated to the desks of the individual legal entities, considering the proposals by the business units;
- second level limits (sensitivity and greeks): they have the objective of controlling operations of the various desks on the basis of differentiated measures based on the specific characteristics of traded instruments and operating strategies, such as sensitivity, greeks and equivalent exposures;
- other significant limits: they have the objective of monitoring particular transactions (e.g. ceiling for transactions with issuer risk, Incremental Risk Charge limit).

Some of these limits may be covered by the RAF rules.

The use of the IRC limits was 35.3% at year-end for Intesa Sanpaolo (limit of 600 million euro).

Impacts from the COVID-19 pandemic

As regards the impacts generated by the COVID-19 pandemic on the trends in market risks, the exceptional circumstances that characterised the financial markets in the first and second quarter of 2020 resulted in the revision of the RAF framework in May, with regard to both the Trading measures and the HTCS component.

In particular, in light of the changed context:

- from a managerial perspective, the Group continued the reduction of its securities portfolio in the fourth quarter. The fourth quarter saw a reduction in managerial VaR compared to the previous quarter, from 277.6 million euro to 200.2 million euro, mainly due to rolling scenario effects and a reduction in the HTCS portfolio of the IMI C&IB Division;
- as for Market Risk capital requirement, despite the increase in volatility, the trading book experienced a slight increase in its prudential requirement compared to the previous quarter. Despite an increase in the cyclical measure (VaR), the hedging strategies have limited the exposure to the risk factors most affected by the pandemic (sovereign and financial spreads). Furthermore, the Intesa Sanpaolo Group's market risk weighted assets at 31 December 2020, calculated according to the internal model, amounted to 17 billion euro. This figure was in line with December 2019 despite the increased volatility that affected the financial markets during 2020.

BANKING BOOK**1.2.2 INTEREST RATE RISK AND PRICE RISK****Qualitative information****General aspects, interest rate risk and price risk management processes and measurement methods**

Market risk originated by the banking book arises primarily from the exposure to assets, liabilities and off-balance sheet transactions sensitive to interest rates (interest rate risk) assumed by the Parent Company and the other main Group companies involved in credit activity (retail and corporate banking). The banking book also includes exposure to market risks deriving from the equity investments in listed companies not fully consolidated, mainly held by the Parent Company.

The internal system for measuring interest rate risk assesses and describes the effect of changes in interest rates on the economic value and the net interest income and identifies all significant sources of risk that affect the banking book:

- repricing risk: risk arising from maturity mismatches (for fixed-rate positions) and interest rate revision date mismatches (for floating-rate positions) of financial items due to parallel movements in the yield curve;
- yield curve risk: risk arising from maturity mismatches and interest rate revision date mismatches due to changes in the inclination and shape of the yield curve;
- basis risk: risk arising from imperfect correlation in the adjustment of lending and deposit rates of floating-rate instruments which may differ according to indexing parameters, rate revision method, indexing algorithm, etc. This risk arises as a result of non-parallel changes in market rates;
- option risk: risk due to the presence of automatic options or options that depend on the behaviour of the counterparty to the assets, liabilities and off-balance sheet instruments of the Group.

Interest rate risk is managed by setting limits and an early warning level for the exposure, approved within the Risk Appetite Framework (RAF). In particular, the early warning level allows monitoring of the exposure to the risk of bends in the curve. The Financial and Market Risks Head Office Department performs monthly checks that the limits and early warning level approved in the Risk Appetite Framework (RAF) are observed at the consolidated and individual level.

In addition, the Group has adopted a specific internal policy document regarding interest rate risk (the IRRBB Guidelines) subject to approval by the BoD, which governs the Group's entire interest rate risk management framework and in particular the aspects of governance, methods of use and formulation of scenarios.

The following metrics are used to measure the interest rate risk generated by the banking book:

1. with regard to economic value:
 - fair value shift sensitivity (Δ EVE);
 - fair value basis risk (BR);
 - value at risk (VaR).
2. with regard to net interest income:
 - net interest income sensitivity (Δ NI);
 - net interest income basis risk.

The shift sensitivity of the economic value (or fair value shift sensitivity) measures the change in the economic value of the banking book and is calculated at individual cash flow level for each financial instrument, based on different instantaneous rate shocks and based on historical stress simulations aimed at identifying the worst and best cases. It reflects the changes in the present value of the cash flows of the positions already in the balance sheet for the entire remaining duration until maturity (run-off balance sheet). The cash flows used to determine the present value are developed at the contractual rate, FTP (internal fund transfer price) or risk-free rate (Euribor/Libor) and discounted according to risk-free discount curves. When calculating the present value of loans, the expected loss component is considered; it represents the amount of cash flow that the bank does not expect to recover on a given exposure and that thus reduces its value. The present value of the loan adjusted for credit risk is calculated for this purpose by deducting the corresponding level of expected loss from expected cash flows according to the "cash flow adjustment" ("CFA") method.

To control the exposure and monitor the limits, the calculation involves determining the algebraic sum of the equivalent in euro of the shift sensitivities of the positions in the various currencies by applying a parallel shock of +100 bps to the interest rate curves in the various currencies. The calculation for non-parallel shocks for the purposes of controlling the exposure and monitoring the early warning level is performed similarly. The sensitivity of the relevant currencies is then corrected, according to a "currency aggregation" management technique, to take account of the imperfect correlation with the rates of the main currency (the euro).

The fair value basis risk (BR) is a risk measure designed to capture the effect on the floating-rate banking book caused by the imperfect correlation of changes in market indices. The method of estimating fair value basis risk is based on applying shocks, diversified by the curve of reference of the main risk factors. The specific shock level is calculated as a change in the base of each reference rate compared to a designated pivot rate in the same currency.

Value at Risk (VaR) measures the maximum loss that could occur within a given time horizon (holding period) and with a given confidence level. VaR is determined by adopting a 99% confidence level and a holding period of ten days. VaR is estimated using a method based on the historical simulation of the risk factors, represented by the risk-free market interest rate curves, in which the bank's exposure is revalued (full evaluation) on the basis of the curves observed over the last 250 days prior to the evaluation date.

The sensitivity of net interest income quantifies the impact on interest income of shock to the interest rate curve. For managerial monitoring of the limits, the sensitivity of net income is measured over a short-term horizon (12 months), excluding potential effects due to new transactions and future changes in the mix of assets and liabilities, by applying parallel, instantaneous interest rate shocks. The method implicitly assumes that the principal amounts of transactions upon reaching maturity or repricing are reinvested or refinanced through transactions with the same financial characteristics as those that have reached maturity (constant balance sheet assumption), within 12 months of the date of the analysis (date of the end-of-month situation). In addition, for the purposes of prospective simulation of interest income, dynamic analyses are performed,

involving a change in the composition and volumes of assets and liabilities, by also applying non-parallel, non-instantaneous shocks, over medium-term time horizons (up to 3 years).

In calculating the above risk measures, Intesa Sanpaolo adopts behavioural models for representing capital items based on their contractual profile, except for categories of instruments whose risk profiles are different from those contractually envisaged. In this respect, therefore, the choice was made to use a behavioural representation to calculate the risk measures. More specifically:

- for mortgages, statistical techniques are used to determine the probability of prepayment, in order to reduce the Group's exposure to interest rate risk (overhedging) and to liquidity risk (overfunding). The method developed estimates prepayment coefficients diversified according to the type of customer and the financial characteristics of the transaction, such as the loan rate type (fixed or floating), the original term of the loan and the seasoning, understood as the age of the loan on the date of the prepayment event. The analysis refers to partial repayments, full repayments and refinancing. The prepayment model also examines the reasons that lead customers to make prepayments. With regard to this aspect, the phenomenon may be divided into a structural component ("Core Prepayment") and a scenario component ("Coupon Incentive"), primarily linked to market variations. Prepayment phenomena are monitored monthly and the prepayment coefficients to be applied to the model are re-estimated at least annually and are subject to periodic backtesting, in accordance with the specific model change document;
- for core deposits, a financial representation model is adopted aimed at reflecting the behavioural features of stability of deposits and partial and delayed reaction to market interest rate fluctuations, in order to stabilise the value and net interest income both in absolute terms and in terms of variability over time.

In addition, within the framework of the dynamic simulation of net interest income, an additional behavioural model is adopted to simulate the effects of potential renegotiations of the contractual conditions of medium-/long-term assets. In terms of risks, renegotiations modify the duration of the portfolio of medium-/long-term loans and entail a decline in net interest income due to the revision of the contractual rates/spreads to include conditions more advantageous to customers. Specific models have been estimated to ensure a proper representation of the renegotiations phenomenon in terms of the percentages of mortgage loans renegotiated and their financial characteristics.

Impacts from the COVID-19 pandemic

During 2020 management measures intervened in the banking book - such as cash flow hedging - to mitigate the potential negative impacts of COVID-19.

Quantitative information

Banking book: internal models and other sensitivity analysis methodologies

In 2020, interest rate risk generated by the Intesa Sanpaolo Group's banking book, measured through shift sensitivity of value, averaged -1,074 million euro, with a minimum value of -1,815 million euro and a maximum value of 297 million euro, reaching a figure of -1,305 million euro at the end of 2020 (394 million euro at the end of 2019).

The sensitivity of net interest income – assuming a +50, -50 and +100 basis point change in interest rates – amounted to 1,312 million euro, -1,011 million euro and 2,581 million euro, respectively, at the end of 2020. The last of these figures was up on the 1,837 million euro recorded at the end of 2019.

Interest rate risk, measured in terms of VaR, averaged 626 million euro in 2020, with a maximum value of 869 million euro and a minimum value of 271 million euro, reaching a figure of 492 million euro at the end of 2020 (227 million euro at the end of 2019).

Foreign exchange risk expressed by equity investments in foreign currency (banking book) and measured in terms of VaR averaged 73 million euro in 2020, with a maximum value of 96 million euro and a minimum value of 35 million euro, standing at 78 million euro at the end of 2020 (35 million euro at the end of 2019).

Price risk generated by minority stakes in listed companies, mostly held in the HTCS category and measured in terms of VaR, recorded an average level during 2020 of 255 million euro, with maximum and minimum values of 419 million euro and 45 million euro, respectively, amounting to 304 million euro at the end of 2020 (43 million euro at the end of 2019).

The table below shows the changes in the main risk measures.

	(millions of euro)				
		2020		31.12.2020	31.12.2019
	average	minimum	maximum		
Shift Sensitivity of the Economic Value +100 bp	-1,074	-1,815	297	-1,305	394
Shift Sensitivity of Net Interest Income -50bp	-944	-1,016	-847	-1,011	-1,037
Shift Sensitivity of Net Interest Income +50bp	1,076	847	1,362	1,312	939
Shift Sensitivity of Net Interest Income +100bp	2,102	1,634	2,692	2,581	1,837
Value at Risk - Interest Rate	626	271	869	492	227
Value at Risk Exchange	73	35	96	78	35
Value at Risk - Equity investments in listed companies	255	45	419	304	43

Exposures as at 31 December 2020 shown in the table include the metrics of the UBI Group harmonised using the methodologies used by Intesa Sanpaolo, which provide a slight contribution to the overall risk of the Intesa Sanpaolo Group.

Lastly, the table below shows a sensitivity analysis of the banking book to price risk, measuring the impact on Shareholders' Equity of a price shock of $\pm 10\%$ for the abovementioned quoted assets recorded in the HTCS category.

Price risk: impact on Shareholders' Equity

		1st quarter 2020 impact on shareholders' equity at 31.03.2020	2nd quarter 2020 impact on shareholders' equity at 30.06.2020	3rd quarter 2020 impact on shareholders' equity at 30.09.2020	4th quarter 2020 impact on shareholders' equity at 31.12.2020	(millions of euro) Impact on shareholders' equity at 31.12.2019
Price shock	10%	49	141	159	155	50
Price shock	-10%	-49	-141	-159	-155	-50

1.2.3. FOREIGN EXCHANGE RISK

Qualitative information

A. General aspects, foreign exchange risk management processes and measurement methods

"Foreign exchange risk" is defined as the potential loss resulting from changes in the exchange rate that could have a negative impact on the valuation of the assets and liabilities in the financial statements and on earnings and capital ratios.

Two types of Foreign Exchange Risk are identified: *Structural* and *Transaction risk*.

Structural Foreign Exchange Risk is defined as the potential loss resulting from changes in the exchange rate that could have a negative impact on the foreign exchange reserves that are part of the Group's consolidated shareholders' equity, and also includes the foreign exchange risk associated with hybrid capital instruments. The key sources of structural foreign exchange risk are therefore the investments in associates and companies subject to joint control. The Intesa Sanpaolo Group's management of the Structural Foreign Exchange Risk assigns the Parent Company the related management and coordination powers in order to achieve a consistent Group strategy.

This choice, which is consistent with the Parent Company's role as the liaison with the Supervisory Authority, allows the activities to be performed based on the specific responsibilities set out in the prudential supervision regulations, in addition to suitably mitigating and/or managing this type of risk.

Transaction Foreign Exchange Risk is defined as the potential loss resulting from changes in the exchange rate that may have a negative impact both on the valuation of the assets and liabilities in the financial statements and on the earnings from funding and lending transactions in currencies other than the euro. The main sources of this foreign exchange risk consist of: non-euro loans and deposits held by corporate and/or retail customers; conversion into domestic currency of assets, liabilities and income of the international branches; trading of foreign currencies; collection and/or payment of interest, commissions, dividends and administrative expenses in foreign currencies; purchase and sale of securities and financial instruments for the purpose of resale in the short term; etc. Transaction foreign exchange risk also includes the risk related to transactions connected to operations that generate the type of structural foreign exchange risk represented, for example, by dividends, earnings in the process of being generated, and corporate events.

B. Foreign exchange risk hedging activities

The monitoring and hedging of the Transaction Foreign Exchange Risk are carried out at central level by the Group Treasury and Finance Head Office Department of the Parent Company and at local level by the individual treasury functions of the Group Companies and Banks.

According to the general principle underlying the management of the Structural Foreign Exchange Rate Risk, the related exposures are not normally subject to microhedging. This is because the foreign exchange risk arising from the investments in countries where the Group has investments in associates and companies subject to joint control reflects the long-term strategic view of investing in the macroeconomic growth of those countries and any hedging would mean giving up the additional profit arising from the rate spread against the euro rates. In addition, over the long term, the diversification of the Group's portfolio among different currencies optimises its risk/return and mitigates the Group's exposure to Italy country risk, albeit to a limited extent. These investments, due to their nature, also enable the stability of the capital ratios, within certain limits.

The exposures to foreign exchange risk are measured by the Financial and Market Risks Department and, for Transaction Foreign Exchange Risk, are subject to daily VaR limits and stress tests with the rest of the trading book.

As at the date of preparation of the financial statements, there were no transactions hedging shareholders' equity, whereas there were operational hedges of the foreign exchange risk of the assets and liabilities in the financial statements related to the Banking Book.

Impacts from the COVID-19 pandemic

The strategies and controls in place for the purpose of managing exchange rate risk did not require changes or specific actions during the period of the COVID-19 pandemic.

Quantitative information**1. Breakdown by currency of assets and liabilities and of derivatives**

(millions of euro)

	CURRENCIES							Yen	Other currencies
	US dollar	GB pound	Swiss franc	Hungarian forint	Egyptian pound	Croatian kuna			
A. FINANCIAL ASSETS	33,853	3,084	1,484	4,610	4,479	7,273	3,365	10,280	
A.1 Debt securities	12,278	613	13	918	1,668	922	2,431	2,039	
A.2 Equities	437	3	8	-	34	1	-	318	
A.3 Loans to banks	5,104	186	276	1,183	662	2,559	132	2,279	
A.4 Loans to customers	16,023	2,280	962	2,369	2,115	3,790	802	5,533	
A.5 Other financial assets	11	2	225	140	-	1	-	111	
B. OTHER ASSETS	2,927	88	54	100	157	250	72	241	
C. FINANCIAL LIABILITIES	35,257	1,960	676	4,420	3,917	5,234	767	6,246	
C.1 Due to banks	12,635	203	49	710	16	241	5	1,079	
C.2 Due to customers	10,306	644	388	3,638	1,942	4,991	205	4,862	
C.3 Debt securities	12,311	1,112	231	-	1,959	-	557	271	
C.4 Other financial liabilities	5	1	8	72	-	2	-	34	
D. OTHER LIABILITIES	294	13	3	26	106	175	1	90	
E. FINANCIAL DERIVATIVES									
- Options									
<i>long positions</i>	111	6	30	2	-	-	1	12	
<i>short positions</i>	227	3	6	-	-	-	6	22	
- Other derivatives									
<i>long positions</i>	65,582	10,845	4,778	1,819	-	7	5,655	11,069	
<i>short positions</i>	66,768	11,853	5,460	1,390	-	130	8,415	13,440	
TOTAL ASSETS	102,473	14,023	6,346	6,531	4,636	7,530	9,093	21,602	
TOTAL LIABILITIES	102,546	13,829	6,145	5,836	4,023	5,539	9,189	19,798	
DIFFERENCE (+/-)	-73	194	201	695	613	1,991	-96	1,804	

2. Internal models and other sensitivity analysis methodologies

As already noted, the management of Transaction Foreign Exchange Risk relating to trading activities is included in the operating procedures and in the estimation methodologies of the internal model based on VaR calculations, as already illustrated.

The (structural) foreign exchange risk expressed by equity investments in foreign currency (banking book), including Group companies, originated a VaR (99% confidence level, 10-day holding period) amounting to 78 million euro as at 31 December 2020. This potential impact would only be reflected in the Shareholders' Equity.

1.3. DERIVATIVES AND HEDGING POLICIES

Starting from 2014, the Parent Company has been authorised to use EPE (Expected Positive Exposure) internal models to determine the capital requirement for counterparty risk. This approach is applicable to almost the entire derivatives portfolio (as shown in the table below, as at 31 December 2020 approximately 96% of the total EAD of financial and credit derivatives is measured using EPE models). Derivatives whose counterparty risk is measured using approaches other than internal models represent a residual portion of the portfolio (as at 31 December 2020 accounting for approximately 4% of overall EAD) and refer to:

- residual contracts of Intesa Sanpaolo to which EPE is not applied (in compliance with the immateriality of the EBA thresholds);
 - EAD generated by all other banks and companies in the Group which report using the mark-to-market approach.
- As envisaged by Basel 3, also CCPs generate a capital requirement and are thus included in the EPE scope and in the evidence stated below.

The table below shows the overall EAD of exposures in financial and credit derivatives, broken down by measurement approach (EPE internal models or mark-to-market approach).

Transaction categories	31.12.2020		31.12.2019	
	Mark-to-market approach	EPE Internal Method	Mark-to-market approach	EPE Internal Method
Derivative contracts	829	19,999	402	17,138

The EPE internal model considers the collateral collected to mitigate credit exposure and any excess collateral paid. The value of the guarantees received and included in the calculation of the EAD amounts to approximately 5 billion euro for the Parent Company, while the collateral paid equals 22 billion euro (including the collateral connected with transactions with central counterparties).

1.3.1. Trading derivatives

A. FINANCIAL DERIVATIVES

A.1. Financial trading derivatives: period-end notional amounts

(millions of euro)

Underlying asset/Type of derivatives	31.12.2020				31.12.2019			
	Over the counter			Organised markets	Over the counter			Organised markets
	Central Counterparties	Without central counterparties			Central Counterparties	Without central counterparties		
		With netting agreements	Without netting agreements	With netting agreements		Without netting agreements		
1. Debt securities and interest rate	1,850,843	277,526	75,307	162,222	1,638,170	171,607	56,717	211,811
a) Options	-	81,269	7,722	54,385	-	83,974	7,429	63,006
b) Swaps	1,850,843	196,257	64,170	-	1,638,170	87,633	47,391	-
c) Forwards	-	-	2,484	-	-	-	1,897	-
d) Futures	-	-	931	107,837	-	-	-	148,805
e) Other	-	-	-	-	-	-	-	-
2. Equities and stock indices	-	6,828	31,621	1,897	-	9,152	16,504	23,392
a) Options	-	6,515	31,608	401	-	9,152	16,491	21,046
b) Swaps	-	313	13	-	-	-	13	-
c) Forwards	-	-	-	7	-	-	-	-
d) Futures	-	-	-	1,489	-	-	-	2,346
e) Other	-	-	-	-	-	-	-	-
3. Foreign exchange rates and gold	-	158,342	20,387	375	-	189,826	19,479	339
a) Options	-	17,135	1,232	117	-	26,439	888	80
b) Swaps	-	52,006	5,701	16	-	55,590	6,355	-
c) Forwards	-	88,952	12,860	-	-	107,501	11,815	8
d) Futures	-	-	-	242	-	-	-	250
e) Other	-	249	594	-	-	296	421	1
4. Commodities	-	2,993	740	1,685	-	7,342	912	1,637
5. Other	-	-	-	-	-	-	-	-
Total	1,850,843	445,689	128,055	166,179	1,638,170	377,927	93,612	237,179

A.2. Financial trading derivatives: gross positive and negative fair value – breakdown by product

(millions of euro)

Type of derivative	31.12.2020				31.12.2019			
	Over the counter			Organised markets	Over the counter			Organised markets
	Central Counterparties	Without central counterparties			Central Counterparties	Without central counterparties		
		With netting agreements	Without netting agreements	With netting agreements		Without netting agreements		
1. Positive fair value								
a) Options	-	2,426	774	45	-	2,466	95	581
b) Interest rate swaps	51,707	14,225	7,368	-	36,322	12,697	6,724	-
c) Cross currency swaps	-	1,254	353	-	-	1,379	262	-
d) Equity swaps	-	3	6	-	-	-	4	-
e) Forwards	-	1,282	153	-	-	917	82	-
f) Futures	-	-	-	-	-	-	-	-
g) Other	-	173	60	1	-	257	68	1
Total	51,707	19,363	8,714	46	36,322	17,716	7,235	582
2. Negative fair value								
a) Options	-	2,393	6,404	18	-	2,499	4,772	1,155
b) Interest rate swaps	52,369	19,447	1,124	-	41,748	12,633	789	-
c) Cross currency swaps	-	1,542	778	-	-	1,421	840	-
d) Equity swaps	-	1	-	-	-	-	1	-
e) Forwards	-	1,120	260	-	-	847	93	-
f) Futures	-	-	-	-	-	-	-	-
g) Other	-	173	62	1	-	262	70	-
Total	52,369	24,676	8,628	19	41,748	17,662	6,565	1,155

A.3. Over the counter financial trading derivatives: notional values, gross positive and negative fair value by counterparty

Underlying asset	(millions of euro)			
	Central Counterparties	Banks	Other financial companies	Other counterparties
Contracts not included under netting agreements				
1) Debt securities and interest rates				
- notional amount	X	8,908	12,988	53,411
- positive fair value	X	1,233	236	5,989
- negative fair value	X	-767	-228	-257
2) Equities and stock indices				
- notional amount	X	15,893	9,689	6,039
- positive fair value	X	549	132	9
- negative fair value	X	-1,511	-167	-4,690
3) Foreign exchange rates and gold				
- notional amount	X	2,002	8,205	10,180
- positive fair value	X	7	105	416
- negative fair value	X	-654	-78	-216
4) Commodities				
- notional amount	X	2	49	689
- positive fair value	X	-	-	38
- negative fair value	X	-	-4	-56
5) Other				
- notional amount	X	-	-	-
- positive fair value	X	-	-	-
- negative fair value	X	-	-	-
Contracts included under netting agreements				
1) Debt securities and interest rates				
- notional amount	1,850,843	207,570	53,533	16,423
- positive fair value	51,707	12,089	2,335	1,855
- negative fair value	-52,369	-17,356	-3,543	-426
2) Equities and stock indices				
- notional amount	-	2,831	3,974	23
- positive fair value	-	77	35	1
- negative fair value	-	-140	-90	-
3) Foreign exchange rates and gold				
- notional amount	-	116,127	30,332	11,883
- positive fair value	-	1,845	480	482
- negative fair value	-	-1,814	-640	-472
4) Commodities				
- notional amount	-	697	987	1,309
- positive fair value	-	17	74	73
- negative fair value	-	-18	-71	-106
5) Other				
- notional amount	-	-	-	-
- positive fair value	-	-	-	-
- negative fair value	-	-	-	-

A.4. Residual maturity of over the counter financial derivatives: notional amounts

Underlying/Residual maturity	(millions of euro)			
	Up to 1 year	Between 1 and 5 years	Over 5 years	Total
A.1 Financial derivatives on debt securities and interest rates	610,662	847,456	745,558	2,203,676
A.2 Financial derivatives on equities and stock indices	10,235	26,200	2,014	38,449
A.3 Financial derivatives on foreign exchange rates and gold	124,341	36,995	17,393	178,729
A.4 Financial derivatives on commodities	2,302	1,431	-	3,733
A.5 Other financial derivatives	-	-	-	-
Total 31.12.2020	747,540	912,082	764,965	2,424,587
Total 31.12.2019	654,445	776,275	678,989	2,109,709

B. CREDIT DERIVATIVES**B.1. Credit trading derivatives: period-end notional amounts**

Categories of transactions	(millions of euro)	
	Trading derivatives	
	single counterparty	more counterparties (basket)
1. Protection purchases		
a) Credit default products	7,072	58,781
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Other	-	-
Total 31.12.2020	7,072	58,781
Total 31.12.2019	9,019	50,385
2. Protection sales		
a) Credit default products	7,253	51,887
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Other	-	-
Total 31.12.2020	7,253	51,887
Total 31.12.2019	10,559	46,581

As at 31 December 2020, none of the contracts shown in the table above have been included within the structured credit products.

B.2. Credit trading derivatives: gross positive and negative fair value – breakdown by product

Type of derivative	(millions of euro)	
	Total 31.12.2020	Total 31.12.2019
1. Positive fair value		
a) Credit default products	1,616	1,770
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Other	-	-
Total	1,616	1,770
2. Negative fair value		
a) Credit default products	1,759	1,942
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Other	-	-
Total	1,759	1,942

As at 31 December 2020, none of the contracts shown in the table above have been included within the structured credit products.

B.3. Over the counter credit trading derivatives: notional values, gross positive and negative fair value by counterparty

	(millions of euro)			
	Central counterparties	Banks	Other financial companies	Other counterparties
Contracts not included under netting agreements				
1) Protection purchases				
- notional amount	X	-	-	218
- positive fair value	X	-	-	40
- negative fair value	X	-	-	-
2) Protection sales				
- notional amount	X	-	35	13
- positive fair value	X	-	-	-
- negative fair value	X	-	-1	-15
Contracts included under netting agreements				
1) Protection purchases				
- notional amount	40,675	14,151	10,809	-
- positive fair value	1	61	35	-
- negative fair value	-1,113	-234	-258	-
2) Protection sales				
- notional amount	37,301	12,225	9,566	-
- positive fair value	1,003	211	265	-
- negative fair value	-1	-42	-95	-

As at 31 December 2020, none of the contracts shown in the table above have been included within the structured credit products.

B.4. Residual maturity of over the counter credit trading derivatives: notional amounts

	(millions of euro)			
Underlying/Residual maturity	Up to 1 year	Between 1 and 5 years	Over 5 years	Total
1. Protection sales	4,508	53,829	803	59,140
2. Protection purchases	4,842	60,220	791	65,853
Total 31.12.2020	9,350	114,049	1,594	124,993
Total 31.12.2019	17,496	97,073	1,975	116,544

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

The Intesa Sanpaolo Group does not hold credit derivatives associated with the fair value option.

1.3.2. Accounting hedges

Qualitative information

On first-time adoption of IFRS 9, the Intesa Sanpaolo Group exercised its option under the standard to continue to fully apply the rules of IAS 39 for all types of hedges (micro and macro hedges). As a result, the provisions of IFRS 9 on hedging do not apply.

A. Fair value hedging

The hedging carried out by the Intesa Sanpaolo Group is aimed at protecting the banking book from variations in the fair value of loans and deposits due to movements in the interest rate curve (interest rate risk).

The Group uses both micro fair value hedges and macro fair value hedges.

The micro fair value hedges mainly hedge bonds issued, securities under assets and loans to customers.

The macro fair value hedges are used for:

- core deposits, based on the applicable standards in the carved-out version of IAS 39 in accordance with the option provided by IFRS 9 to make use of the possibility of fully applying the provisions of IAS 39 on hedges;
- the already fixed portion of floating-rate loans, in which the macro fair value hedge is used to hedge the interest rate risk inherent in the floating-rate coupons of the loans granted, when the coupon rate is set;
- a portion of the fixed-rate loans. For this type, an open-portfolio macrohedging model has been adopted according to a bottom-layer approach that, in accordance with the interest rate risk measurement method involving modelling of the prepayment phenomenon, is more closely correlated with risk management activity and asset dynamics.
- a portion of the embedded options on loans to customers. For this type, a macrohedging model was adopted on a static portfolio of hedged underlyings.

The main types of derivative contracts used are plain and structured interest rate swaps (IRS), overnight index swaps (OIS), cross-currency swaps (CCS) and options on interest rates concluded with third parties or with other Group companies. The latter, in turn, hedge the risk in the market to meet the requirements for the outsourcing of the hedges to third-party counterparties required to qualify the hedges as IAS-compliant in the consolidated financial statements.

The derivatives are not listed on regulated markets but are traded in OTC circuits. The OTC contracts also include contracts brokered through clearing houses.

B. Cash flow hedging

The hedging carried out by the Intesa Sanpaolo Group is aimed at protecting the Group from the exposure to changes in future cash flows attributable to movements in the interest rate curve, associated with a particular asset/liability, such as variable future interest payments on a debt/loan or a highly probable expected future transaction.

The Group uses both micro cash flow hedges and macro cash flow hedges.

The micro cash flow hedges mainly hedge bonds issued.

The macro cash flow hedges are used for:

- floating-rate funding when it is used to finance fixed-rate loans;
- floating-rate loans to hedge the fixed-rate funding.

The derivatives used are interest rate swaps (IRS) with third parties or with other Group companies, which, in turn, hedge the risk in the market to meet the requirements for the outsourcing of the hedges to third-party counterparties required to qualify the hedges as IAS-compliant in the consolidated financial statements.

The derivatives are not listed on regulated markets but are traded in OTC circuits. The OTC contracts also include contracts brokered through clearing houses.

C. Hedging of foreign investments

In 2020, foreign exchange hedges were implemented against transaction foreign exchange risk.

D. Hedging instruments

The main causes of ineffectiveness of the model adopted by the Group for verifying the effectiveness of the hedges are attributable to the following:

- misalignment between the notional value of the derivative and the hedged underlying recognised at the time of initial designation or generated subsequently, such as in the case of partial repayments of loans or the repurchase of bonds;
- application of different curves on the hedging derivative and hedged item for the purpose of carrying out the effectiveness test on fair value hedges. The derivatives, which are normally collateralised or intermediated through clearing houses, are discounted on the Eonia/Ester curve, while the hedged items are discounted on the indexing curve of the hedging instrument;
- inclusion in the effectiveness test of the value of the variable leg of the hedging derivative, in the case of fair value hedges.

The ineffectiveness of the hedge is promptly recognised for the purposes of:

- the determination of the effect on the income statement;
- the assessment of the possibility of continuing to apply the hedge accounting rules.

The Group does not use dynamic hedges, as defined in IFRS 7, paragraph 23C.

E. Hedged items

The main types of hedged items are:

- debt securities under assets;
- debt securities issued and non-securities funding;
- fixed-rate loans;
- floating-rate loans;
- optional embedded component of floating-rate mortgages;
- already fixed coupon of floating rate-loans;
- modelled on demand deposits.

E.1 Debt securities under assets

These are hedged by micro fair value hedges, using IRS, OIS and CCS as hedging instruments.

The interest rate risk is hedged for the entire duration of the obligation.

The Dollar Offset Method is used to verify the hedge effectiveness. This method is based on the ratio between the cumulative changes (from the inception of the hedge) in the fair value of the hedging instrument, attributable to the hedged risk, and past changes in the fair value of the hedged item (fair value change), net of accrued interest.

Micro fair value hedges also include forward sales on securities in the HTCS portfolio, carried out to hedge fair value risks from movements in credit spreads and interest rate curves. With regard to the forward sale contract, which is a derivative because it is a non-regular way transaction, the spot component is separated from the interest component by designating only the spot component as the hedging instrument in a fair value hedging relationship.

E.2 Debt securities issued and non-securities funding

The Group currently has micro fair value hedges in place on fixed- or structured-rate funding and micro cash flow hedges or macro cash flow hedges on floating-rate funding, using IRS, OIS and CCS as hedging instruments.

The interest rate risk is hedged for the entire duration of the obligation.

For the micro hedges, the hedge effectiveness is verified using the Dollar Offset Method. This method is based on the ratio between the cumulative changes (from the inception of the hedge) in the fair value or the cash flows of the hedging instrument, attributable to the hedged risk, and past changes in the fair value or the cash flows of the hedged item (fair value change), net of accrued interest.

For the macro hedges, the hedge effectiveness is verified by means of a capacity test. This test involves a comparison of the consistency between the hedged items, referring to existing and expected floating-rate funding (so-called highly probable future transactions), and the hedging instruments, which must always be confirmed throughout the life of the hedging relationship and for each time band. In this case, the hedged item is represented by the expected cash flows from funding that will arise over the life of the issues.

E.3 Fixed-rate loans

The Group has designated micro fair value hedges for fixed-rate loans and macro fair value hedges for mortgage loans in the retail segment of the Parent Company and the Network Banks, mainly using IRS as hedging instruments.

The interest rate risk is hedged throughout the life of the underlying.

For the micro hedges, the hedge effectiveness is verified using the Dollar Offset Method.

For the macro hedges, the loan portfolio hedged is open, i.e. it is dynamically composed of fixed-rate instruments managed at aggregate level through hedging derivatives entered into over time.

The effectiveness of the macro hedges on fixed-rate loans is periodically verified through specific prospective and retrospective tests aimed at demonstrating that the hedged portfolio contains an amount of assets whose sensitivity profile and changes in fair value due to interest rate risk reflect those of the derivatives used for the hedge.

E.4 Floating-rate loans

The Group currently has macro cash flow hedges in place on floating-rate loans, mainly using IRS as hedging instruments.

The hedge effectiveness is verified by means of a capacity test. This test involves a comparison of the consistency between the hedged items, referring to the floating-rate loans outstanding, and the hedging instruments, which must always be confirmed throughout the life of the hedging relationship and for each time band. In this case, the hedged item is represented by the expected cash flows originating from the loans that will arise over the life of the assets.

E.5 Optional embedded component of floating-rate mortgages

The optional embedded components (interest rate options) of floating-rate mortgages are hedged by both micro and macro fair value hedges, using options (cap, floor, collar) as hedging instruments.

The underlying assets may be partially or totally hedged, over time and in terms of amount.

For the macro hedges, the loan portfolio hedged is static, i.e. it is defined at the start of the hedge without the possibility of adding new hedged elements over time.

The Dollar Offset Method is used to verify the hedge effectiveness.

E.6 Already fixed coupon of floating-rate loans

This is hedged by macro fair value hedges, using OIS as hedging instruments.

The purpose of this type of hedge is to neutralise the interest rate risk generated by the coupons already set for floating-rate loans.

The Dollar Offset Method is used to verify the hedge effectiveness, while the actual consistency of the hedged items is verified by a capacity test.

E.7 Modelled on demand deposits.

Modelled on demand deposits are hedged by macro fair value hedges, as required by the “carve out” of IAS 39, using IRS and OIS as hedging instruments.

The purpose of this type of hedge is to protect the net interest income from possible falls in interest rates that reduce the spread generated by core deposits.

The model is subject to continuous monitoring and verification by the Financial and Market Risks Head Office Department, in order to promptly incorporate changes in the main characteristics (volumes, stability, reactivity) and make the necessary adjustments where necessary. The Dollar Offset Method is used to verify the hedge effectiveness.

Quantitative information**A. Financial hedging derivatives***A.1 Financial hedging derivatives: period-end notional amounts*

(millions of euro)

Underlying asset/Type of derivative	31.12.2020				31.12.2019			
	Over the counter			Organised markets	Over the counter			Organized markets
	Central Counterparties	Without central counterparties			Central Counterparts	Without central counterparties		
		With netting agreements	Without netting agreements	With netting agreements		Without netting agreements		
1. Debt securities and interest rates	225,066	25,626	5,617	-	21,477	184,377	6,235	-
a) Options	-	2,229	-	-	-	2,689	-	-
b) Swaps	225,066	22,827	4,173	-	21,477	181,668	4,645	-
c) Forwards	-	550	1,444	-	-	-	1,590	-
d) Futures	-	-	-	-	-	-	-	-
e) Others	-	20	-	-	-	20	-	-
2. Equities and stock indices	-	-	-	-	-	-	-	-
a) Options	-	-	-	-	-	-	-	-
b) Swaps	-	-	-	-	-	-	-	-
c) Forwards	-	-	-	-	-	-	-	-
d) Futures	-	-	-	-	-	-	-	-
e) Other	-	-	-	-	-	-	-	-
3. Foreign exchange rates and gold	-	7,425	31	59	-	6,682	36	136
a) Options	-	-	-	-	-	-	-	-
b) Swaps	-	7,425	31	59	-	6,682	36	136
c) Forwards	-	-	-	-	-	-	-	-
d) Futures	-	-	-	-	-	-	-	-
e) Other	-	-	-	-	-	-	-	-
4. Commodities	-	-	-	-	-	-	-	-
5. Other	-	-	-	-	-	-	-	-
TOTAL	225,066	33,051	5,648	59	21,477	191,059	6,271	136

The average notional amount in the year of the financial hedging derivatives was 184,802 million euro.

A.2 Financial hedging derivatives: gross positive and negative fair value – breakdown by product

Type of derivative	Positive and negative fair value								(millions of euro)	
	Total 31.12.2020				Total 31.12.2019				Change in value used to calculate hedge effectiveness	
	Over the counter			Organised markets	Over the counter			Organised markets	Total 31.12.2020	Total 31.12.2019
	Central Counterparties	Without central counterparties			Central Counterparties	Without central counterparties				
With netting agreements		Without netting agreements	With netting agreements	Without netting agreements						
Positive fair value										
a) Options	-	10	-	-	-	19	-	-	-155	-183
b) Interest rate swap	3,082	834	1	-	392	2,583	11	-	2,682	2,127
c) Cross currency swap	-	287	-	-	-	385	-	-	103	116
d) Equity swap	-	-	-	-	-	-	-	-	-	-
e) Forwards	-	-	1	-	-	-	28	-	-	-
f) Futures	-	-	-	-	-	-	-	-	-	-
g) Other	-	1	-	-	-	1	-	-	-	-
Total	3,082	1,132	2	-	392	2,988	39	-	2,630	2,060
Negative fair value										
a) Options	-	3	-	-	-	4	-	-	3	1
b) Interest rate swap	9,455	2,626	161	-	907	8,039	141	-	8,871	6,242
c) Cross currency swap	-	407	5	-	-	397	1	-	204	356
d) Equity swap	-	-	-	-	-	-	-	-	-	-
e) Forwards	-	-	12	-	-	-	-	-	-	-
f) Futures	-	-	-	-	-	-	-	-	-	-
g) Other	-	-	-	2	-	-	-	3	-	-
Total	9,455	3,036	178	2	907	8,440	142	3	9,078	6,599

A.3 Over the counter financial hedging derivatives: notional values, gross positive and negative fair values by counterparty

Underlying asset	(millions of euro)			
	Central counterparties	Banks	Other financial companies	Other counterparties
Contracts not included under netting agreements				
1) Debt securities and interest rates				
- notional amount	X	3,509	2,108	-
- positive fair value	X	-	2	-
- negative fair value	X	-129	-44	-
2) Equities and stock indices				
- notional amount	X	-	-	-
- positive fair value	X	-	-	-
- negative fair value	X	-	-	-
3) Foreign exchange rates and gold				
- notional amount	X	31	-	-
- positive fair value	X	-	-	-
- negative fair value	X	-5	-	-
4) Commodities				
- notional amount	X	-	-	-
- positive fair value	X	-	-	-
- negative fair value	X	-	-	-
5) Other				
- notional amount	X	-	-	-
- positive fair value	X	-	-	-
- negative fair value	X	-	-	-
Contracts included under netting agreements				
1) Debt securities and interest rates				
- notional amount	225,066	23,972	1,654	-
- positive fair value	3,082	781	64	-
- negative fair value	-9,455	-1,845	-784	-
2) Equities and stock indices				
- notional amount	-	-	-	-
- positive fair value	-	-	-	-
- negative fair value	-	-	-	-
3) Foreign exchange rates and gold				
- notional amount	-	6,555	870	-
- positive fair value	-	282	5	-
- negative fair value	-	-235	-172	-
4) Commodities				
- notional amount	-	-	-	-
- positive fair value	-	-	-	-
- negative fair value	-	-	-	-
5) Other				
- notional amount	-	-	-	-
- positive fair value	-	-	-	-
- negative fair value	-	-	-	-

A.4 Residual maturity of over the counter financial hedging derivatives: notional amounts

Underlying/Residual maturity	(millions of euro)			
	Up to 1 year	Between 1 and 5 years	Over 5 year	Total
A.1 Financial derivatives on debt securities and interest rates	59,252	96,968	100,089	256,309
A.2 Financial derivatives on equities and stock indices	-	-	-	-
A.3 Financial derivatives on foreign exchange rates and gold	1,208	3,405	2,843	7,456
A.4 Financial derivatives on commodities	-	-	-	-
A.5 Other financial derivatives	-	-	-	-
Total 31.12.2020	60,460	100,373	102,932	263,765
Total 31.12.2019	70,476	63,507	84,824	218,807

B. Credit hedging derivatives

B.1 Credit hedging derivatives: period-end notional amounts

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

B.3 Over the counter credit hedging derivatives: notional values, gross positive and negative fair values by counterparty

B.4 Residual maturity of over the counter credit hedging derivatives: notional amounts

The Intesa Sanpaolo Group does not hold credit derivatives classified as hedges in its portfolio.

C. Non-derivative hedging instruments

C.1 Non-derivative hedging instruments: breakdown by accounting portfolio and type of hedge

The Intesa Sanpaolo Group has exercised the option, provided for on the introduction of IFRS 9, of continuing to fully apply the provisions of IAS 39 on hedge accounting (in the carved-out version endorsed by the European Commission) for each type of hedge (both for micro hedges and macro hedges).

For this reason, the Intesa Sanpaolo Group does not hold financial instruments to be shown in table “C.1 Non-derivative hedging instruments: breakdown by accounting portfolio and type of hedge”.

INFORMATION ON THE UNCERTAINTY DERIVING FROM HEDGING DERIVATIVE BENCHMARK INDICES

As illustrated in Part A – Accounting policies, the Intesa Sanpaolo Group, from the 2019 Financial Statements, has applied Regulation (EU) 34/2020 of 15 January 2020, which adopted the document issued by the IASB in September 2019 on “Interest Rate Benchmark Reform (amendments to IFRS 9 Financial Instruments, IAS 39 Financial Instruments: Recognition and Measurement and IFRS 7 Financial Instruments: Disclosures)”. This regulation introduced several amendments regarding hedges (hedge accounting) designed to prevent uncertainties about the amount and timing of the cash flows arising from the rate reform resulting in the discontinuation of existing hedges and difficulties in designating new hedging relationships. Therefore, the analysis of hedge effectiveness was carried out considering the flows and timing of outstanding hedging derivatives, assuming that the interest rate benchmarks used to set existing interest rates will not be changed as a result of the Interest Rate Benchmark Reform (IBOR Reform).

The disclosure required by IFRS 7, paragraph 24H, on the uncertainty arising from interest rate benchmark reform on hedging relationships and the nominal amount of hedging instruments potentially impacted by the benchmark rate reform is provided below.

Fair value hedge derivatives

Fair value hedge derivatives of the Group are mainly index-linked to the Euribor, whose calculation method was revised during 2019 to be able to continue using that parameter also after 1 January 2022, both for outstanding contracts and new contracts. To make the Euribor compliant with the EU Benchmarks Regulation (BMR - Regulation 2016/1011/EU) the EMMI - European Money Markets Institute - implemented the change to a new “hybrid” calculation method. The current calculation system – which was completed at the end of November 2019 – does not change the economic variable that the benchmark measures: the Euribor expresses the actual cost of funding for contributing European banks, and is always available and consultable.

Therefore, the Group does not deem that there is uncertainty on the timing or cash flows of the Euribor, and does not consider the fair value hedges linked to the Euribor to be impacted by the reform as at 31 December 2020, in line with the approach already adopted for the Financial Statements as at 31 December 2019.

The fair value hedges also include derivatives index-linked to benchmarks impacted by the reform, specifically to the EONIA and the LIBOR, for the various currencies, which will be replaced in the future with new risk-free interest rates. In Europe, the EONIA fixing, calculated starting from October 2019 based on the new risk-free rate €STR, will be published until the end of 2021 and then permanently replaced by €STR. The publication of the LIBOR is also expected to be discontinued at the end of 2021 and there are already alternative risk-free rates available in the individual nations, which will gradually replace the LIBOR.

Specifically, as at 31 December 2020, there were fair value hedges linked to parameters impacted by the reform, with a notional value of 48,175 million euro which, net of the contribution of the UBI Group of 2,621 million euro, came to 45,554 million euro (83,808 million euro as at 31 December 2019), relating to the following parameters:

- EONIA for a notional value of 32,461 million euro which, excluding the UBI Group (1,693 million euro), would come to 30,768 million euro (67,651 million euro as at 31 December 2019), of which 17,947 million euro (18,529 million euro as at 31 December 2019) with maturity after 31 December 2021, to which 1,693 million euro of the UBI Group with the same maturity must be added;
- LIBOR USD for a notional value of 15,266 million euro which, excluding the UBI Group (902 million euro), would come to 14,364 million euro (15,535 million euro as at 31 December 2019), of which 14,144 million euro (14,857 million euro as at 31 December 2019) with maturity after 31 December 2021, to which 493 million euro of the UBI Group with the same maturity must be added;
- other rates impacted by the reform, represented by LIBOR in other currencies for a notional value of 448 million euro which, excluding the UBI Group (26 million euro), would come to 422 million euro (622 million euro as at 31 December 2019), of which 416 million euro (469 million euro as at 31 December 2019) with maturity after 31 December 2021, to which 21 million euro of the UBI Group with the same maturity must be added.

The total notional value of the fair value hedge derivatives impacted by the reform, including the UBI Group, represents 19% of the total of fair value hedge derivatives of the Group (39% as at 31 December 2019) and 18% considering only derivatives maturing after 31 December 2021 (16% as at 31 December 2019). In 2020, there was also a progressive increase in the use of derivatives indexed to the €STR in the hedging subject to hedge accounting.

Cash flow hedge derivatives

Cash flow hedge derivatives are index-linked to the Euribor. As illustrated for fair value hedges, the Group does not deem that there is uncertainty on the timing or cash flows of the Euribor, and, therefore does not consider the cash flow hedges linked to the Euribor to be impacted by the reform as at 31 December 2020.

D. Hedged items

The Intesa Sanpaolo Group has exercised the option, provided for on the introduction of IFRS 9, of continuing to fully apply the provisions of IAS 39 on hedge accounting (in the carved-out version endorsed by the European Commission) for each type of hedge (both for micro hedges and macro hedges).

D.1 Fair value hedges

							(millions of euro)
		Micro-hedges: book value	Micro-hedges – net positions: book value of assets and liabilities (prior to netting)	Micro-hedges		Macro- hedges: book value	
				Cumulative fair value changes (hedged instrument)	Termination of hedging: residual cumulative fair value changes	Changes in value used to assess hedge ineffectiveness	
A. Assets							
1. Financial assets designated at fair value through other comprehensive income – hedging of:							
		36,859	-	1,390	607	1,265	-
1.1	Debt securities and interest rates	34,915	-	1,402	607	1,232	X
1.2	Equities and stock indices	-	-	-	-	-	X
1.3	Foreign exchange rates and gold	-	-	-	-	-	X
1.4	Loans	-	-	-	-	-	X
1.5	Other	1,944	-	-12	-	33	X
2. Financial assets measured at amortised cost - hedging of:							
		41,054	-	4,797	27	3,981	77,305
1.1	Debt securities and interest rates	40,399	-	4,484	27	3,665	X
1.2	Equities and stock indices	-	-	-	-	-	X
1.3	Foreign exchange rates and gold	120	-	-3	-	-	X
1.4	Loans	-	-	-	-	-	X
1.5	Other	535	-	316	-	316	X
	Total 31.12.2020	77,913	-	6,187	634	5,246	77,305
	Total 31.12.2019	69,968	-	4,462	107	3,207	68,055
B. Liabilities							
1. Financial liabilities measured at amortised cost - hedging of:							
		60,506	-	1,949	-5	2,084	34,996
1.1	Debt securities and interest rates	55,132	-	1,711	-5	1,827	X
1.2	Foreign exchange rates and gold	-	-	-	-	-	X
1.3	Other	5,374	-	238	-	257	X
	Total 31.12.2020	60,506	-	1,949	-5	2,084	34,996
	Total 31.12.2019	40,312	-	1,391	264	1,641	20,016

D.2 Cash flow hedges and hedges of foreign investments

		Change in value used to assess hedge ineffectiveness	Hedging reserves	(millions of euro) Termination of hedging: residual cumulative value of the hedging reserves
A. Cash flow hedge				
1. Assets				
1.1 Debt securities and interest rates		37	37	-
1.2 Equities and stock indices		-	-	-
1.3 Foreign exchange rates and gold		-	-	-
1.4 Loans		-	-	-
1.5 Other		-	-	-
2. Liabilities				
1.1 Debt securities and interest rates		-1,075	-818	-
1.2 Foreign exchange rates and gold		-	-	-
1.3 Other		-	-	-
Total (A)	31.12.2020	-1,038	-781	-
Total (A)	31.12.2019	-1,216	-1,259	-
B. Hedges of foreign investments				
		X	-	-
Total (A+B)	31.12.2020	-1,038	-781	-
Total (A+B)	31.12.2019	-1,216	-1,259	-

E. Effects of hedging on shareholders' equity

E.1 Reconciliation of components of shareholders' equity

	Cash flow hedging reserve					Reserve for hedging of foreign investments				
	Debt securities and interest rates	Equities and stock indices	Foreign exchange rates and gold	Loans	Other	Debt securities and interest rates	Equities and stock indices	Foreign exchange rates and gold	Loans	Other
Initial amount	-1,259	-	-	-	-	-	-	-	-	-
Fair value changes (effective portion)	478	-	-	-	-	-	-	-	-	-
Reclassification to the income statement	-	-	-	-	-	-	-	-	-	-
<i>of which: future transaction not expected</i>	-	-	-	-	-	X	X	X	X	X
Other changes	-	-	-	-	-	-	-	-	-	-
<i>of which: transfer to initial book value</i>	-	-	-	-	-	X	X	X	X	X
Final amount	-781	-	-	-	-	-	-	-	-	-

The category "Hedging instruments (non-designated items)" is not present, because the Intesa Sanpaolo Group has exercised the option, provided for on the introduction of IFRS 9, of continuing to fully apply the provisions of IAS 39 on hedge accounting (in the carved-out version endorsed by the European Commission) for each type of hedge (both for micro hedges and macro hedges).

1.3.3. Other information on derivative instruments (trading and hedging)

A. Credit and financial derivatives

A.1 Over the counter credit and financial derivatives: net fair values by counterparty

	Central counterparties	Banks	Other financial companies	(millions of euro) Other counterparties
A. Financial derivatives				
1) Debt securities and interest rates				
- notional amount	2,042,697	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-5,579	-	-	-
2) Equities and stock indices				
- notional amount	-	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-	-	-	-
3) Foreign exchange rates and gold				
- notional amount	-	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-	-	-	-
4) Commodities				
- notional amount	-	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-	-	-	-
5) Other				
- notional amount	-	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-	-	-	-
B. Credit derivatives				
1) Protection purchases				
- notional amount	-	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-	-	-	-
2) Protection sales				
- notional amount	-	-	-	-
- positive net fair value	-	-	-	-
- negative net fair value	-	-	-	-

The table shows the values resulting from the offsetting in the balance sheet for the derivatives whose netting agreements meet the criteria set out in IAS 32 paragraph 42.

In particular, the above refers to OTC trading and hedging financial and credit in place with the legal clearing agent LCH Ltd, for which the fair values attributable to transactions on own account and transactions on behalf of customers have been offset separately in the financial statements.

The overall negative result of 5,579 million euro (negative fair value of 60,224 million euro and positive fair value of 54,645 million euro) is reported in Part B of the Notes to the financial statements under financial liabilities held for trading at 2,168 million euro for the first transaction type and under hedging derivatives liabilities at 3,411 million euro for the second transaction types.