

1.2. BANKING GROUP - 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 Group Risk Governance Committee, replaced by the Steering Committee (Article 18.2.2, letter c) of the Articles of Association provided for the establishment of a Steering Committee, on 25/07/2017, chaired by the Managing Director and CEO and composed of the heads of the main corporate departments), and the Group Financial Risks Committee.

The Steering Committee (formerly the Group Risk Governance Committee), the 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 the 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 Risks 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 Statutory 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 Risks Committee.

The Parent Company's Financial and Market Risks 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 VaR is the main risk measurement metrics 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.).

	BOOK VALUE (supervisory scope)	MAIN RISK MEASUREMENT METRICS		Risk factors measured using metrics included under Other
		VaR	Other	
(millions of euro)				
Assets subject to market risk	603,170	98,076	505,094	
Financial assets held for trading	39,042	37,791	1,250	Interest rate risk, credit spread, equity
Financial assets designated at fair value through profit and loss	863	425	439	Interest rate risk, credit spread
Financial assets available for sale	64,968	59,819	5,149	Interest rate risk, equity risk
Financial assets held to maturity	1,174	-	1,174	Interest rate risk
Due from banks	71,883	-	71,883	Interest rate risk
Loans to customers	415,029	-	415,029	Interest rate risk
Hedging derivatives	4,213	41	4,172	Interest rate risk
Investments in associates and companies subject to joint control	5,998	-	5,998	Equity risk
Liabilities subject to market risk	572,132	41,874	530,258	
Due to banks	99,805	-	99,805	Interest rate risk
Due to customers	327,482	-	327,482	Interest rate risk
Securities issued	96,137	-	96,137	Interest rate risk
Financial liabilities held for trading	41,215	41,004	211	Interest rate risk
Financial liabilities designated at fair value through profit and loss	4	-	4	-
Hedging derivatives	7,489	870	6,619	Interest rate risk

REGULATORY TRADING BOOK**1.2.1. INTEREST RATE RISK AND PRICE RISK**

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

QUALITATIVE INFORMATION

The quantification of trading risks is based on daily and periodic VaR of the trading portfolios of Intesa Sanpaolo and Banca IMI, which represent 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.

A number of the other Group subsidiaries hold smaller trading portfolios with a marginal risk (around 1% of the Group's overall risk). In particular, the risk factors of the international subsidiaries' trading portfolios are interest rates and foreign exchange rates, both relating to linear pay-offs.

Internal model validation

For some of the risk factors indicated above, the Supervisory Authority has validated the internal models for the reporting of the capital absorptions of both Intesa Sanpaolo and Banca IMI.

In particular, the validated risk profiles for market risks are: (i) generic/specific on debt securities and on equities for Intesa Sanpaolo and Banca IMI, (ii) position risk on quotas of UCI underlying CPPI (Constant Proportion Portfolio Insurance) products for Banca IMI, (iii) position risk on dividend derivatives and (iv) position risk on commodities for Banca IMI, the only legal entity in the Group authorised to hold open positions in commodities.

Effective from June 2014, market risks are to be reported according to the internal model for capital requirements for the Parent Company's hedge fund portfolios.

Starting from 1 July 2014, the capital requirements deriving from the use of internal models will benefit from the reduction in the prudential multipliers established by the Supervisory Authority following completion of the previously recommended corrective actions.

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 portfolios of Intesa Sanpaolo and Banca IMI;
- the period must allow real historical series to be used for all portfolio risk factors.

In keeping with the historical simulation approach employed to calculate VaR, the latter point is a discriminating condition in the selection of the holding period. In fact, 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 the document, the period relevant to the measurement of stressed VaR was set as 1 April 2008 to 30 March 2009 for Intesa Sanpaolo and as 1 July 2011 to 30 June 2012 for Banca IMI.

VaR

The analysis of market risk profiles relative to the trading book 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, hedge funds).

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

The section "Quantitative information" presents the estimates and evolution of VaR, defined as the sum of VaR and of the simulation on illiquid parameters, for the trading book of Intesa Sanpaolo and Banca IMI.

Incremental Risk Charge (IRC)

The Incremental Risk Charge (IRC) is the maximum potential loss in the credit trading portfolio 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.

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 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.

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).

QUANTITATIVE INFORMATION**Daily VaR evolution**

During the fourth quarter of 2017, the market risks originated by Intesa Sanpaolo and Banca IMI declined compared to the previous period: the average daily VaR for the fourth quarter of 2017 was 58.6 million euro, slightly down on the third quarter, primarily for Banca IMI.

With regard to the whole of 2017, the Group's average risk profile (69 million euro) decreased compared to the average values in 2016 (94.9 million euro).

Daily VaR of the trading book for Intesa Sanpaolo and Banca IMI^(a)

	(millions of euro)					
	average 4th quarter	minimum 4th quarter	maximum 4th quarter	average 3rd quarter	average 2nd quarter	average 1st quarter
Intesa Sanpaolo	8.0	6.3	8.7	8.9	11.6	11.5
Banca IMI	50.5	44.2	59.5	52.6	58.4	73.7
Total	58.6	52.3	67.8	61.5	70.0	85.3

^(a) Each line in the table sets out the past estimates of daily operating VaR calculated on the quarterly historical time-series respectively of Intesa Sanpaolo and Banca IMI; total minimum and maximum values are estimated using aggregate historical time-series and therefore do not correspond to the sum of the individual values in the column.

Daily VaR of the trading book for Intesa Sanpaolo and Banca IMI – Comparison between 2017 and 2016^(a)

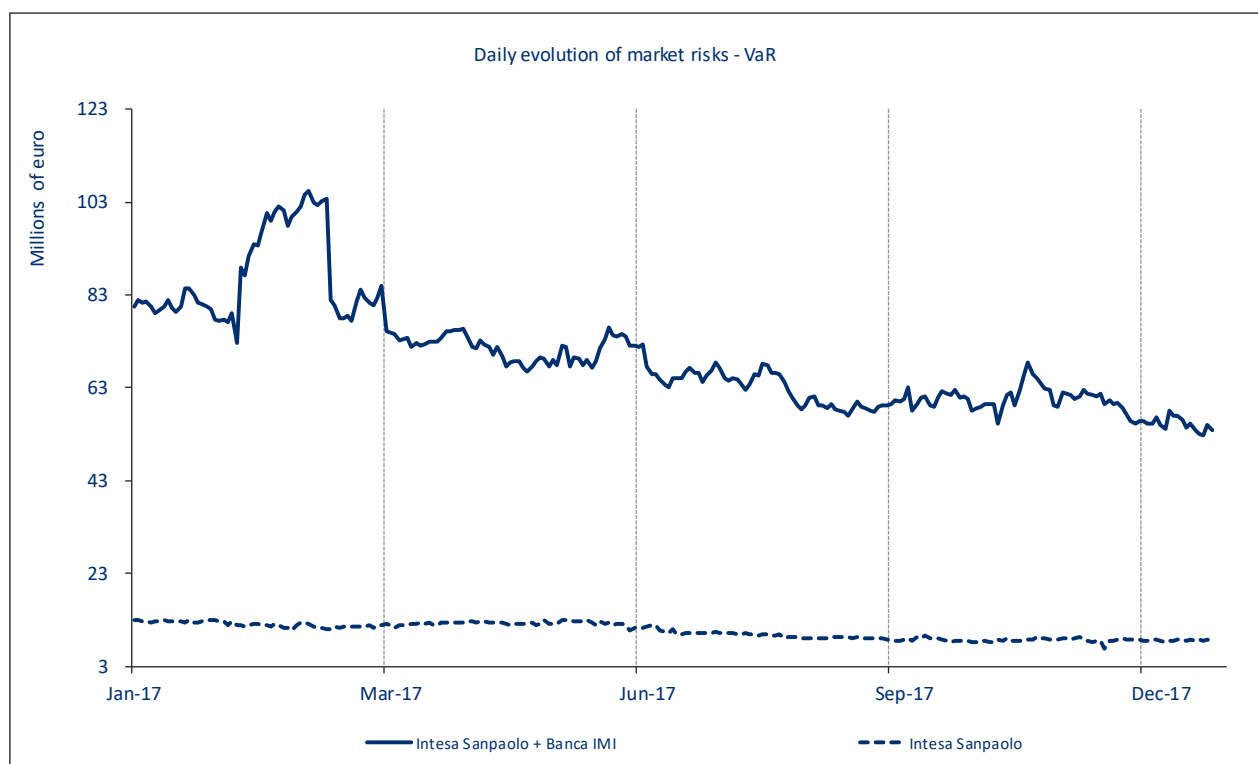
	(millions of euro)							
	2017				2016			
	average	minimum	maximum	last day	average	minimum	maximum	
Intesa Sanpaolo	10.0	6.3	12.5	8.0	12.4	9.8	17.6	
Banca IMI	58.9	44.2	93.2	45.1	82.5	51.8	125.6	
Total	69.0	52.3	104.8	53.2	94.9	63.3	137.9	

^(a) Each line in the table sets out the past estimates of daily operating VaR calculated on the annual historical time-series respectively of Intesa Sanpaolo and Banca IMI; total minimum and maximum values are estimated using aggregate historical time-series and therefore do not correspond to the sum of the individual values in the column.

The trend in the Group's VaR, shown in the following chart, was mainly determined by Banca IMI.

During the first quarter of 2017 an increase in risks was recorded, due initially to a "scenario" effect (at the beginning of February a particularly volatile scenario was recorded for the credit spread risk factor) and subsequently to an increase in risks in the credit and equity sector. In the last month, the VaR recorded a decline due to the technical effect linked to the passage of time, whereby past scenarios, at the time volatile, assume, with the passing of days, a lower weighting in the calculation of risks. In the second quarter of 2017, in addition to the abovementioned technical effect, according to which the "Brexit scenario" has been phased out of the VaR calculation period, a further decline in risks was recorded due to a reduction in the securities portfolio.

The risk profile declined in the third and fourth quarter of 2017 as a result of the lesser exposure to the government bond portfolio and interest rate risk. In addition, volatile scenarios had a lesser impact due to the technical effect linked to the passage of time.



Contribution of risk factors to total VaR^(a)

4th quarter 2017	Shares	Hedge funds	Interest rates	Credit spreads	Foreign exchange rates	Other parameters	Commodities
Intesa Sanpaolo	4%	6%	21%	46%	21%	1%	1%
Banca IMI	5%	0%	6%	81%	1%	6%	1%
Total	4%	1%	8%	76%	4%	6%	1%

^(a) Each line in the table sets out the contribution of risk factors considering the overall VaR 100%, calculated as the average of daily estimates in the fourth quarter of 2017, broken down between Intesa Sanpaolo and Banca IMI and indicating the distribution of overall VaR.

The breakdown of risk profile in the fourth quarter of 2017 with regard to the various factors shows the prevalence of the risk generated by the spread, which accounted for 46% of the total VaR for Intesa Sanpaolo and 81% for Banca IMI.

Contribution of strategies to portfolio breakdown ^(a)

	31.12.2017	31.12.2016
- Catalyst Driven	20.1%	12.4%
- Credit	33.9%	37.8%
- Directional trading	25.5%	33.4%
- Equity hedged	2.9%	0.0%
- Equity Long Only	0.0%	3.3%
- Multi-strategy	17.6%	13.1%
Total hedge funds	100.0%	100.0%

^(a) The table sets out on every line the percentage of total cash exposures calculated on amounts at period-end.

In 2017, the hedge fund portfolio maintained an asset allocation with a focus on strategies relating to credit (34% of the total in terms of portfolio value).

Risk control with regard to the trading activity of Intesa Sanpaolo and Banca IMI also uses scenario analyses and stress tests. The impact on the income statement of selected scenarios relating to the evolution of stock prices, interest rates, credit spreads and foreign exchange rates as at the end of December is summarised in the following table: The shocks applied to the portfolio were updated on an annual basis by the Financial and Market Risks Department.

(millions of euro)

	EQUITY		INTEREST RATES		CREDIT SPREADS		FOREIGN EXCHANGE RATES		COMMODITIES	
	Crash	Bullish	+40bp	lower rate	-25bp	+25bp	-10%	+10%	Crash	Bullish
Total	-3	31	-4	-6	280	-275	43	-15	3	13

In particular:

- for positions on equity markets, there would be a theoretical loss of 3 million euro in the event of a market crash (decline in prices of 15% on the European market and of 10% on the U.S. market and increase in volatility of 70%).
- for positions in interest rates, there would be a loss of 4 million euro in the event of an increase in rate curves of 40 bps;
- for positions in credit spreads, a widening of credit spreads of 25 bps would entail a loss of 275 million euro;
- for positions in foreign exchange, there would be losses of 15 million euro in the event of a 10% increase in the EUR-USD exchange rate and reduction in volatility of 25%.
- finally, for positions on commodities, in both crash and bullish scenarios there would be gains given the portfolio non-linearity

Backtesting

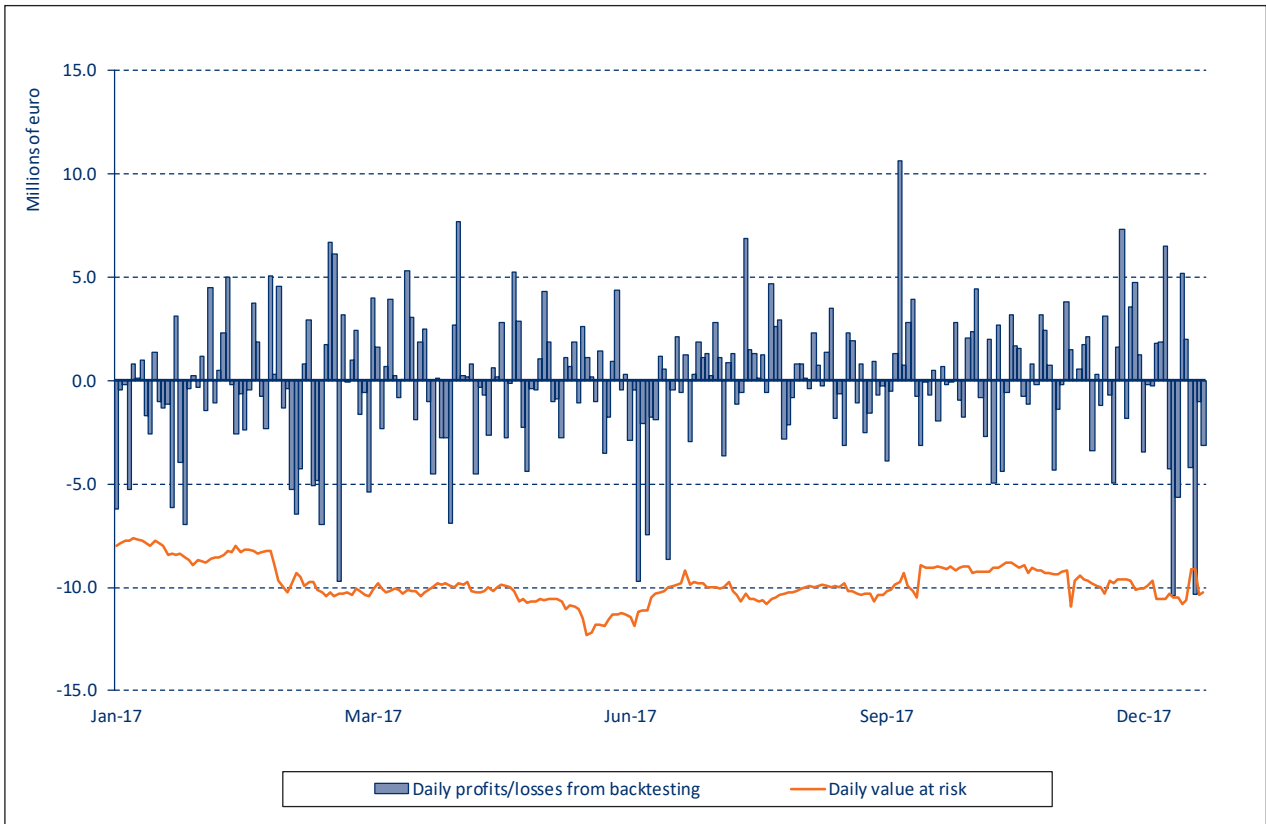
The effectiveness of the VaR calculation methods must be monitored daily via backtesting which, as concerns regulatory backtesting, compares:

- 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 such as commissions and intraday activities.

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 three 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 P&L series recorded and the theoretical series. The latter is based on revaluation of the portfolio value through the use of pricing models adopted for the VaR measurement calculation. The number of significant backtesting exceptions is determined as the maximum between those for actual P&L and theoretical P&L.

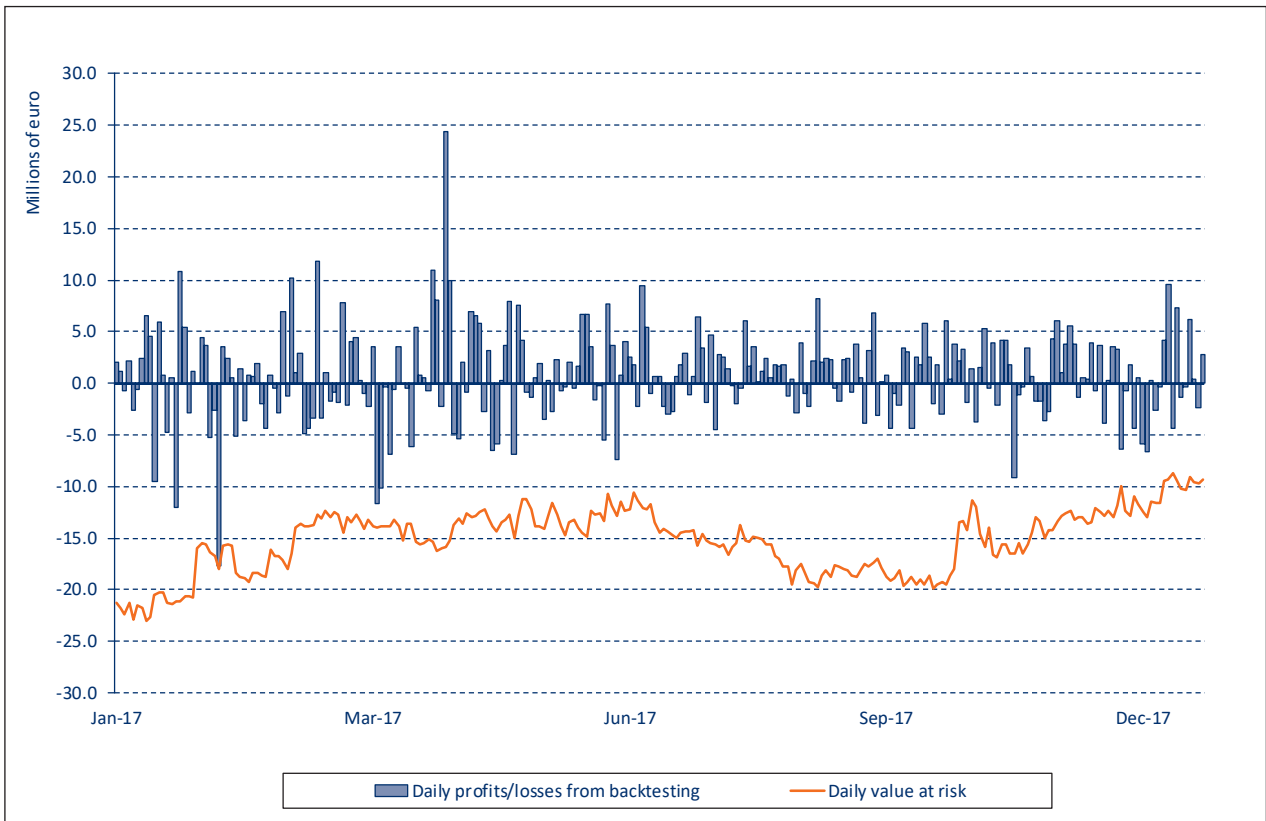
Backtesting in Intesa Sanpaolo

On 28 December 2017, there was theoretical backtesting exception on Intesa Sanpaolo’s trading portfolio. The risk factor that contributed to almost all of the loss was the rate; specifically, strong short-term shocks were observed on the USD Basis and Forex curves, mainly due to year-end rolling.



Backtesting in Banca IMI

In the past twelve months, there were no backtesting exceptions.



Issuer risk

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

Breakdown of exposures by type of issuer for Intesa Sanpaolo and Banca IMI ^(a)

	TOTAL	OF WHICH					
		Corporate	Financial	Emerging	Covered	Government	Securitis.
Intesa Sanpaolo	61%	5%	0%	0%	4%	77%	14%
Banca IMI	39%	1%	22%	-13%	8%	-3%	85%
Total	100%	3%	9%	-5%	6%	46%	41%

^(a) In the Total column, the table reports the contribution to total exposure of Intesa Sanpaolo and Banca IMI to issuer risk, breaking down the contribution to exposure by type of issuer. The scope is the trading book subject to issuer credit limit (excluding Italian Government and AAA, own securities), including cds.

The breakdown of the portfolio subject to issuer risk shows the prevalence of securities in the government segment for Intesa Sanpaolo and the securitisation segment for Banca IMI.

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 following 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 Risks 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.

For the 2017 RAF, an overall limit was set for the trading component of 155 million euro, in line with the previous year.

With respect to the component sub-allocated to the organisational units, it may be noted that the use of the VaR limit (held for trading component) for Intesa Sanpaolo averaged 52% in 2017, with a maximum use of 65%. For Banca IMI, the average VaR limit came to 45%, with a maximum use of 72%. It should be specified that for Banca IMI the VaR limit also includes the AFS component.

The use of the IRC limits at year end amounted to 21.8% for Intesa Sanpaolo (limit of 150 million euro) and 23% for Banca IMI (limit of 430 million euro).

The use of VaR operating limits on the AFS component (excluding Banca IMI) at year end was 38%. For 2017, the limit for this component remained in line with 2016 at 260 million euro.

BANKING BOOK**1.2.2 INTEREST RATE RISK AND PRICE RISK****QUALITATIVE INFORMATION****A. General aspects, interest rate risk and price risk management processes and measurement methods**

Market risk originated by the banking book arises primarily in the Parent Company and the main Group companies involved in retail and corporate banking. The banking book also includes exposure to market risks deriving from the equity investments in listed companies not fully consolidated, mostly held by the Parent Company and IMI Investmenti.

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.

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

1. shift sensitivity of economic value (Δ EVE);
2. net interest income:
 - shift sensitivity of net interest income (Δ NII);
 - dynamic simulation of net interest income (NII);
3. Value at Risk (VaR).

The shift sensitivity of the economic value (or shift sensitivity of the fair value) 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 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).

In measurements, capital items are represented 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);
- 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 net interest income both in absolute terms and in terms of variability over time;
- for the expected loss on loans, which represents the average cost of long-term loans, a shift in the discounting curve is envisaged, according to the aggregate credit risk levels by economic segment, in order to reduce this component in the cash flows.
- The cash flows used for both the contractual and behavioural profile are calculated at the contractual rate or at the FTP;

To determine the present value, a multi-curve system is adopted which has different discounting and forwarding curves according to the type of instrument and the tenor of its indexing. For the determination of shift sensitivity, the standard shock applied to all the curves is defined as a parallel and uniform shifting of +100 basis points of the curves.

In addition to the standard +100 scenario, the measurement of the economic value (EVE) is also calculated based on the 6 scenarios prescribed by the BCBS document and based on historical stress simulations aimed at identifying worst and best case scenarios.

The shift sensitivity of the net interest income quantifies the impact on short-term interest income of a parallel, instantaneous and permanent, shock to the interest rate curve.

Margin sensitivity is measured using a method that enables the estimation of the expected change in net interest income as a result of a shock to the curves produced by items subject to interest rate revision within a gapping period set at 12 months from the analysis date.

This measure highlights the effect of variations in market interest rates on the net interest income generated by the portfolio being measured, on a constant balance sheet basis, excluding potential effects resulting from the new operations and from assumptions on future changes in the mix of assets and liabilities and, therefore, it cannot be considered a forecast indicator of the future levels of the interest margin.

To determine changes in net interest income (Δ NII), standard scenarios of parallel rate shocks of +/-50 basis points are applied, in reference to a time horizon of twelve months.

Dynamic margin simulation analyses are also conducted that combine shifts in yield curves with changes in base and liquidity differentials, as well as changes in customer behaviour in different market scenarios.

Value at Risk is calculated as the maximum potential loss in the portfolio's market value that could be recorded over a 10-day holding period with a 99% confidence level (parametric VaR). Besides measuring the equity portfolio, VaR is also used to consolidate exposure to financial risks of the various Group companies which perform banking book activities, thereby taking into account diversification benefits. Value at Risk calculation models have certain limitations, as they are based on the statistical assumption of the normal distribution of the returns and on the observation of historical data that may not be repeated in the future. Consequently, VaR results cannot guarantee that the possible future losses will not exceed the statistically calculated estimates.

B. Fair value hedging and cash flow hedges

Hedging of interest rate risk is aimed at (i) protecting the banking book from variations in the fair value of loans and deposits due to movements in the interest rate curve or (ii) reducing the volatility of future cash flows related to a particular asset/liability. The main types of derivative contracts used are interest rate swaps (IRS), overnight index swaps (OIS), cross-currency swaps (CCS) and options on interest rates stipulated with third parties or with other Group companies. The latter, in turn, cover risk in the market so that the hedging transactions meet the criteria to qualify as IAS-compliant for consolidated financial statements.

Hedging activities performed by the Intesa Sanpaolo Group are recorded using various hedge accounting methods. A first method refers to the fair value hedge of specifically identified assets and liabilities (microhedging), mainly consisting of bonds issued or acquired by Group companies and loans to customers. On the basis of the carved-out version of IAS 39, fair-value hedging is also applied for the macrohedging of the stable portion of demand deposits (core deposits) and on the already fixed portion of variable-rate loans and on a portion of fixed-rate loans. For this last 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.

Another hedging method used is the cash flow hedge, which has the purpose of stabilising interest flow on both variable rate funding, to the extent that the latter finances fixed-rate investments, and on variable rate investments to cover fixed-rate funding (macro cash flow hedges).

The Financial and Market Risks Department is in charge of measuring the effectiveness of interest rate risk hedges for the purpose of hedge accounting, in compliance with international accounting standards.

During the year no hedging activities were performed to cover the price risk of the banking book.

D. Hedging of foreign investments

In 2017, foreign exchange hedges were implemented against the exchange risk on gains in foreign currency generated by the Parent Company's international branches.

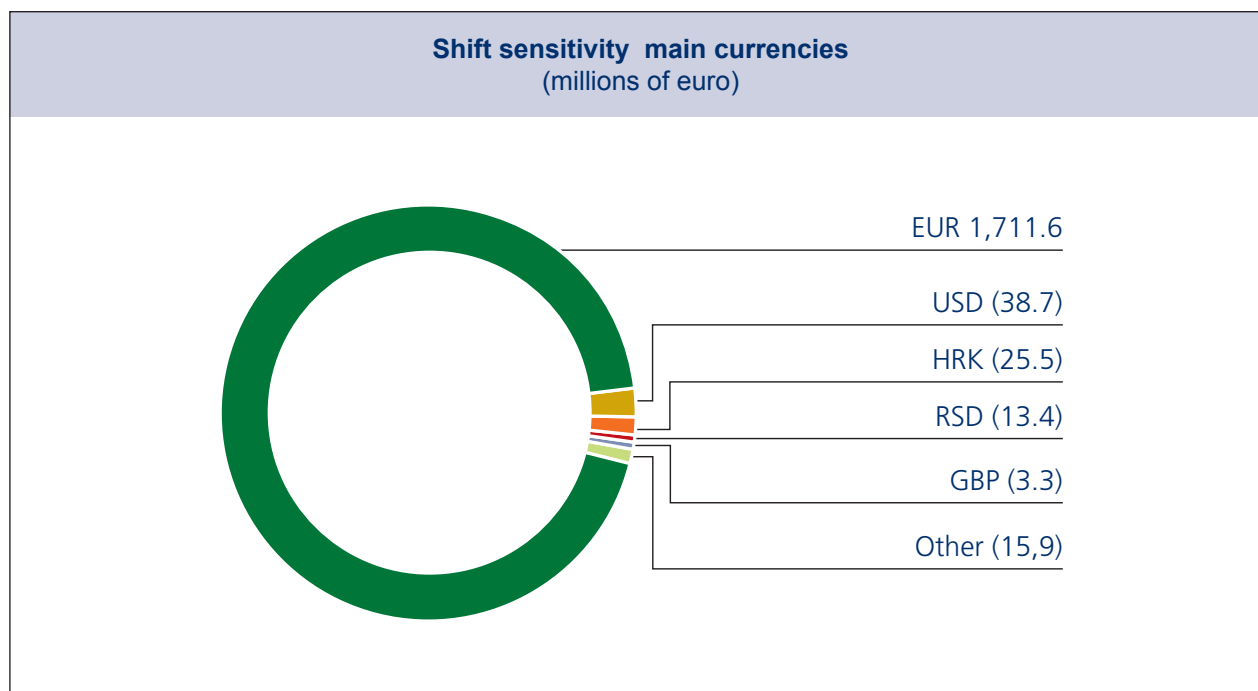
QUANTITATIVE INFORMATION

Banking book: internal models and other sensitivity analysis methodologies

The sensitivity of net interest income – assuming a +50, -50 and +100 basis point change in interest rates – amounted to 794 million euro, -872 million euro and 1,563 million euro, respectively, at the end of 2017. The last of these figures was up the 1,081 million euro recorded at the end of 2016.

In 2017, interest rate risk generated by the Intesa Sanpaolo Group's banking book, measured through shift sensitivity of value, averaged 1,155 million euro with a year-end figure of 1,615 million euro (945 million euro at the end of 2016), almost entirely concentrated on the euro currency.

The chart below shows the shift sensitivity broken down according to the main currencies:



Interest rate risk, measured in terms of VaR, averaged 129 million euro in 2017, with a minimum value of 85 million euro and a maximum value of 153 million euro, the same level as at the end of 2017 (117 million euro at the end of 2016).

Price risk generated by minority stakes in quoted companies, mostly held in the AFS (Available for Sale) category and measured in terms of VaR, recorded an average level during 2017 of 103 million euro (161 million euro at the end of 2016), with peak and minimum values of 146 million euro and 57 million euro respectively (64 million euro at the end of 2017).

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 AFS category.

Price risk: impact on Shareholders' Equity

		(millions of euro)
		Impact on shareholders' equity
Price shock	+10%	60
Price shock	-10%	-60

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 possibility that foreign exchange rate fluctuations produce significant changes, both positive and negative, in the Group’s balance sheet aggregates. The key sources of exchange rate risk lie in:

- foreign currency loans and deposits held by corporate and/or retail customers;
- purchases of securities, equity investments and other financial instruments in foreign currencies;
- conversion into domestic currency of assets, liabilities and income of branches and subsidiaries abroad;
- trading of foreign currencies and banknotes;
- collection and/or payment of interest, commissions, dividends and administrative costs in foreign currencies.

More specifically, “structural” foreign exchange risk refers to the exposures deriving from the commercial operations and the strategic investment decisions of the Intesa Sanpaolo Group.

Foreign exchange transactions, spot and forward, are carried out mostly by Banca IMI, which also operates in the name and on behalf of the Parent Company with the task of guaranteeing pricing throughout the Bank and the Group while optimizing the proprietary risk profile deriving from brokerage of foreign currencies traded by customers.

The main types of financial instruments traded include: spot and forward exchange transactions in foreign currencies, forex swaps, domestic currency swaps, and foreign exchange options.

B. Foreign exchange risk hedging activities

Foreign exchange risk deriving from operating positions in foreign currency in the banking book is systematically transferred from the business units to the Parent Company’s Treasury Department, for the purpose of guaranteeing the elimination of such risk. Similar risk containment is performed by the various Group companies for their banking book. Essentially, foreign exchange risk is mitigated by the practice of raising funds in the same currency as assets.

Held for trading exposures are included in the trading book where foreign exchange risk is measured and subjected to daily VaR limits.

QUANTITATIVE INFORMATION

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

(millions of euro)

	CURRENCIES							
	US dollar	GB pound	Swiss franc	Hungarian forint	Egyptian pound	Croatian kuna	Yen	Other currencies
A. FINANCIAL ASSETS	30,850	2,403	607	3,898	2,844	4,234	1,388	9,097
A.1 Debt securities	7,818	752	-	1,090	718	694	543	1,998
A.2 Equities	308	25	18	4	27	7	1	520
A.3 Loans to banks	6,948	143	221	1,114	935	570	110	2,609
A.4 Loans to customers	15,776	1,483	368	1,690	1,164	2,963	734	3,970
A.5 Other financial assets	-	-	-	-	-	-	-	-
B. OTHER ASSETS	4,400	556	90	198	55	37	158	114
C. FINANCIAL LIABILITIES	32,343	1,205	382	3,272	2,389	3,314	204	5,947
C.1 Due to banks	8,988	333	84	347	8	81	3	846
C.2 Due to customers	9,639	488	291	2,917	1,298	3,233	127	3,476
C.3 Debt securities	13,716	384	7	8	1,083	-	74	1,625
C.4 Other financial liabilities	-	-	-	-	-	-	-	-
D. OTHER LIABILITIES	452	522	64	245	-	35	4	434
E. FINANCIAL DERIVATIVES								
- Options								
<i>long positions</i>	3,266	210	2	82	-	-	60	253
<i>short positions</i>	3,622	339	38	65	-	-	47	453
- Other derivatives								
<i>long positions</i>	59,658	7,478	3,418	1,849	-	14	4,714	9,925
<i>short positions</i>	61,669	8,369	3,541	1,914	-	14	6,093	11,734
TOTAL ASSETS	98,174	10,647	4,117	6,027	2,899	4,285	6,320	19,389
TOTAL LIABILITIES	98,086	10,435	4,025	5,496	2,389	3,363	6,348	18,568
DIFFERENCE (+/-)	88	212	92	531	510	922	-28	821

2. Internal models and other sensitivity analysis methodologies

Management of foreign exchange risk relative 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.

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 58.7 million euro as at 31 December 2017. This potential impact would only be reflected in the Shareholders’ Equity.

1.2.4. DERIVATIVES AND SECURITIES FINANCING TRANSACTIONS

Starting from 2014, the Parent Company and Banca IMI have been authorised to use EPE (Expected Positive Exposure) internal models to determine the capital requirement for counterparty risk. This authorisation was extended also to the banks belonging to the Banca dei Territori (BdT) division starting from 31.12.2016.

This approach is applicable to almost the entire trading portfolio (as shown in the table below, as of 31 December 2017 approximately 96% of the total EAD of financial and credit derivatives is measured using EPE models). Derivatives and SFT's out of scope of internal models represent a residual portion of the portfolio (as of 31 December 2017 accounting for approximately 4% of overall EAD) and refer to:

- residual contracts of Banca IMI, Intesa Sanpaolo and BdT to which EPE is not applied (in compliance with EBA non-materiality thresholds);
- EAD generated by other banks and companies of the group which report using the mark-to-market approach.

As envisaged by Basel 3, also CCPs and ETD derivatives 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	31.12.2017		31.12.2016	
	Mark-to-market approach	EPE Internal Method	Mark-to-market approach	EPE Internal Method
Derivative contracts	695	15,465	867	17,651

(millions of euro)

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 more than 3 billion euro for the Parent Company, Banca IMI and the banks of the Banca dei Territori division, while the collateral paid equals 14 billion euro (this amount includes the collateral connected to transactions with central counterparties).

A. FINANCIAL DERIVATIVES**A.1. Regulatory trading book: period-end notional amounts**

Underlying assets / Type of derivatives	31.12.2017		31.12.2016	
	Over the counter	Central counterparties	Over the counter	Central counterparties
1. Debt securities and interest rates	2,157,321	181,701	2,009,912	229,069
a) Options	96,243	31,016	112,610	26,038
b) Swaps	2,059,848	-	1,897,237	-
c) Forwards	1,230	-	65	-
d) Futures	-	150,685	-	203,031
e) Others	-	-	-	-
2. Equities and stock indices	20,441	16,370	16,431	19,059
a) Options	20,376	14,647	16,215	17,557
b) Swaps	64	-	31	-
c) Forwards	1	-	185	-
d) Futures	-	1,723	-	1,502
e) Others	-	-	-	-
3. Foreign exchange rates and gold	164,474	277	149,197	275
a) Options	22,971	29	22,631	60
b) Swaps	50,258	-	49,169	-
c) Forwards	89,925	-	76,525	-
d) Futures	-	248	-	215
e) Others	1,320	-	872	-
4. Commodities	6,460	2,031	7,118	3,208
5. Other underlying assets	-	-	-	-
TOTAL	2,348,696	200,379	2,182,658	251,611

(millions of euro)

By convention, the column "Over the counter" includes transactions in OTC derivatives transferred to primary clearing houses of 1,943,893 million euro as of 31 December 2017 (1,780,948 million euro as at 31 December 2016).

A.2. Banking book: period-end notional amounts**A.2.1. Hedging derivatives**

Underlying assets / Type of derivatives	(millions of euro)			
	31.12.2017		31.12.2016	
	Over the counter	Central counterparties	Over the counter	Central counterparties
1. Debt securities and interest rates	259,609	-	264,632	-
a) Options	3,708	-	3,908	-
b) Swaps	255,901	-	260,724	-
c) Forwards	-	-	-	-
d) Futures	-	-	-	-
e) Others	-	-	-	-
2. Equities and stock indices	-	-	-	-
a) Options	-	-	-	-
b) Swaps	-	-	-	-
c) Forwards	-	-	-	-
d) Futures	-	-	-	-
e) Others	-	-	-	-
3. Foreign exchange rates and gold	3,198	-	3,794	-
a) Options	-	-	-	-
b) Swaps	3,162	-	3,794	-
c) Forwards	-	-	-	-
d) Futures	-	-	-	-
e) Others	36	-	-	-
4. Commodities	-	-	-	-
5. Other underlying assets	-	-	-	-
TOTAL	262,807	-	268,426	-

By convention, the column "Over the counter" includes transactions in OTC derivatives transferred to primary clearing houses of 11,614 million euro as at 31 December 2017.

A.2.2. Other derivatives

(millions of euro)

Underlying assets / Type of derivatives	31.12.2017		31.12.2016	
	Over the counter	Central counterparties	Over the counter	Central counterparties
1. Debt securities and interest rates	2,932	-	2,936	-
a) Options	1,599	-	1,671	-
b) Swaps	1,333	-	1,265	-
c) Forwards	-	-	-	-
d) Futures	-	-	-	-
e) Others	-	-	-	-
2. Equities and stock indices	1,113	-	2,040	-
a) Options	1,113	-	2,040	-
b) Swaps	-	-	-	-
c) Forwards	-	-	-	-
d) Futures	-	-	-	-
e) Others	-	-	-	-
3. Foreign exchange rates and gold	952	-	885	-
a) Options	45	-	201	-
b) Swaps	99	-	182	-
c) Forwards	808	-	463	-
d) Futures	-	-	-	-
e) Others	-	-	39	-
4. Commodities	-	-	-	-
5. Other underlying assets	-	-	-	-
TOTAL	4,997	-	5,861	-

The table above shows the financial derivatives recognised in the financial statements in the trading book, but not forming part of the regulatory trading book. In particular, the table shows the derivatives recorded separately from the combined financial instruments, the derivatives used to hedge debt securities measured at fair value through profit and loss and the put and call options relating to commitments on equity investments.

A.3. Financial derivatives gross positive fair value – breakdown by product**A.4. Financial derivatives gross negative fair value – breakdown by product****A.5. Over the counter financial derivatives: regulatory trading book – notional amounts, gross positive and negative fair values by counterparty – contracts not included under netting arrangements****A.6. Over the counter financial derivatives: regulatory trading book – notional amounts, gross positive and negative fair values by counterparty – contracts included under netting arrangements****A.7. Over the counter financial derivatives: banking book – notional amounts, gross positive and negative fair values by counterparty – contracts not included under netting arrangements****A.8. Over the counter financial derivatives: banking book – notional amounts, gross positive and negative fair values by counterparty – contracts included under netting arrangements****A.9. Residual maturity of over the counter financial derivatives: notional amounts**

Tables A.3 to A.9 were not filled in as the financial derivatives whose counterparty risk is measured using methods other than internal models represent a residual portion of the portfolio.

Information on derivatives is shown below, in the section relating to internal models¹⁴.

¹⁴Based on the financial statement instructions issued by the Bank of Italy, tables A.3 to A.9 do not have to be filled in by banks which use EPE internal models to calculate counterparty risk if this approach covers a significant portion of the portfolio.

A.10 Over the counter financial derivatives: counterparty risk/financial risk – internal models

As stated in the initial part of the section on derivatives, Banca IMI, the Parent Company and the banks of the Banca dei Territori Division were authorised to use EPE internal models to determine the requirement for counterparty risk. The other banks of the Group report the requirement using the mark-to-market approach.

At consolidated level, financial derivatives whose counterparty risk is measured using mark-to-market methods represent a residual portion of the portfolio. For this reason, the data relating to these derivatives was included in the tables below, with the purpose of sum up all the information on derivatives at group level.

Financial derivatives gross positive fair value – breakdown by product

(millions of euro)

Portfolios /Types of derivatives	POSITIVE FAIR VALUE			
	31.12.2017		31.12.2016	
	Over the counter	Central counterparties	Over the counter	Central counterparties
A. Regulatory trading book	22,534	478	27,645	647
a) Options	2,801	478	3,755	647
b) Interest rate swaps	17,109	-	20,060	-
c) Cross currency swaps	1,551	-	2,382	-
d) Equity swaps	5	-	-	-
e) Forwards	870	-	1,120	-
f) Futures	-	-	-	-
g) Others	198	-	328	-
B. Banking book - hedging	4,213	-	6,234	-
a) Options	75	-	83	-
b) Interest rate swaps	3,858	-	5,600	-
c) Cross currency swaps	279	-	551	-
d) Equity swaps	-	-	-	-
e) Forwards	-	-	-	-
f) Futures	-	-	-	-
g) Others	1	-	-	-
C. Banking book - other derivatives	604	-	675	-
a) Options	183	-	231	-
b) Interest rate swaps	416	-	441	-
c) Cross currency swaps	3	-	1	-
d) Equity swaps	-	-	-	-
e) Forwards	2	-	2	-
f) Futures	-	-	-	-
g) Others	-	-	-	-
TOTAL	27,351	478	34,554	647

Financial derivatives gross negative fair value – breakdown by product

(millions of euro)

Portfolios /Types of derivatives	NEGATIVE FAIR VALUE			
	31.12.2017		31.12.2016	
	Over the counter	Central counterparties	Over the counter	Central counterparties
A. Regulatory trading book	26,184	546	33,101	718
a) Options	5,497	546	7,069	718
b) Interest rate swaps	17,687	-	21,553	-
c) Cross currency swaps	1,899	-	2,867	-
d) Equity swaps	2	-	-	-
e) Forwards	822	-	1,257	-
f) Futures	-	-	-	-
g) Others	277	-	355	-
B. Banking book - hedging	7,489	-	9,027	-
a) Options	-	-	-	-
b) Interest rate swaps	7,069	-	8,588	-
c) Cross currency swaps	420	-	439	-
d) Equity swaps	-	-	-	-
e) Forwards	-	-	-	-
f) Futures	-	-	-	-
g) Others	-	-	-	-
C. Banking book - other derivatives	289	-	360	-
a) Options	262	-	329	-
b) Interest rate swaps	24	-	28	-
c) Cross currency swaps	-	-	1	-
d) Equity swaps	-	-	-	-
e) Forwards	3	-	2	-
f) Futures	-	-	-	-
g) Others	-	-	-	-
TOTAL	33,962	546	42,488	718

By convention, the column "Over the counter" includes transactions in OTC derivatives transferred to primary clearing houses of 4,141 million euro (5,188 million euro as at 31 December 2016).

The data contained in the two tables below - unlike the previous tables - refers exclusively to transactions in OTC derivatives.

Over the counter financial derivatives: regulatory trading book – notional amounts, gross positive and negative fair values by counterparty

(millions of euro)

	Governments and Central Banks	Public entities	Banks	Financial institutions	Insurance companies	Non-financial companies	Other counterparties
1. Debt securities and interest rates							
- notional amount	7,353	2,236	102,941	2,002,436	586	41,166	600
- positive fair value	3,492	586	11,065	2,196	31	1,991	20
- negative fair value	-60	-20	-12,368	-7,031	-	-457	-21
2. Equities and stock indices							
- notional amount	-	-	7,959	1,087	11,286	102	7
- positive fair value	-	-	141	25	1	9	-
- negative fair value	-	-	-2,685	-55	-64	-1	-2
3. Foreign exchange rates and gold							
- notional amount	1,230	-	102,838	41,427	619	18,260	100
- positive fair value	-	-	1,094	853	-	735	3
- negative fair value	-17	-	-2,015	-617	-7	-282	-3
4. Other values							
- notional amount	-	-	1,973	1,626	-	2,858	4
- positive fair value	-	-	96	89	-	104	-
- negative fair value	-	-	-86	-169	-	-226	-

Over the counter financial derivatives: banking book – notional amounts, gross positive and negative fair values by counterparty

	(millions of euro)						
	Governments and Central Banks	Public entities	Banks	Financial institutions	Insurance companies	Non- financial companies	Other counterparties
1. Debt securities and interest rates							
- notional amount	35	407	240,419	20,860	15	28	776
- positive fair value	-	3	4,305	146	-	4	-
- negative fair value	-	-	-6,372	-779	-12	-	-84
2. Equities and stock indices							
- notional amount	-	-	786	74	-	21	232
- positive fair value	-	-	67	7	-	-	-
- negative fair value	-	-	-56	-	-	-	-52
3. Foreign exchange rates and gold							
- notional amount	69	-	3,522	525	-	-	34
- positive fair value	3	-	280	2	-	-	-
- negative fair value	-	-	-264	-159	-	-	-
4. Other values							
- notional amount	-	-	-	-	-	-	-
- positive fair value	-	-	-	-	-	-	-
- negative fair value	-	-	-	-	-	-	-

B. CREDIT DERIVATIVES

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

Categories of transactions	(millions of euro)			
	REGULATORY TRADING BOOK		BANKING BOOK	
	single counterparty	more counterparties	single counterparty	more counterparties
1. Protection purchases				
- Credit default products	7,371	37,390	-	-
- Credit spread products	-	-	-	-
- Total rate of return swap	-	-	-	-
- Others	-	-	-	-
Total 31.12.2017	7,371	37,390	-	-
Total 31.12.2016	10,736	42,989	-	-
2. Protection sales				
- Credit default products	8,893	32,743	-	-
- Credit spread products	-	-	-	-
- Total rate of return swap	-	-	-	-
- Others	-	-	-	-
Total 31.12.2017	8,893	32,743	-	-
Total 31.12.2016	13,239	41,532	-	-

As at 31 December 2017, none of the contracts shown in the table above have been included within the structured credit products:

Also tables B.2 to B.6 were not filled in as the credit derivatives whose counterparty risk is measured using methods other than internal models represent a residual portion of the portfolio.

Information on derivatives is shown below, in the section relating to internal models. Based on the financial statement instructions issued by the Bank of Italy, tables B.2 to B.6 do not have to be filled in by banks which use EPE internal models to calculate counterparty risk if this approach covers a significant portion of the portfolio.

B.2. Over the counter credit derivatives: gross positive fair value – breakdown by product**B.3. Over the counter credit derivatives: gross negative fair value – breakdown by product****B.4. Over the counter credit derivatives: gross (positive and negative) fair values by counterparty – contracts not included under netting arrangements****B.5. Over the counter credit derivatives: gross (positive and negative) fair values by counterparty - contracts included under netting arrangements****B.6. Residual maturity of credit derivatives: notional amounts****B.7. Credit derivatives: counterparty risk/financial risk – Internal models**

As stated in the initial part of the section on derivatives, Banca IMI, the Parent Company and the banks of the Banca dei Territori Division were authorised to use EPE internal models to determine the requirement for counterparty risk, which is used for most of the portfolio.

Credit derivatives whose counterparty risk is measured using mark-to-market methods represent a residual portion of the portfolio. For this reason, the data relating to these derivatives was included in the tables below, with the purpose of summarising all the information on derivatives.

Over the counter credit derivatives: gross positive fair value – breakdown by product

(millions of euro)

Portfolios /Types of derivatives	POSITIVE FAIR VALUE	
	31.12.2017	31.12.2016
A. Regulatory trading book	1,160	1,226
a) Credit default products	1,160	1,226
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Others	-	-
B. Banking book	-	-
a) Credit default products	-	-
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Others	-	-
TOTAL	1,160	1,226

As at 31 December 2017, none of the contracts shown in the table above have been included within the structured credit products.

Over the counter credit derivatives: gross negative fair value – breakdown by product

(millions of euro)

Portfolios /Types of derivatives	NEGATIVE FAIR VALUE	
	31.12.2017	31.12.2016
A. Regulatory trading book	1,275	1,275
a) Credit default products	1,275	1,275
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Others	-	-
B. Banking book	-	-
a) Credit default products	-	-
b) Credit spread products	-	-
c) Total rate of return swap	-	-
d) Others	-	-
TOTAL	1,275	1,275

As at 31 December 2017, none of the contracts shown in the table above have been included within the structured credit products.

Over the counter credit derivatives: gross (positive and negative) fair values by counterparty

	(millions of euro)						
	Governments and Central Banks	Public entities	Banks	Financial institutions	Insurance companies	Non- financial companies	Other counterparties
REGULATORY TRADING BOOK							
1. Protection purchases							
- notional amount	-	146	23,578	21,037	-	-	-
- positive fair value	-	50	53	20	-	-	-
- negative fair value	-	-	-611	-472	-	-	-
2. Protection sales							
- notional amount	-	-	19,865	21,740	31	-	-
- positive fair value	-	-	545	492	-	-	-
- negative fair value	-	-	-31	-159	-2	-	-
BANKING BOOK							
1. Protection purchases							
- notional amount	-	-	-	-	-	-	-
- positive fair value	-	-	-	-	-	-	-
- negative fair value	-	-	-	-	-	-	-
2. Protection sales							
- notional amount	-	-	-	-	-	-	-
- positive fair value	-	-	-	-	-	-	-
- negative fair value	-	-	-	-	-	-	-

C. CREDIT AND FINANCIAL DERIVATIVES

C.1. Over the counter credit and financial derivatives: net fair values and future exposure by counterparty

This table was not filled in because, as previously illustrated, the Intesa Sanpaolo Group primarily calculates counterparty risk using the EPE approach. According to the internal models approach, the EPE is calculated as a statistical-time-based average of the future mark-to-market evolution of the derivatives, strengthened by conservative restrictions on the mark-to-market profiles that do not decrease over time.