

SECTION 3 – RISKS OF INSURANCE COMPANIES

3.1 INSURANCE RISKS

QUALITATIVE AND QUANTITATIVE INFORMATION

Life business

The typical risks of the life insurance portfolio (managed by Intesa Sanpaolo Vita, Intesa Sanpaolo Life and Fideuram Vita) may be divided into three main categories: premium risks, actuarial and demographic risks and reserve risks.

Premium risks are managed initially during definition of the technical features and product pricing, and over the life of the instrument by means of periodic checks on sustainability and profitability (both at product level and at portfolio level, including liabilities). When defining a product, profit testing is used, aimed at measuring profitability and identifying any weaknesses beforehand, by means of specific sensitivity analyses.

Actuarial and demographic risks arise when an unfavourable trend is recorded in the actual loss ratio compared with the trend estimated when the rate was calculated, and these risks are reflected in the level of “reserves”. The loss ratio refers not only to actuarial loss, but also to financial loss (guaranteed interest rate risk). The Company guards against these risks by means of systematic statistical analysis of the evolution of liabilities in its own contract portfolio, divided by risk type, and through simulations of expected profitability of the assets hedging technical reserves.

Reserve risk is guarded against through the exact calculation of mathematical reserves, with a series of detailed checks (for example, checking that all the variables required for the calculation such as yields, quotations, technical foundations, parameters for the supplementary reserves, and recalculation of the value of single contracts are correctly saved in the system) as well as overall verifications, by comparing results with the estimates produced on a monthly basis. Specific attention is paid to checking the correct assumption of contracts, by checking the relative portfolio against the reconstruction of movements during the period, divided by purpose, and checking the consistency of the amounts settled compared with the movements of reserves.

The tables below show the structure of the mathematical reserves by expiry date, excluding reserves for amounts to be paid and before intercompany netting, and the structure of the guaranteed minimum yield as at 31 December 2018.

Breakdown of mathematical reserves of life branch: maturity	(millions of euro)	
	Mathematical reserve	%
up to 1 year	242	0.31
1 to 5 years	5,039	6.55
6 to 10 years	1,451	1.89
11 to 20 years	2,821	3.67
over 20 years	67,333	87.58
TOTAL	76,886	100.00

Breakdown of risk concentration by type of guarantee	(millions of euro)	
	Total Reserves	%
Insurance and investment products with guaranteed annual yield		
0% - 1%	20,634	26.14
from 1% to 3%	44,065	55.82
from 3% to 5%	6,092	7.72
Insurance products	6,095	7.72
Shadow reserve	2,053	2.60
TOTAL	78,939	100.00

The mathematical reserves are calculated on almost the entire portfolio, on a contract-by-contract basis, and the methodology used to determine the reserves takes account of all the future commitments of the company.

The following table shows a breakdown by maturity of financial liabilities, before intercompany netting, represented by assets covering commitments arising under unit- and index-linked policies and subordinated liabilities.

Breakdown of financial liabilities by maturity	(millions of euro)			
	Within 12 months	Over 12 months	Total as at 31.12.2018	Total as at 31.12.2017
Unit linked	144	67,846	67,990	68,398
Index linked	-	-	-	1
Subordinated liabilities	-	1,535	1,535	2,072
Total	144	69,381	69,525	70,471

Non-life business

The typical risks of the non-life insurance portfolio (managed through Intesa Sanpaolo Assicura and Intesa Sanpaolo Vita) mainly relate to premium and reserve risks.

Premium risks are managed initially during definition of the technical features and product pricing and over the life of the instrument by means of periodic checks on sustainability and profitability (both at product level and at portfolio level, including liabilities).

Reserve risk is monitored through the exact calculation of technical reserves. More specifically, for companies with non-life business the technical reserves may be broken down into: premium reserves, claims reserves, profit sharing and reversal reserves, other technical reserves and the equalisation reserve.

With regard to risk assumption, policies are checked when acquired through an automatic system aimed at detecting the underwriting parameters associated with the applicable tariff. The check is thus not only formal, but also substantive, and in particular allows the identification of exposures in terms of capital and limits of liability, in order to verify that the portfolio matches the technical and tariff scheme agreed upon with the sales network.

Subsequently, statistical checks are carried out to verify potentially anomalous situations (such as concentration by area or by type of risk) and to keep under control accumulation at the level of individual persons (with particular reference to policies that provide cover in the accident and health branches). This is also carried out in order to provide the Financial Reporting Actuarial Analysis and Reinsurance Unit with suitable indications of the portfolio characteristics in order to prepare the annual reinsurance plan.

The following table presents the development of claims by year of generation, broken down into the major business lines of operation, as at 31 December 2018.

Development of Claims Reserves	(millions of euro)					
	YEAR OF GENERATION/EVENT					TOTAL
	2014	2015	2016	2017	2018	
Reserve amount:						
as at 31/12 generation year N	124	122	128	132	151	
as at 31/12 year N+1	102	99	108	111		
as at 31/12 year N+2	99	97	107			
as at 31/12 year N+3	97	94				
as at 31/12 year N+4	94					
Total claims paid	85	86	89	77	49	386
Claims reserve booked as at 31.12.2017	9	8	17	34	102	170
Final claims reserve for previous years						24
Total claims reserve booked as at 31.12.2018						194

3.2 FINANCIAL RISKS

Financial Risks

These risks derive from the level or volatility of market prices of financial instruments that impact the book value of both assets and liabilities.

The risk factors identified by the company are as follows:

- Interest rate risk: impacts assets and liabilities whose value is sensitive to changes in the forward structure of interest rates or the volatility of interest rates;
- Equity price risk: derives from the level or volatility of market prices of equities and impacts assets and liabilities whose value is sensitive to changes in equity prices;
- Property risk: derives from the level or volatility of market prices of real estate property and impacts assets and liabilities sensitive to said changes;
- Foreign exchange risk: derives from changes in the level or volatility of foreign exchange rates;
- Spread risk: impacts assets and liabilities whose value is sensitive to adverse changes in credit spreads;
- Concentration risk: reflects the risk of holding high percentages of financial assets of the same counterparty.

Investment portfolios

The investments of the insurance companies of the Intesa Sanpaolo Group (Intesa Sanpaolo Vita, Intesa Sanpaolo Assicura, Intesa Sanpaolo Life and Fideuram Vita) are made with their free capital and to cover contractual obligations with customers. These refer to traditional revaluable life insurance policies, Index- and Unit-linked policies, pension funds and non-life policies. As at 31 December 2018, the investment portfolios of Group companies, recorded at book value, amounted to 152,437 million euro. Of these, a part amounting to 78,368 million euro relates to traditional revaluable life policies (the financial risk of which is shared with the policyholders by virtue of the mechanism whereby the returns on assets subject to segregated management are determined), non-life policies and free capital. The other component, whose risk is borne solely by the policyholders, consists of investments related to Index-linked policies, Unit-linked policies and pension funds and amounted to 74,069 million euro.

Considering the various types of risks, the analysis of investment portfolios, described below, concentrates on the assets held to cover traditional revaluable life policies, non-life policies and free capital.

Financial assets under segregated funds and free capital

In terms of breakdown by asset class, net of derivative financial instruments, 83.29% of assets, i.e. approximately 65,254 million euro, were bonds, whereas assets subject to equity risk represented 1.25% of the total and amounted to 981 million euro. The remainder (12,113 million euro) consisted of investments relating to UCI, Private Equity and Hedge Funds (15.46%).

The carrying value of derivatives came to approximately 20 million euro, almost entirely relating to hedging derivatives while the portion of effective management derivatives²¹ is negative for approximately -0.4 million euro.

At the end of 2018, investments made with the free capital of Intesa Sanpaolo Vita and Fideuram Vita amounted to approximately 1,081 million euro at market value, and presented a risk in terms of VaR (99% confidence level, 10-day holding period) of approximately 28 million euro.

Interest rate risk exposure

The breakdown by maturity of bonds showed 9.56% short-term (under 1 year), 39.82% medium-term and 50.62% long-term (over five years).

Financial assets	Book value	%	(millions of euro)
			Duration
Fixed-rate bonds	60,610	77.36	5.65
up to 1 year	5,609	7.16	
1 to 5 years	24,034	30.68	
over 5 years	30,967	39.52	
Floating rate/indexed bonds	4,644	5.93	3.20
up to 1 year	628	0.80	
1 to 5 years	1,953	2.49	
over 5 years	2,063	2.64	
TOTAL	65,254	83.29	-
Equities or similar capital securities	981	1.25	
UCI, Private Equity, Hedge Fund	12,113	15.46	
TOTAL AS AT 31.12.2018	78,348	100.00	

²¹ ISVAP Regulation 36 of 31 January 2011 on investments defines as “effective management derivatives” all derivatives aimed at achieving pre-established investment objectives in a faster, easier, more economical or more flexible manner than would have been possible acting on the underlying assets.

The sensitivity of the fair value of the portfolio of financial assets to interest rate movements, summarised in the table below, highlights the exposure of the portfolio: for example, a parallel shift in the yield curve of +100 basis points leads to a negative fair value change in the bond portfolios of -3,359 million euro.

	Book value	%	(millions of euro)	
			Fair value changes due to interest rate fluctuations	
			+100 bps	-100 bps
Fixed-rate bonds	60,610	92.88	-3,223	3,573
Floating rate/indexed bonds	4,644	7.12	-136	149
Interest rate risk hedging effect	-	-	-	-
TOTAL	65,254	100.00	-3,359	3,722

Credit risk exposure

The table below sets forth the distribution of the bond portfolio by rating class: AAA/AA bonds represented 3.47% of total investments and A bonds approximately 8.57%. Low investment grade securities (BBB) were 85.56% of the total, while the portion of speculative grade or unrated was minimal (2.40%).

With regard to exposure to BBB rated securities, the majority of the exposure related to bonds issued by the Republic of Italy.

Breakdown of financial assets by issuer rating	(millions of euro)	
	Book value	%
Bonds	65,254	83.29
AAA	1,261	1.61
AA	1,003	1.28
A	5,593	7.14
BBB	55,831	71.26
Speculative grade	1,536	1.96
Unrated	30	0.04
Equities or similar capital securities	981	1.25
UCI, Private Equity, Hedge Fund	12,113	15.46
TOTAL	78,348	100.00

The analysis of the exposure in terms of the issuers/counterparties produced the following results: securities issued by governments, central banks and other public entities made up 76.12% of the total investments, whereas the securities of corporate issuers contributed around 23.88%.

The sensitivity values of the fair value of the bonds with respect to a variation in the creditworthiness of the issuers, namely a market credit spread shock of ± 100 basis points, as at end of 2018, are shown in the table below.

	Book value	%	(millions of euro)	
			Fair value changes due to credit spread fluctuations	
			+100 bps	-100 bps
Government bonds	49,670	76.12	-2,708	3,028
Corporate bonds	15,584	23.88	-730	750
TOTAL	65,254	100.00	-3,438	3,778

Equity risk exposure

The sensitivity of the equity portfolio to a hypothetical deterioration in equity prices of 10% amounts to 99 million euro, as shown in the table below.

	Book value	%	(millions of euro)	
			Fair value changes due to stock price fluctuations	-10%
Equities - Financial institutions	85	8.66	-9	
Equities - Non-financial companies and other counterparties	896	91.34	-90	
TOTAL	981	100.00	-99	

Exchange risk exposure

Approximately 98% of investments is made up of assets denominated in the EU currency. The residual exposure to exchange risk was hedged by positions in derivative financial instruments, particularly domestic currency swaps, in the same currency.

Derivative financial instruments

Financial derivative instruments are used to hedge the financial risks of the investment portfolio or for effective management. The table below shows the book values of the financial derivative instruments as at 31 December 2018.

Type of underlying	DEBT SECURITIES / INTEREST RATES		EQUITIES, EQUITY INDICES, COMMODITIES, EXCHANGE RATES		TOTAL	
	Quoted	Unquoted	Quoted	Unquoted	Quoted	Unquoted
	(millions of euro)					
Hedging derivatives	-	21	-	-	-	21
Effective management derivatives	-	-35	46	-12	46	-47
TOTAL	-	-14	46	-12	46	-26