SECTION 2 – RISKS OF INSURANCE COMPANIES

2.1 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). During the definition of a product, profit testing is used, aimed at measuring profitability and identifying any weaknesses beforehand, by means of specific sensitivity analyses. The issue process for a product involves its prior presentation to the Product Committee in order to take account of and validate its structure and features.

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.

In the tables below, 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 2011 are shown.

(millions of euro)

Breakdown of mathematical reserves of life branch: maturity	Mathematical reserve	%
up to 1 year	2,398	4.43
1 to 5 years	7,625	14.08
6 to 10 years	2,342	4.32
11 to 20 years	2,190	4.04
over 20 years	39,617	73.13
TOTAL	**54,172**	**100.00**

(millions of euro)

Breakdown of risk concentration by type of guarantee	Total Reserves	%
Insurance and investment products with guaranteed annual yield		
0% - 1%	2,911	5.78
from 1% to 3%	34,663	68.87
from 3% to 5%	8,036	15.96
Insurance products	**8,562**	**17.01**
Shadow reserve	**-3,836**	**-7.62**
TOTAL	**50,336**	**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.

(millions of euro)

Breakdown of financial liabilities by maturity	Within 12 months	Over 12 months	Total as at 31.12.2011	Total as at 31.12.2010
Unit linked	201	20,358	20,559	21,309
Index linked	-	1,564	1,564	5,343
Subordinated liabilities	-	257	257	338
Total	**201**	**22,179**	**22,380**	**26,990**

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 the sustainability and profitability (both at product level and at portfolio level, including liabilities).

Reserve risk is guarded against through the exact calculation of technical reserves. More specifically, for companies with non-life businesses 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 Reinsurance department 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 2011. The total claims reserves associated with Intesa Sanpaolo Assicura and Intesa Sanpaolo Vita come to 101 million euro.

(millions of euro)

Development of Claims Reserves	Year of generation/event					
	2007	2008	2009	2010	2011	TOTAL
Reserve amount:						
as at 31/12 generation year N	33	42	60	66	68	
as at 31/12 year N+1	33	40	60	59		
as at 31/12 year N+2	30	41	53			
as at 31/12 year N+3	31	36				
as at 31/12 year N+4	29					
Total claims paid	**26**	**31**	**40**	**38**	**18**	**153**
Claims reserve booked as at 31.12.2011	**3**	**5**	**13**	**21**	**50**	**92**
Final claims reserve for previous years 2007						**4**
Total claims reserve booked as at 31.12.2011						**96**

2.2 FINANCIAL RISKS

ALM and financial risks

In line with the growing focus in the insurance sector on the issues of value, risk and capital in recent years, a series of initiatives has been launched with the objective of both strengthening risk governance and managing and controlling risk-based capital.
With reference to investment portfolios, set up both as coverage of obligations with the insured and in relation to free capital, the Investment Framework Resolution is the control and monitoring instrument for market and credit risks.
The Resolution defines the goals and the operating limits that are needed to distinguish the investments in terms of eligible assets and asset allocation, breakdown by rating classes and credit risk, concentration risk by issuer and sector, market risks (in turn measured in terms of sensitivity to variations in risk factors and Value at Risk).
Investment decisions, portfolio evolution and compliance with operating limits, articulated in diverse types, are discussed, normally on a monthly basis, by specific investment committees. During 2011, a Risk Committee was also formed to support top management in setting the risk profile and associated levels of economic capital, monitoring the risk profile on the basis of reporting by the responsible services and supporting the top management in identifying any corrective strategies.
In order to measure and manage all the underwriting and financial risks together, a simulation tool is also used with the objective of measuring the intrinsic value, the fair value of the liabilities and the economic capital.
The system is based on a dynamic Asset Liability Management (ALM) model that forecasts stochastically-generated economic scenarios, simulating the evolution of the value of assets and liabilities based on the technical features of the products, the trend in significant financial variables and a management rule which guides investments and disinvestments.
This model measures the capital required to cover actuarial and financial risk factors. Among the former, the FAP models risks deriving from the dynamics of an extreme surrendering of policies, from sharp changes in mortality and longevity, and from pressure on costs; among the latter, the FAP takes into consideration stress scenarios over year-long time spans on interest rates, on credit spread and on stock market trends.
By means of the ALM system, the process makes it possible to calculate the sensitivity of liabilities with respect to the movements of market risk factors in order to effectively manage the financial assets covering technical provisions.
Any gap between projected outflows and cash in hand are evaluated on a monthly basis in order to monitor liquidity risk arising from the difficulty of meeting outlay requirements not sufficiently covered by the redemption of investments. The asset and liability maturity profile is evaluated on a monthly basis, seeking to keep the indicators of the average financial duration of these two components in a fixed range of compatibility, so as to ensure that assets are managed consistently with the maturity profile of the corresponding liabilities while also reflecting tactical views and market expectations.

Investment portfolios

As at 31 December 2011, the investment portfolios of the Group companies, recorded at book value, amounted to 73,772 million euro (before consolidation entries and intercompany netting); of these, the part regarding life policies with profit participation, non-life policies and free capital ("Class C portfolio" or "portfolio at risk") amounted to 42,904 million euro, while the other component ("Class D portfolio" or "portfolio with total risk retained by the insured") mostly comprised investments related to index- and unit-linked policies and pension funds totalling 30,868 million euro.
Considering the various types of risks, the analysis of investment portfolios, described below, concentrates on the financial assets included in the "portfolio at-risk".

Financial assets under segregated funds and free capital

In terms of breakdown by asset class, net of loans on policies and positions in derivative financial instruments (8 million euro at book value) detailed below, 94% of the assets (40,484 million euro) consisted of bonds, whereas assets subject to equity price risk represented 2% of the total and amounted to 776 million euro. The remainder (4%, 1,636 million euro) consisted of investments relating to UCI, private equity and hedge funds.
Investments relating to the free capital of Intesa Sanpaolo Vita and Fideuram Vita amounted to 2,445 million euro (market values, net of current account balances) and had a risk level in terms of Value at Risk (99% confidence level, 10-day holding period) of 82 million euro.

Interest rate risk exposure

The breakdown by maturity of bonds showed 6% short-term (under 1 year), 35% medium-term and 53% long-term (over five years).

(millions of euro)

Financial assets	Book value	%	Duration
Fixed-rate bonds	**33,996**	**79.25**	**5.60**
up to 1 year	1,686	3.93	
1 to 5 years	12,647	29.48	
over 5 years	19,663	45.84	
Floating rate/indexed bonds	**6,488**	**15.13**	**1.10**
up to 1 year	873	2.04	
1 to 5 years	2,534	5.91	
over 5 years	3,081	7.18	
TOTAL	**40,484**	**94.38**	**-**
Equities or similar capital securities	**776**	**1.81**	
UCI, Private Equity, Hedge Fund	**1,636**	**3.81**	
TOTAL AS AT 31.12.2011	**42,896**	**100.00**	

The modified duration of the bond portfolio, or the synthetic financial term of assets, is approximately 4.9 years. The reserves relating to the life policies with profit participation under segregated funds have an average modified duration of 5.7 years. The related portfolios of assets have a modified duration of around 4.5 years.
The sensitivity of the fair value of the portfolio of financial assets to interest rate movements is summarised in the table below which highlights both exposure of the securities portfolio and the effect of positions represented by hedging derivatives which reduce its sensitivity. 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 1,854 million euro. In this scenario, the value of hedging derivatives increases by 133 million euro which partly offsets the capital loss registered by bonds.

(millions of euro)

	Book value	%	Fair value changes due to interest rate fluctuations	
			+100 bps	-100 bps
Fixed-rate bonds	33,997	83.98	-1,797	1,985
Floating rate/indexed bonds	6,487	16.02	-57	66
Interest rate risk hedging effect	-	-	133	-162
TOTAL	**40,484**	**100.00**	**-1,721**	**1,889**

Credit risk exposure

The investment portfolio has a high credit quality: as shown in the table below, AAA/AA bonds represented equal to 12% of total investments and A bonds approximately 75%. Low investment grade securities (BBB) constituted around 6% of the total and the portion of speculative grade or unrated securities was marginal (1%).

(millions of euro)

Breakdown of financial assets by issuer rating	Book value	%
Bonds	**40,484**	**94.38**
AAA	3,211	7.49
AA	1,756	4.09
A	32,313	75.33
BBB	2,638	6.15
Speculative grade	460	1.07
Unrated	106	0.25
Equities or similar capital securities	**776**	**1.81**
UCI, Private Equity, Hedge Fund	**1,636**	**3.81**
TOTAL	**42,896**	**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 approximately made up 71% of the total investments, whereas the securities of corporate issuers contributed around 23%.
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 2011, are shown in the table below.

(millions of euro)

	Book value	%	Fair value changes due to credit spread fluctuations	
			+100 bps	-100 bps
Government bonds	30,559	75.48	-1,667	1,828
Corporate bonds	9,925	24.52	-403	449
TOTAL	**40,484**	**100.00**	**-2,070**	**2,277**

Equity risk exposure

The sensitivity of the equity portfolio to a hypothetical deterioration in equity prices of 10% amounts to 78 million euro, as shown in the table below.

(millions of euro)

	Book value	%	Fair value changes due to stock price fluctuations
			-10%
Equities - Financial institutions	246	31.70	25
Equities - Non-financial companies and other counterparties	530	68.30	53
TOTAL	**776**	**100.00**	**78**

Exchange risk exposure

The investment portfolio is not appreciably exposed to foreign exchange risk: approximately 98% of investments are made up of assets denominated in euro. The remaining part hedges the reserves of the insurance policies which lead to payments in foreign currency.

Financial derivative instruments

Financial derivative instruments are used to hedge the financial risks of the investment portfolio or for effective management.
Liquidity risk associated with positions in financial derivative instruments is primarily attributable to plain-vanilla derivatives (chiefly interest rate swaps, constant-maturity swaps and swaptions) traded on OTC markets with significant liquidity characteristics and sizes. These instruments are thus also liquid and easily liquidated both with the counterparty with which they were traded and with other market operators.
The table below shows the book values of the financial derivative instruments as at 31 December 2011.

(millions of euro)

Type of underlying	Interest rates		Equities, equity indices, commodities, exchange rates		TOTAL	
	Quoted	Unquoted	Quoted	Unquoted	Quoted	Unquoted
Hedging derivatives	-	-251	-	-	-	-251
Effective management derivatives	-	-25	-	4	-	-21
TOTAL	**-**	**-276**	**-**	**4**	**-**	**-272**

The capital losses shown for the hedging derivatives are offset, due to the nature of the instruments, by the capital gains on the positions hedged.