5. Risk assessment

The chapter is devoted to analyse the risks affecting the insurance and pension fund industry and their impact on them both from a qualitative and a quantitative perspective. In detail, the chapter elaborates on the effect of the prolonged low yield environment both on the asset allocation and on the profitability of insurers. The evolution of the GWPs along with the cross country contribution is described. The section concludes with an assessment of the evolution of the interconnections between insurers and the rest of the financial service industry.

5.1. Qualitative risk assessment

A qualitative risk assessment is an important part of the overall financial stability framework. Unsurprisingly, based on the responses of the Spring Survey among national supervisors, the key risks and challenges classified as the most imminent in terms of their probability and potential impact remain broadly unchanged. The survey clearly suggests increased risk of the impact of the low interest rate environment especially for the life insurance and pension sector as well as increased equity risks for both the insurance and pension sectors over the last six months (Figure 5.1, 5.2 and 5.3). A prolonged period of low rates will be particularly challenging for both insurers and pension funds and will affect both DB and DC schemes.

Figure 5.1: Risk assessment for the insurance sector

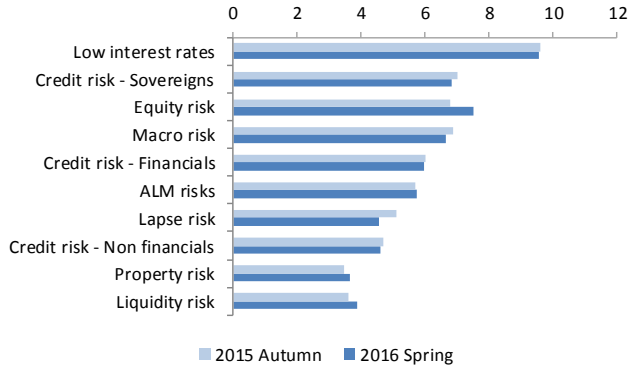
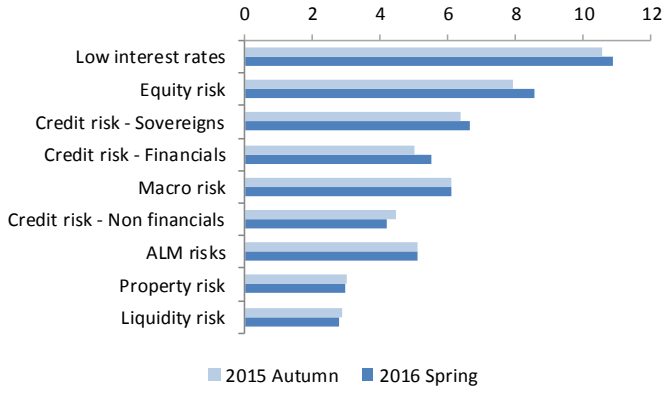


Figure 5.2: Risk assessment for the pension funds sector

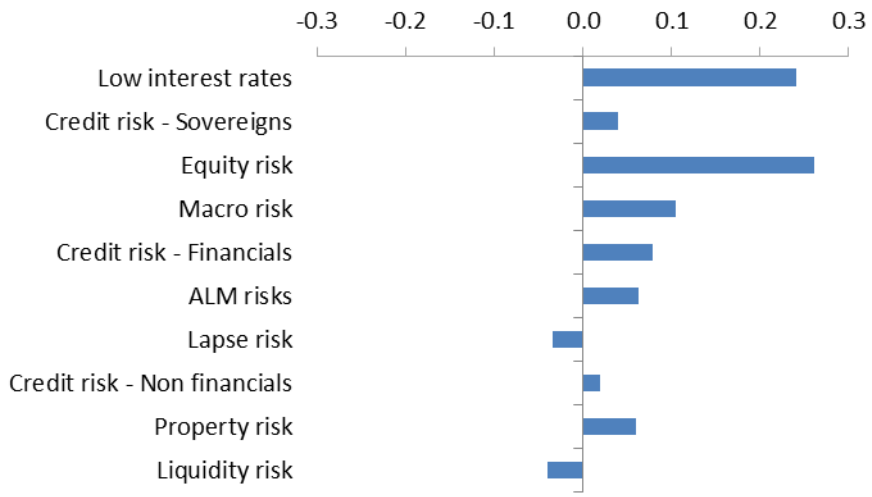


Source: EIOPA

Note: Risks are ranked according to probability of materialisation (from 1 indicating low probability to 4 indicating high probability) and the impact (1 indicating low impact and 4 indicating high impact). The figure shows the aggregation (i.e. probability times impact) of the average scores assigned to each risk.

Figure 5.3. Supervisory risk assessment for insurance and pension funds - expected future development

Note: EIOPA members indicated their expectation for the future development of these risks. Scores were provided in the range -2 indicating considerable decrease and +2 indicating considerable increase.



Investment portfolios remain largely unchanged and concentrated on fixed-income instruments. However, in order to reduce Solvency II requirements and to face the ongoing low interest rate environment, some undertakings also adopted a form of de-risking policies. Some, for example, increased their exposure to "AAA"-rated counterparties, whilst others decreased their equity exposure. In addition, others implemented hedging strategies using derivatives.[24] Some tendencies for infrastructure investment categories can be seen although the overall proportion of such investments is still limited.

Q4 2015 data regarding the average composition of the investment portfolio (Figure 5.4a and 5.4b) allows appreciating the different asset allocation between life and non-life insurers. Non-life insurers have nearly three quarters of their portfolio invested in fixed-income portfolios; life insurers invest more in equities (14 per cent as opposed to 7 per cent for non-life insurers) and also rely more heavily on investment funds (11 per cent vs. 1 per cent for non-life insurers). The different portfolio composition is likely due to the products they offer, whereas life insurers often face high financial guarantees.

[24] Equity hedging can entail using options and futures on indices and individual securities, whereas bond hedging uses instruments such as interest rate options and swaps as well as credit default swaps.

Figure 5.4 a): Average composition of the investment portfolio of the Life insurance sector Q4 2015

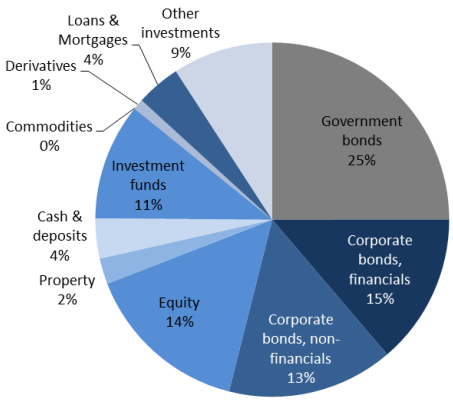
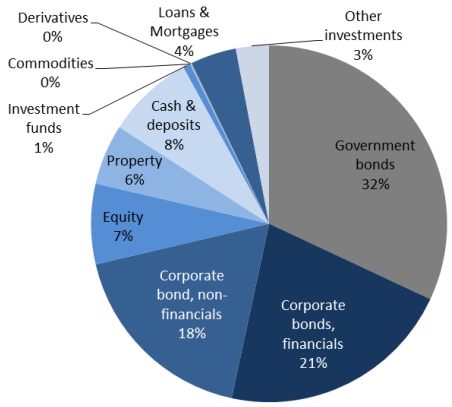


Figure 5.4 b): Average composition of the investment portfolio of the Non-Life insurance sector Q4 2015

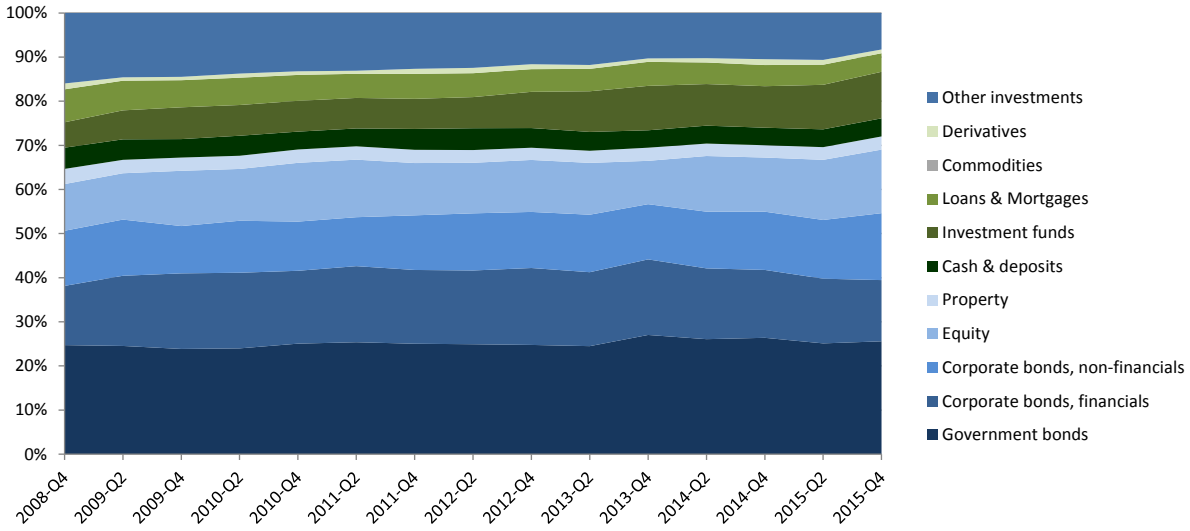


Source: EIOPA.

Note: The estimation for the insurance figure is based on a sample of 32 large insurers.

Figure 5.5 shows that government bonds account for at least 25 per cent of the investment portfolio. In the last two years, corporate bonds report a moderate shift from financial to non-financial companies: they moved respectively from 17 per cent to 14 per cent and from 13 per cent to 15 per cent of the total investments. Equities report a positive growth rate from 2013 onwards. The change in the regulatory framework and the search for yield behaviour are the main triggering events for the reallocation of the investments. The need of increased cash-inflows and income should be read in the light of the new Solvency II framework that distinguishes between the investment concentration. At this stage none of the two triggers can be ruled out and the evolution of the investments shall be further scrutinized to assess the potential deterioration of the quality of the assets held by insurers.

Figure 5.5: Evolution of the investment portfolio of the insurance sector over time (in per cent)

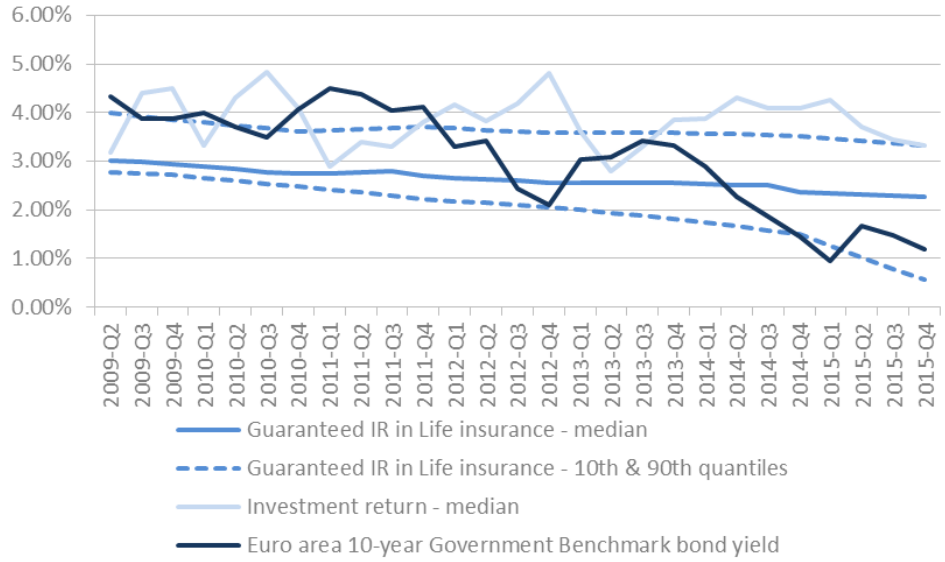


Source: EIOPA

Note: The estimation for the insurance figure is based on a sample of 32 large insurers.

The persistent low yield environment marginally affects the options embedded in the portfolios offered by the companies (i.e. guaranteed returns). Figure 5.6 shows how the median of the guaranteed interest rates in life insurance slowly reduces over time with some companies reacting quicker than others (see the 10th percentile curve). Generally, since the beginning of 2014, the guaranteed rates are well above the Euro area 10-Year government benchmark bond yield and the gap with the investment return of the life insurance industry, even though positive, has reduced.

Figure 5.6. Guaranteed interest rate in life insurance vs. investment return, Euro area 10-year government bond (in per cent)



Source: EIOPA (sample based on 32 large insurance groups in EU and Switzerland) and ECB

Note: The figures represent guaranteed rates for businesses where such guarantees are applied.

5.2. Quantitative risk assessment

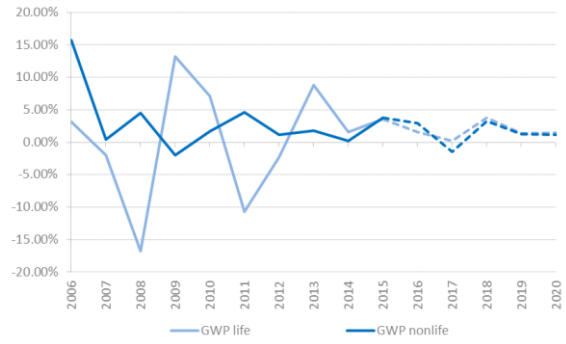
The chapter investigates the impact of the risks previously presented in this report. In detail, the section elaborates on the reaction of the industry to the European weak growth and market volatility.

Despite the conventional and exceptional monetary policy intervention of the ECB the growth in Europe is still weak and heterogeneous. The first direct effect on the insurance industry is represented by the foreseen reduction in the underwritten premium both for life and non-life business (Figure 5.7a). The stagnant and heterogeneous GDP growth, reflected also in the unemployment rate and the low yields, will turn into a slow-down of the GWP, characterized by a zero and negative growth in 2017 for life and non-life alike.[25] The revised GWP projection compared to the last report reflects the deterioration of the European macroeconomic outlook.

[25] GDP projections are based on the National Accounts Projection of the OECD available at: https://data.oecd.org/gdp/real-gdp-forecast.htm#indicator-chart. Risk free rates and inflations are based on ECB projections (https://www.ecb.europa.eu/stats/html/index.en.html). Data retrieved on March the 29th, 2016

Against this scenario in the EU, insurers increasingly rely on cross-border activities (Figure 5.7 b). Despite the crisis of the emerging markets, the ratio of new contracts signed outside the home-country keeps increasing at a remarkable pace (approaching 10 per cent in 2017 according to the applied model) with some distinctions. While life business growth does not show any slow-down, the non-life business reports a drop in the growth rate in year 2015. The crisis of the emerging economies could have negatively affected the demand on property and casualty products.

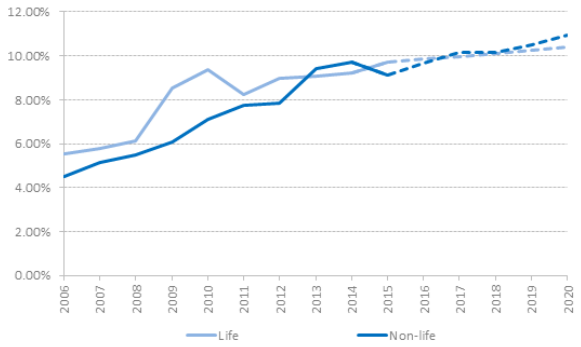
Figure 5.7 a): Gross Written premiums (GWP) projection for the EU (in per cent)



Source: EIOPA and ECB Survey of Professional Forecasters (SPF)

Note: Data corresponds to aggregates for the euro zone; dashed lines represent the EIOPA projection using macro scenarios based on ECB SPF developed according to Christophersen, C. and Jakubik, P. (2014) Insurance and the Macroeconomic Environment.

Figure 5.7 b): Share of Gross Written Premium (GWP) abroad (in per cent)



Source: EIOPA

Note: Data corresponds to aggregates for EU/EEA countries, dashed lines represent the EIOPA projection using a macro scenario based on the IMF World Economic Outlook, October 2015 developed according to Christophersen, C. and Jakubik, P. (2014) Insurance and the Macroeconomic Environment.

The weak European economic environment is characterised by limited and heterogeneous growth and stagnating inflation. EU-exogenous shocks such as the slow-down of the real economy and the financial turmoil recently experienced in China complement the scenario. Low commodity prices with oil at its lowest level, counterbalance the monetary policy intervention keeping inflation in the EU far from the ECB's target of 2 per cent. Interest rates and inflation are not foreseen to increase in the short to mid run.

Life insurers with their long-term liabilities and defined commitments towards policyholders will be particularly affected by this scenario. ROA for life insurers (Figure 5.8 a) will remain at low levels in coming years. This is mainly driven by the GDP and stock market development and risk free rate projections. The ROE for non-life insurers (Figure 5.8 b) displays a different pattern: the curve is

sloping downwards until the end of 2016 and is expected to revert afterwards, especially in 2017 due to the stabilization of the sovereign bond yields. From 2018 onwards it is expected to be more or less constant due to the weak growth projections of the GDP and the forecasted inflation in the EA.[26]

Figure 5.8 a) ROA - Life insurers (in per cent)

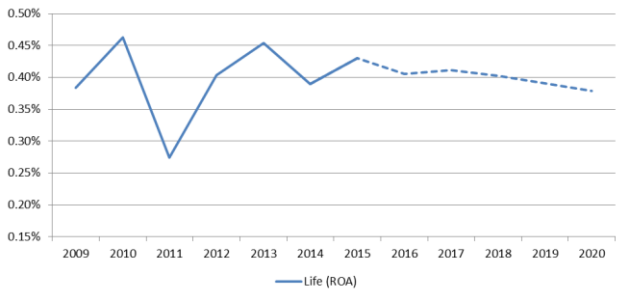
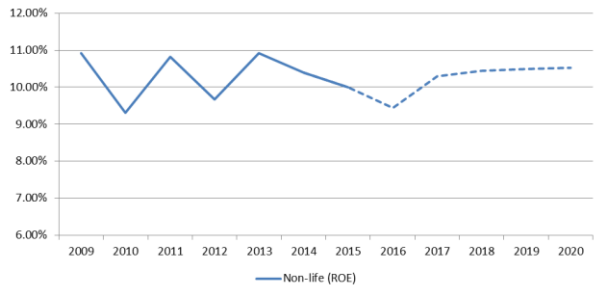


Figure 5.8 b) ROE - Non-life insurers (in per cent)



Source: EIOPA

Note: Data corresponds to aggregates for EU/EEA countries. Dashed line represent the EIOPA projection using a macro scenario based on the OECD data (retrieved in April 2016) and developed according to Dorofti, C. and Jakubik, P. (2015) Insurance Sector Profitability and the Macroeconomic Environment, EIOPA Financial Stability Report May 2015.

The contribution of insurers to systemic relevance with particular reference to the life business has increased in the last years across developed economies.[27] Nevertheless, systemic risk stemming from the insurance industry is still well below that of banks. In the light of the growing importance of the insurance industry in the global economy, the section concludes with an analysis on the evolution of interconnections between insurers and the rest of the financial service industry.[28]

The analysis aims at investigating the evolution of the systemic implications for the European insurance industry over time by measuring its level of interconnectedness vis-à-vis other players of the financial arena. Selected peers are banks and, due to the increasing relevance of non-bank and non-insurance financial institutions[29], asset

[26] Figures are based on QFT data submitted to EIOPA quarterly and on a best effort basis by a sample of 32 European Insurers. Size of the sample may vary over time. Projections are subject to the approximation driven by the applied model and by the utilized data series.

[27] See e.g. IMF International Monetary Fund (2016): Global Financial Stability Report - Chapter3: the insurance sector - trends and systemic implications.

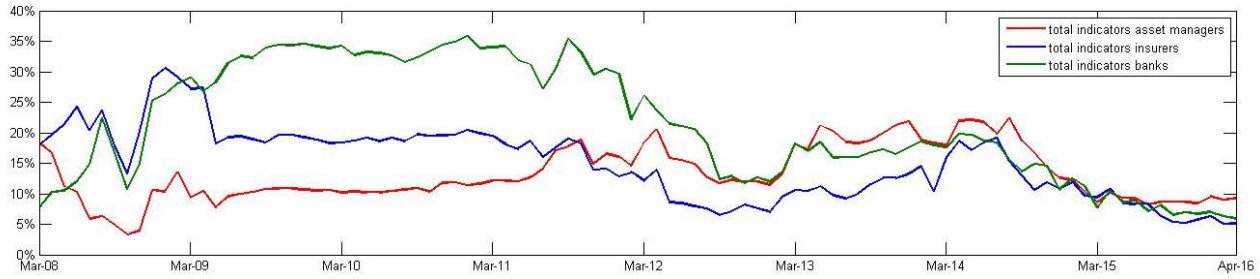
[28] Interconnectedness is also included among the determinants of systemic relevance for insurers by the IAIS - see International Association of Insurance Supervisors (2013): Global Systemically Important Insurers.

[29] EBA, EIOPA, ESMA (2016): Joint Committee Repost on Risks and Vulnerabilities in the EU Financial System. Forthcoming.

managers. Interconnectedness and subsequently systemic relevance is assessed by applying the Granger Causality Test[30] to the time series of total returns of a panel of 60 listed companies and three groups. These are the top 20 EU listed insurers, the top 20 EU listed banks and the top 20 US/EU listed Asset Managers.[31] Hence, the results of this analysis are based on the market perception and do not reflect the real inter-exposures between the financial sectors.

An overall reduction of the number of significant connections since the second half of 2014 is shown below (Figure 5.9). It displays for each sector the number of statistically significant Granger causality connections over the total number of possible connections. The statistical significance level is set at five per cent. This corresponds to a reduction in the overall tensions in the financial market. The groups' patterns allow distinguishing between the three groups. In the aftermath of the 2008/2009 and 2010/2012 EU sovereign debt crises banks played a prominent role in posing systemic risk with respect to insurers and asset managers. In the general reduction of the level of interconnectedness observed (in March 2014) the behaviour of the three groups can be hardly distinguished. Only from end-2015 onwards asset managers tend to actively affects banks and insurers.

Figure 5.9. Interconnections among banks, insurers and asset managers



Source: banks: top 20 in terms of capitalization from STOXX® Euro 600 Banks; (re)insurers: top 20 in terms of capitalization from STOXX® Euro 600 Insurance; Asset Managers: 20 AM listed in US and EU stock markets. Data retrieved from Datastream®. Elaboration: EIOPA. A thorough description of the model can be found in Appendix 1.1 of Berdin, E. and Sottocornola, M (2015) Insurance Activities and Systemic Risk. SAFE Working Paper n.121.

[30] Granger, C. W. J. 1969 Investigating causal relations by econometric models and cross-spectral methods. Econometrica 37, 424-438.

[31] It is worth noticing that the concept of Granger causality does not measure the causality in its stricter meaning, but whether past values of a variable x contain information that helps to predict a variable y beyond the information contained in past values y of alone. More specifically, we are measuring whether the movements in stock price of one entity cause movements of stock prices of other entities and vice-versa.