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Financial Stability Report

First Half Year Report | Spring 2013

About EIOPA Financial Stability Reports

Under Article 8 of Regulation 1094/2010, EIOPA is, inter alia, mandated to monitor and assess market developments as well as to undertake economic analyses of markets. To fulfill its mandate under this regulation EIOPA performs market intelligence functions regarding its supervisory universe, develops a market surveillance framework to monitor, and reports on market trends and financial stability related issues. The findings of EIOPA's market development and economic analyses are published in the Financial Stability Report on a semi-annual basis.

(Re)insurance undertakings and occupational pension funds are important investors in the financial market and provide risk sharing services to private households and corporates. In the financial markets, they act as investors, mostly with a long-term focus. Their invested assets aim to cover liabilities towards policyholders or members of pension fund schemes to which long-term savings products are offered, e.g. in the form of life assurance or pension fund schemes. Besides from offering savings products, (re)insurance undertakings provide risk sharing facilities, covering biometric risks as well as risks of damage, costs, and liability.

Financial stability, in the field of insurance and pension funds, can be seen as the absence of major disruptions in the financial markets, which could negatively impact insurance undertakings or pension funds. Such disruptions could, for example, result in fire sales or malfunctioning markets for hedging instruments. In addition, market participants could be less resilient to external shocks, and this could also affect the proper supply of insurance products or long-term savings products at adequate, risk-sensitive prices.

However, the insurance and pension fund sectors can also influence the financial stability of markets in general. Procyclical pricing or reserving patterns, and potential contagion risk stemming from interlinkages with other financial sectors, could potentially make the financial system, as a whole, less capable of absorbing (financial) shocks. Finally, (re)insurance undertakings might engage in non-traditional business such as the provision of financial guarantees or alternative risk transfer, which also needs to be duly reflected in any financial stability analysis.

The Financial Stability Report draws on both quantitative and qualitative information from EIOPA's member authorities. Supervisory risk assessments as well as market data are further core building blocks of the analysis.

First half-year report 2013

EIOPA's Financial Stability Committee (FSC) has updated its report on financial stability in relation to the insurance, reinsurance and occupational pension fund sectors in the EU/EEA. The current report covers developments in financial markets, the macroeconomic environment, and the insurance, reinsurance and occupational pension fund sectors as of 15 May 2013 unless otherwise indicated.

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Overview

The external environment surrounding Europe's insurance markets

Regarding the external environment surrounding Europe's insurance markets, some signs of favourable developments have been observed in the first half of 2013.

European insurers showed relatively stable results in 2012. Investment returns improved due to increased asset prices, which combined with cost-cutting efforts saw return on equity picking up in the second half of 2012. As for capitalisation levels, solvency ratios (on a Solvency 1 basis) in 2012 showed a moderate upwards trend, especially for non-life insurers, providing sizable buffers to weather economic pressures in the Eurozone or challenging financial market conditions. Reinsurance undertakings also showed a good operating performance in 2012 benefiting from a capital inflow to the sector with investors looking for stable returns in volatile markets. Losses from natural catastrophes remained significantly lower than in 2011 and 2005, the worst year ever for the reinsurance industry.

Risks still remain

Nevertheless, many underlying challenges remain and uncertainty about the future is still high. European macro-economic prospects remain weak, while European equity markets underperformed compared to global markets in recent months. Moreover, in several countries a continued economic downturn amid deleveraging by the banking sector and fiscal consolidation has been observed.

The weak macro-economic climate and the dichotomy observed in economic performance in Europe, combined with a potentially prolonged period of low interest rates and continued weak market growth remain key concerns in European and international markets. Low GDP growth and high unemployment continue to weigh negatively on premium growth in the insurance sector. While non-life insurers still benefit from mandatory insurance purchases and, hence, report positive premium growth rates in 2012, many life insurers have reported negative growth rates for premiums in 2011 and 2012.

EIOPA rates the risk stemming from a prolonged period of low interest rates to be the single most important risk insurers and occupational pensions are facing, both in terms of impact on the market and probability of occurrence. Although markets have recently taken a more benign view of sovereign and financial institution credit risks, supervisors still rank this risk as the second most significant risk and this is expected to remain so during 2013.

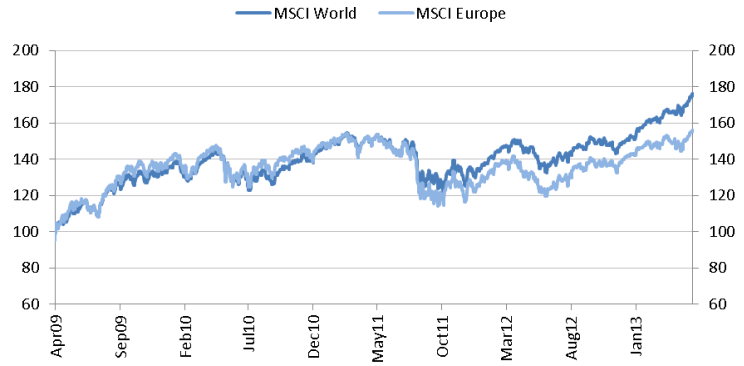
Insurers and supervisors have been responding to the risk of a prolonged period of low interest rates. Some insurance companies have started to shift away from fixed and/or life-long guarantees toward less rigid guarantees to reduce reinvestment risk. Others seem to be making a shift towards other non-guaranteed product types. Supervisors continue to engage with firms and to perform targeted exercises aimed at identifying vulnerabilities and appropriate supervisory tools. In this regard, EIOPA has published an EIOPA Opinion outlining a coordinated supervisory approach to this issue.

In the occupational pension sector, the shift from defined benefit schemes towards defined contribution or hybrid schemes continues in 2012, as a result of increased longevity and low interest rates, with regulatory initiatives often reinforcing this development. To manage this development, however, there has also been a corresponding increase in national interest in developing risk sharing alternatives to defined benefit and defined contribution schemes.

1. A weak macro-economic climate

The favourable developments in financial markets noted in the previous EIOPA financial stability report have continued in 2013. Figure 1 shows that both European and world equity prices have gradually increased since the summer of 2012. At the middle of May 2013, European equity prices were 25% higher than a year earlier. In its monthly bulletin published in April, the European Central Bank (ECB) pointed to signs of a renewed growth momentum, while a recent ECB survey of professional forecasters (SPF)[1] points to positive macro-economic growth from next year in the euro area. Analysis by the International Monetary Fund (IMF) also indicates that global financial market conditions improved considerably in the past months.[2] Moreover, the IMF notes that deeper policy commitments and continued monetary stimulus have reduced tail risks and enhanced confidence. This is particularly the case in the euro area where acute near-term stability risks are significantly reduced.

Figure 1 European and world equity price indices



Source: Bloomberg. Indexed to 100 on 1 April 2009.

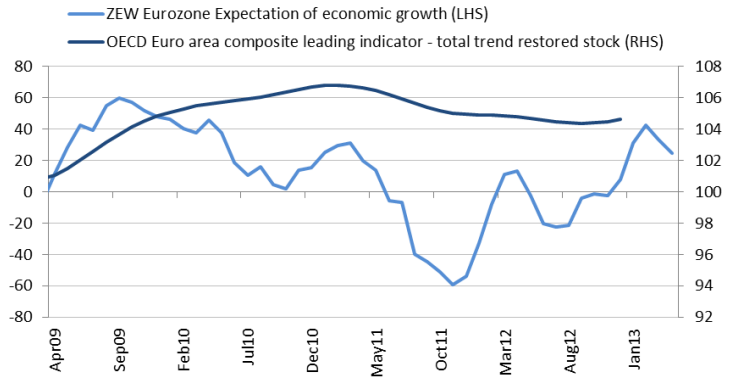
Despite the progress, however, European macro-economic prospects remain weak. The stability of financial markets is vulnerable to negative shocks, and European equity markets underperformed compared to global markets in recent months. Macro-economic data for the Eurozone has yet to indicate sustained growth, and key measures of economic output have tended to disappoint. Indeed, consensus growth forecasts for 2013 and 2014 for the Eurozone, while remaining positive, have been consistently revised down every quarter. Moreover, the Real GDP flash release published by Eurostat on the 15th of May

[1] The ECB Survey of Professional Forecasters (SPF) is a quarterly survey of expectations for the rates of inflation, real GDP growth and unemployment in the euro area for several horizons.
[2] See the IMF Global Financial Stability Report published in April

showed that the Euro Area contracted by 0.2 per cent in the first quarter of 2013 relative to the previous quarter.

Improved growth prospects in Europe and in the world would be a key contributor to financial stability. However, the ZEW Eurozone (see Figure 2) indicator has again dipped down and MarkIt recently (in April) published a flash purchasing managers composite index (PMI) which indicates continued contraction in the Eurozone. Consensus forecasts also point to contraction in 2013 (-0.4 per cent) in the Eurozone and growth of 1 per cent in 2014, while unemployment in the euro area is expected to remain above 12 per cent for at least the next three years.

Figure 2 Business cycle leading indicators



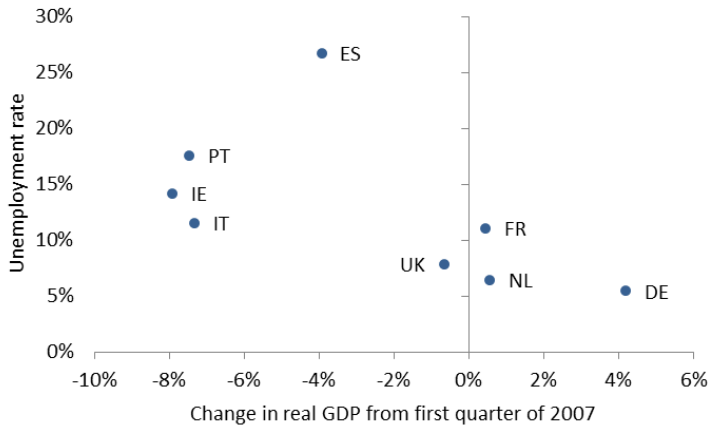
Source: Bloomberg. Note: The figure shows leading indicators for the economic cycle six months ahead. Two indicators are depicted. One derives from the ZEW (Zentrum für Europäische Wirtschaftsforschung) Eurozone expectation of economic growth and the other from OECD. The former is plotted in light blue on the left-hand axis and the latter is plotted in dark blue on the right-hand axis. The OECD updated its methodology for the calculation of the indicator in April 2012 to use GDP as a reference series.

Cuts in government spending in the US also led to lower than expected growth in the first quarter of 2013, although the US economy is showing a pattern of recovery. In Japan, the central bank recently upgraded its outlook for the economy. In its most recent report on prices and economic activity, the Bank of Japan expected the economy to start picking up by the middle of 2013. It lifted its forecast for real GDP growth to 2.9 per cent from 2.3 per cent.

The dichotomy in economic performance observed within Europe is also a key concern. Several European countries are facing continued economic downturn, amid deleveraging by the banking sector and fiscal consolidation. Figure 3 plots the change in real GDP in several large European countries between 2007 and 2013 on the horizontal axis against current levels of unemployment. The graph

shows that the real GDP (as of 2012 Q4) is below pre-crisis levels in several countries. As these countries also face persistently high levels of unemployment, Figure 3 illustrates the dichotomy.

Figure 3 Development in real GDP and current levels of unemployment for 8 selected European countries. 2012Q4.



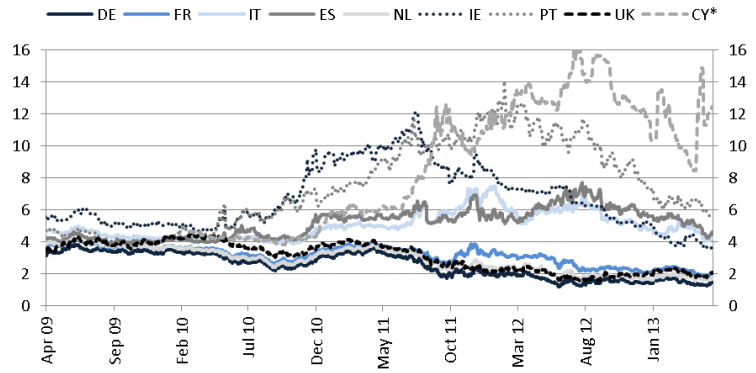
Source: Bloomberg

Combined with high government bond yields for several countries shown in Figure 4 (although there is a clear downward trend in previous months), the current economic climate reinforces the asymmetry in Europe as the countries which would most benefit from lower interest rates are the ones where borrowing costs are the highest.

The balance of fiscal policy towards the stabilisation of public finances and debt levels also rules out any large scale fiscal stimuli in the countries most affected. Unless there is a large degree of spill-over between countries (e.g. foreign direct investment or subcontracting for production in other countries, or increased demand abroad), there is a risk that European-wide imbalances will continue to grow. For this reason, signs of fragmentation of the internal market[3] are particularly worrying as cross country imbalances would depend on a fully functioning internal market to level out.

[3] This risk is discussed in detail in the recent Joint Committee Report on risks and vulnerabilities in the EU financial system, published on https://eiopa.europa.eu/joint-committee/index.html.

Figure 4 European government bond yields for nine selected European countries – 10 years segment



Source: Bloomberg. Note: The figure shows the evolution of 10-years government bond yields for selected countries (8 years in the case of Cyprus).

The weak macro-economic outlook and the observed dichotomy in Europe serves as a backdrop to the analysis of the risks in the insurance and pension fund sectors, presented in the next chapters of this report. Although it is difficult to quantify the overall detrimental impact that the weak macroeconomic climate will have on the European insurance and occupational pension fund sectors, it is clear that with the deteriorating macroeconomic environment, the likelihood of a prolonged period of low interest rates increases. This will certainly put life insurers and pension funds under pressure, especially those having high guaranteed rates.

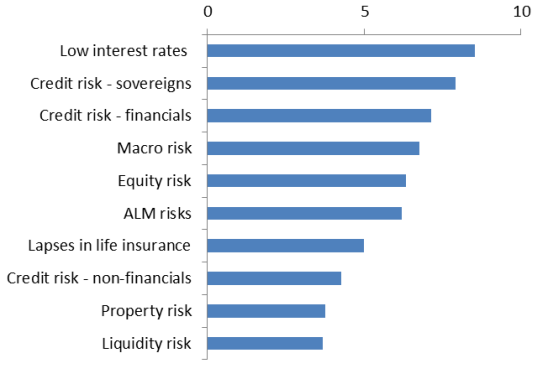
The weak macro-economic outlook also affects the reinsurance sector as the nature of catastrophe-exposed business attracts investors who are searching for safe investments which are uncorrelated with other assets. At the same time, competitive market conditions lead many direct insurers to raise retention ratios. These factors contribute to the long-run trend where capacity is outgrowing demand in the reinsurance sector. These adverse developments were only partly offset by a lower level of natural catastrophes in 2012 compared to 2011. Large scale losses in 2012 were still high on a global level, dominated by severe weather event losses in America. In the US, insured losses following Hurricane Sandy are expected to reach USD 30-35bn.

2. Risk assessment for the insurance and pension fund sectors

In the preparation of the Financial Stability Report, national supervisory authorities are surveyed on their assessment of the risks and challenges for the insurance and occupational pensions sectors. They are asked to rate these according to the probability of materialisation and the impact on national markets. The aggregations of these scores are shown in Figure 5 for the insurance sector and Figure 6 for the pension fund sector. The figures show the

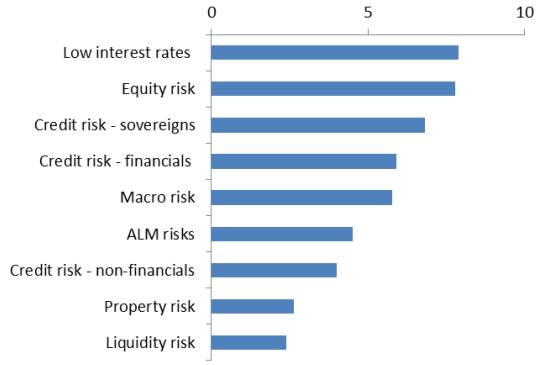
average combined (i.e. probability times impact) scores assigned to each risk. These risks are discussed in detail below.

Figure 5 Risk assessment for the insurance 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 6 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.

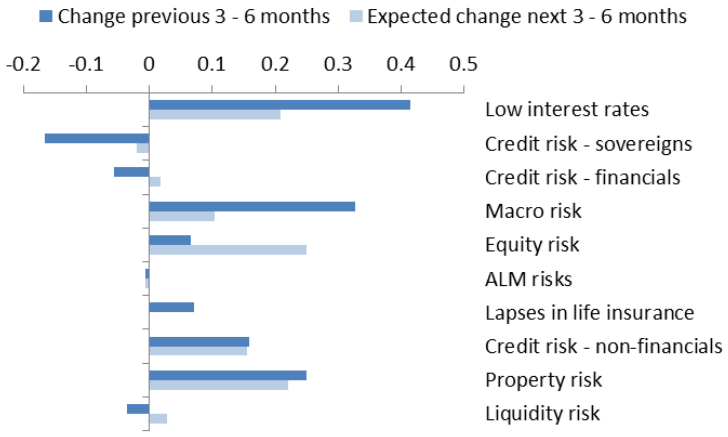
2.1. Macro risks and a prolonged period of low interest rates

The risks stemming from a prolonged period of low interest rates is the single most important risk as identified by national authorities, both in terms of probability of materialisation and in terms of impact. This is the case both for pension funds and for the insurance sector.

Our survey indicates that this risk has both increased over the last few months, and is likely to continue to increase over the next three to six months (see Figure 7). The background is the weak macro-economic climate (also identified as a key risk by supervisors), which has necessitated low policy interest rates. Market expectations, influenced by central bank communications, are that interest rates will remain low for a long time (see Figure 8). A Eurostat flash[4] inflation estimate published on 30th April indicated that euro area annual inflation could be down to 1.2%, increasing the likelihood of continued low policy interest rates.

[4] The euro area inflation flash estimate is issued at the end of each reference month.

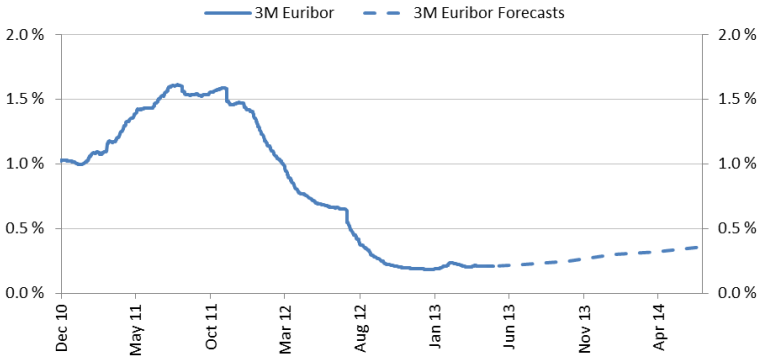
Figure 7 Supervisory risk assessment for insurance and pension funds – past and expected future development



Source: EIOPA.
Note: EIOPA members indicated, for each risk, their assessment of how the probability of materialisation and potential impact developed over the previous 3 to 6 months (dark blue bar). EIOPA members also indicated their expectation for the future development of these risks (light blue bar). Scores were provided in the range -2 indicating considerable decrease and +2 indicating considerable increase).

The increased likelihood of continued low interest rates was also highlighted by the recent 25 basis points cut in the rate for the main refinancing operations by the ECB to 0.50%. Although such a policy response is intended to lower the price of credit and stimulate demand (which would also be beneficial for insurers as the recessionary tendencies have put pressure on premium growth, see Section 3.1), the low interest rates also introduce direct and profound challenges to the sector.

Figure 8 European short-term interest rates and consensus forecasts



Source: Bloomberg

In particular, the existence of a prolonged low interest rate environment harms insurance undertakings and pension funds by increasing the present value of un-hedged liabilities and by depressing reinvestment returns. In turn, as capital market rates approach the guaranteed rate, these institutions face increasing difficulties to meet performance guarantees provided on certain insurance contracts. Consequently, compression of this margin beyond a given point would cause an erosion of the capital position of some segments of the industry.

Low interest rates are particularly detrimental for life insurers and defined-benefit pension funds, given i) the large share of fixed-income assets in their portfolio, ii) the fact that they typically have a negative duration gap, with liabilities of longer duration than assets, and iii) the fact that their products might include performance guarantees.

Some of these effects are also illustrated for the pensions sector in the preliminary results for the first Quantitative Impact Study (QIS) on Institutions for Occupational Retirement Provision (IORPs) – see Box 4.6. IORPs in several countries report substantial capital shortfalls under the proposed Holistic Balance Sheet approach, relative to liabilities and the SCR. It should be noted, however, that the QIS did not consider how IORPs and/or national supervisors should respond to shortfalls under the Holistic Balance Sheet.

In the insurance sector, the precise impact of a prolonged low-interest environment depends on the prevailing relationship between interest rates, market yields and guaranteed returns, as well the duration mismatch in the insurer's balance sheet and the composition of the balance sheet. Taken together, these factors generate a highly specific outcome for each insurer. Individual reports on the interest rate sensitivity of European insurers collected by Swiss Re show that companies domiciled in central and northern European markets are the most exposed to further declines in interest rates.[5] This heightened sensitivity is generally due to the long maturity, rigid guarantees offered to policy-holders. The Swiss Re survey also shows that interest rate sensitivity is generally lower in Southern Europe and France, as well as in the UK.

In Southern Europe interest rates on government bonds used to back domestic liabilities are generally higher (see Figure 4). In the UK and France, on the other hand, the lower interest rate sensitivity stems either from the product portfolio or from the characteristics of the guaranteed business. In particular, in the UK traditional premium endowment business dominates, while in France, the guarantees offered are generally only valid for one year.[6]

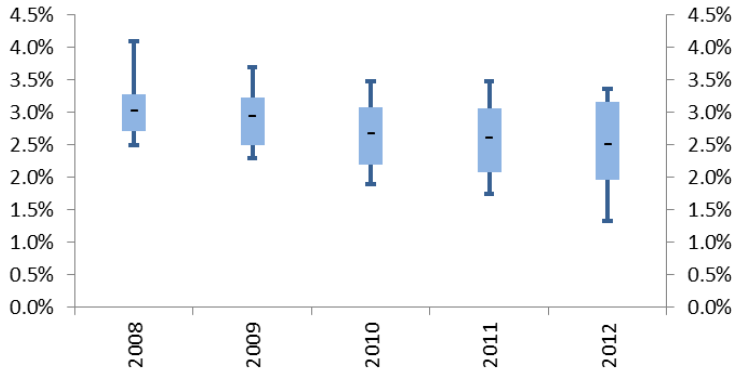
[5] See "Facing the interest rate challenge", Swiss Re Sigma Report No. 4/2012.
[6] Such guarantees are additional to the technical rate which is fixed at the beginning of the contract, but which is very low for most contracts.

In the pension fund sector, the risks arising from a prolonged period of low interest rates are also lower in member states where occupational pension arrangements have traditionally been defined contribution (DC) schemes, such as e.g. in Central and Eastern European countries.

Industry response[7]

Individual insurers need to find suitable tools to mitigate the effect of low interest rates. In Japan, for instance, where interest rates have been low for over 15 years, seven insurers collapsed in the early 2000s due to high negative spread burdens. Others survived due to a recovery in the stock market and a gradual decline in effective guaranteed rates through termination, surrenders and lapses, and a decrease of guarantees for new business.

Figure 9 Life - Guaranteed interest rates in life insurance, average weighted by technical provisions, in % - Annual. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

From the industry perspective, the first option is naturally to reshape or lower the guarantees they offer to new policy-holders. However, the effects on the average guaranteed interest rates in the portfolio of insurers will only materialize over a longer time period because of the large share of existing policies. Evidence of this gradual lowering of average guaranteed rates in the life business is shown in Figure 9.

However, guarantees on current contracts would generally need to be honoured. A second possibility is therefore to re-price products and fund current contracts

[7] Note the data coverage and disclaimer note given in the Appendix which applies to all data presented in this chapter which is based on the sample of 30 large insurance groups in EU and Switzerland

through reserves. This strategy may in particular be useful if life insurance companies are allowed to smooth the returns over the life of the contract.

Insurers could also aim to redesign their product portfolio. This would generally involve a move towards products that are less risky for the insurers in current market conditions (e.g. unit-linked products, in which risk is shifted to the policyholder) and the discontinuation of selling new rigidly guaranteed products. This strategy would imply a gradual shift of the portfolio towards a higher weighting of products to the right in Table 1. Such a strategy may, however, make insurance products less attractive compared to alternative investment opportunities, such as mutual funds.

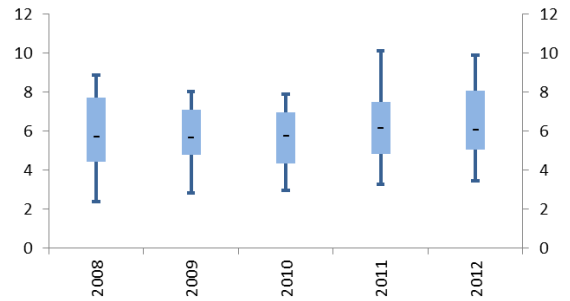
Table 1 Product evolution and bearing of risk in the insurance sector

Type of business	Rigid guarantees	Flexible guarantees	Unit linked
Description	Guarantees are set at the inception and cannot be changed during the lifetime of the contract.	Guarantees are set at the inception, but are only valid for a limited period of time, after which they are recalibrated according to market development.	Premiums are invested directly in a pool of assets and returns to the policy-holder are dependent on the performance of the investment pool.
Risk holder	Insurer	Insurer and policy holder	Policy holder
Risk limiting factors for insurers	In cases where guarantees can be smoothed over the lifetime of the contract, risks to the insurer can be slightly reduced. It is also beneficial to the insurer if guarantees are not valid in the case of early surrender.		
Risk aggravating factors for insurers	If guarantees are credited annually, no smoothing can take place.		

The selling of guaranteed products continues in many but not all countries. However, the features of the products are often adjusted to limit the risk to the insurer. In particular, annually adjusted minimum rates of return are increasingly marketed, at least in some jurisdictions. This allows undertakings to periodically review the level of guaranteed rates and align them with current market conditions. Some products are also made conditional on external circumstances and with no guaranteed investment income in case of early surrender.

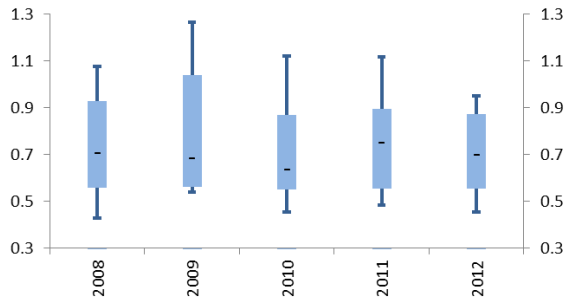
On the asset side, qualitative information available to EIOPA indicates that two distinct strategies have been employed. One strategy involves increasing the duration of the asset side to close the duration mismatch. This, however, is only possible to the extent that the solvency position of the undertaking is not harmed in the process. The other strategy which has been employed involves shortening the duration of the asset side in order to avoid locking in low interest rates.

Figure 10 Life - Duration of bond portfolio, (including derivatives) in years – Annual. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

Figure 11 Life - Duration of bond portfolio (including derivatives) to Duration of technical provisions – Annual. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

Data available to EIOPA and presented in Figure 10 and Figure 11 are not conclusive on which effect dominates. On the one hand, Figure 10 indicates that the duration of the bond portfolio of life insurers has remained fairly stable over the last years. On the other hand, Figure 11 indicates that duration mismatches, as measured by the duration of the bond portfolio to the duration of technical provisions, increased somewhat between 2011 and 2012 (the mismatch is seen as a lower ratio in Figure 11).[8] In line with this, data available to EIOPA indicates that the duration of technical provisions did increase slightly in the same period.

Insurance supervisors do identify asset-liability matching (ALM) risks and duration mismatches as a risk in Figure 5, but it is not ranked among the highest risk. However, insurers most exposed to a risk of a decrease in interest rates are also those with large negative duration gaps, i.e. the asset duration is lower than the liability duration. Duration gaps are likely to be a reflection of the adequacy of ALM policies as well as the duration challenges of certain long-tailed liabilities, such as long term care, for which there is no ready supply of sufficiently long fixed income assets. Although most insurers tend to match the durations of their assets and liabilities, some operate with wide duration gaps. Overall, however, supervisors do not seem to indicate any large changes in their assessment of this risk, neither in the past nor for the next 3 to 6 months.

In the pension fund sector, the funds themselves are also reacting to low yield conditions. In particular, the pension landscape continues to evolve with a gradual shift from Defined Benefit (DB) schemes to schemes where members

[8] Duration is a way to measure the interest rate sensitivity of the balance sheet, both on the asset and liability side. In principle, duration mismatch means that the two sides of the balance sheet react differently to increases/decreases in interest rates. This, however, is not the sole source of risk as other factors, such as profit and loss sharing, also come into play.

bear more risks (such as Defined Contribution (DC) or Defined Ambition[9] (DA) contracts). In some countries sponsors of DB schemes may respond to increases in un-hedged liabilities, and the consequent pressure on financing their funds, by moving to pure DC plans. In other countries, funds are developing hybrid DB/DC schemes containing caps on earnings.

Life insurance undertakings and occupational pension funds which offer products with guaranteed interest rates might struggle in earning these interest rates without adapting their original investment policy and engage in some type of search for yield. It is, however, difficult to quantify the actual extent of such behaviour and an EIOPA survey of national supervisory authorities in Autumn 2012 revealed no clear picture. Although the number of jurisdictions reporting at least some observations of an increased search-for-yield behaviour was greater than the number of jurisdictions not reporting such findings, aggregated data on the investment portfolios of large insurance groups cannot underpin any trend of switching between major asset classes (e.g. from sovereign to corporate bonds, or from bonds to equity).

Moreover, recent qualitative information available to EIOPA indicates that the financial and sovereign debt crisis led insurers to increase the domestic bias in their asset portfolios. Insurers in peripheral countries may have increased their holding of debt offering a higher return (such as own sovereign debt), but this is most likely due to the fact that these assets are used to back domestic liabilities. Insurers in core countries also seem to increase the domestic bias, forgoing the additional yield which could have been achieved by investing in periphery bonds. As a result, this seems to be more the case of domestic assets matching domestic liabilities than a market-wide search for yield.

Supervisory response

The dimensions of the potential problems associated with a prolonged period of low interest rates can be difficult to estimate. In particular, where historical cost accounting instead of market consistent valuation is applied in regulatory and public reporting, the effect of the low interest rates is not immediately visible.

Supervisors have therefore performed targeted exercises aimed at quantifying the extent of the problem. One such quantification for the insurance sector was carried out on a European-wide scale in 2011 as part the EIOPA stress test. It revealed that 5% to 10% of the companies included in the sample would face severe problems if the prolonged low interest environment remained. The ratio of available capital to the minimum capital requirement (MCR) could fall below 100% and in many cases would be just above 100%, making insurers more vulnerable to other potential external shocks. The effects of low interest rates on

[9] In defined ambition schemes, the employer is bearing some risk on behalf of their employees.

the liability side clearly outweighed any temporary asset valuation gains on fixed income investments.

EIOPA is currently working with national supervisors to identify suitable supervisory measures and to further quantify the extent of the detrimental effect of the current low interest rates. In this regard, EIOPA published in early 2013 an Opinion on the supervisory response to a prolonged low interest rate environment.[10] The Opinion addresses the main challenges for the insurance sector posed by a low interest rate environment, promotes adoption of private sector solutions and expresses EIOPA's views on the supervisory responses to this environment. EIOPA will also carry out a follow-up exercise with members to assess the scale of this issue and where the greatest impacts lie.

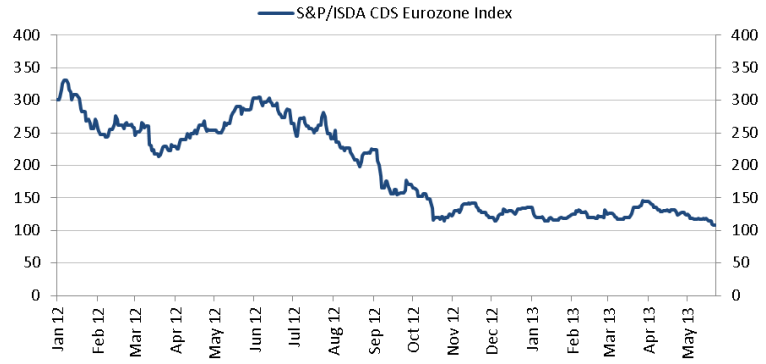
Several regulatory changes introduced in Europe are meant to support the solvency position of pension funds. The Netherlands, for instance, announced in September that funds were to use an ultimate forward rate (UFR) equal to 4.2% in order to discount future long-term liabilities (20 years or more). The Swedish FSA is also implementing a new model for calculating the discount rate of technical provisions. The new method will be as consistent as possible to the Solvency II method, but legally adapted from within the present Solvency I framework. These measures are similar to that employed in other countries where a measure similar to the UFR is intended to match the long term expectations for inflation and real growth. Some regulatory changes are also introduced to increase available options for scheme design, and to better address social partners' preferences when facing the current challenges. In the UK, for instance, the government is currently considering the policy options available for the promotion of a Defined Ambition (DA) risk-sharing scheme (where the employer is bearing some risk on behalf of their employees).

2.2. Credit risks

Supervisors rank credit risks related to sovereigns and financial companies as the second and third most important risk to the insurance sector (see Figure 5), and the third and fourth most important risk for the pension fund sector (see Figure 6). Although these risks have been reduced since the beginning of 2012 with lower CDS spreads both on sovereign (and financial) bonds (see Figure 12 and the EIOPA Risk Dashboard March 2013), a sudden reversal in spread narrowing cannot be ruled out.

[10] https://eiopa.europa.eu/publications/eiopa-opinions/index.html

Figure 12 Sovereign CDS spreads

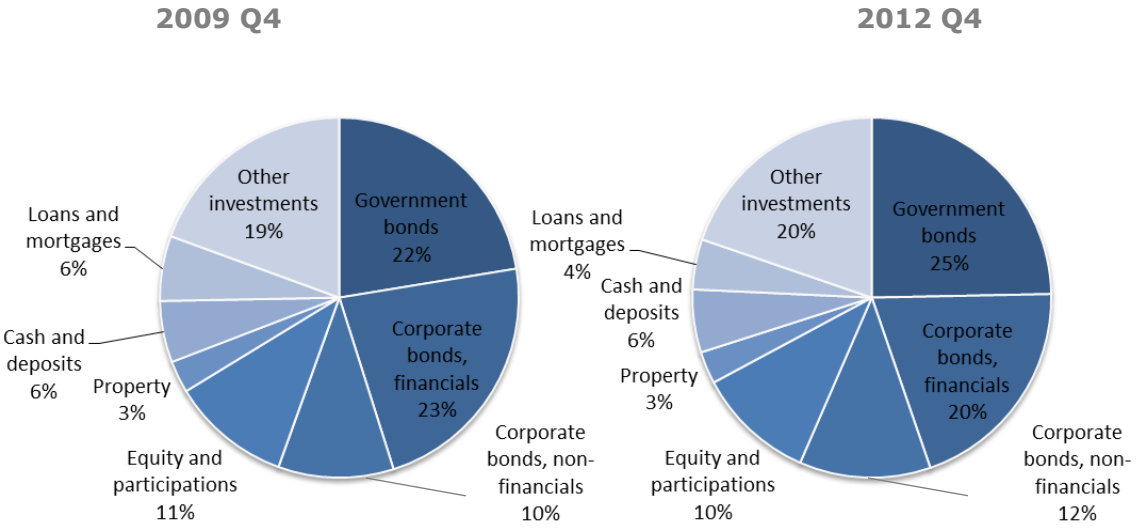


Source: Bloomberg

Moreover, due simply to the large share of investments held in sovereign and financial bonds, any materialisation of such risks will have large impacts. Figure 13 shows that large European insurers are estimated to hold almost 25 per cent of their investment portfolio in government bonds and 20 per cent in financial bonds in Q4 2012. The figure also shows that the combined share of these two asset classes have been fairly stable over the period from q4 2009 to Q4 2012. However, the share of government bonds has increased at the expense of financial bonds.

Cash and deposits accounted for 6 per cent of the investments in 2012,representing a further exposure to the banking sector. In the pension fund sector, the exposures are of a similar scale. National authorities that were able to report the split of assets in their jurisdiction for 2012 reported that pension funds on average held 28% of their portfolio in government bonds and 11% in financial bonds.

Figure 13 Average composition of the investment portfolio of large European insurers



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

2.3. Market price risks – equity and property

Equity price risks also ranked relatively high in the EIOPA surveys. Figure 13 shows that exposure to equity and participations in the portfolios of large insurers has been fairly constant at around 10 per cent. National authorities responsible for the supervision of pension funds ranked equity risks as the second highest risk facing the industry. This is higher than in insurance, where equity risk scores fifth among the identified risks.

The reason for the higher risk ranking for pension funds is the relatively high equity exposure of many pension funds, increasing the effect any materialisation of this risk might have on the local market. Although recent increases in price levels led to a perceived reduction of this risk in the past 3 to 6 months, the experiences in recent years have showed that volatility can quickly return. The survey results indicated that recent growth in equity prices was not matched by similar improvements in economic fundamentals, increasing the risk of negative corrections over the next 3 to 6 months. At the same time, recent increases may also reflect undershooting in the past, decreasing the risk of negative corrections.

The risk score assigned in the EIOPA surveys to a property price correction is far lower than for equity. This lower score comes from both a lower assessment of probability, but also lower impact score. The main argument for the lower impact score is the fact that property only makes up a very small share of insurers' and pension funds' investments (see Figure 13 for the insurance sector).

However, severe property price falls will impact insurers also through mortgage loan exposure, and importantly, also through the banking sector. As the banking sector is generally highly sensitive to property price falls due to the large share of mortgages and loans on the asset side of their balance sheet, the indirect exposure to property by the insurance sector is many times what the direct exposure may seem to be. However, banking sector sensitivity to residential market cycle depends highly on national specificities (for instance loan to value ratios and whether loans are granted on income or housing values).

3. The European insurance sector[11]

3.1. Market growth

The weak macroeconomic environment continues to negatively influence market growth in the insurance sector and puts pressure on the sale of life insurance policies, in particular in countries where household wealth and income has been reduced. Premium growth in the life sector was particularly low throughout

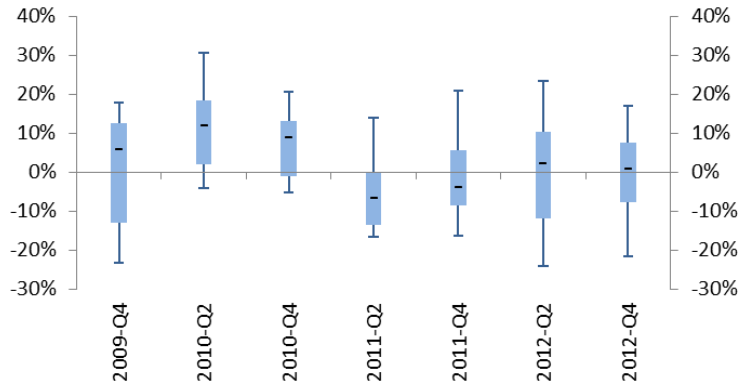
[11] Note the data coverage and disclaimer note given in the Appendix which applies to all data presented in this chapter which is based on the sample of 30 large insurers in EU and Switzerland. For a list of the top 30 countries please see the Background Note to EIOPA's Risk Dashboard published on Eiopa's website: https://eiopa.europa.eu/publications/financial-stability/index.html

2011, with negative growth for a majority of reporting companies (see Figure 14). Unit-linked business was hit particularly hard, with declining premiums since the second quarter of 2011 and a reported premium decline of 9% (for the median company) in 2012. Traditional life insurance, by contrast, reported more or less stable premiums in 2012 following large decline in 2011.

Fiscal adjustment to reduce public sector deficits in many countries with general tax increases and reduced household income also limited the potential growth of insurance volumes. Several EIOPA members reported that increased taxation on premiums or reduced tax incentives for long-term life and savings products contribute to this effect. In some countries, investments in government bonds are a savings vehicle that directly competes with certain life insurance products.

Moreover, the difference between the 10th and the 90th percentile in Figure 14 is wide, as is the interquartile range. The gap narrowed by the end of 2012, but premium growth is still only marginally positive for the median company, indicating that around half of the companies in the sample still experience negative premium growth. A majority of EIOPA members expect premium growth to remain subdued in the next 3 to 6 months.

Figure 14 Year on year growth in gross written premiums – Life. Median, interquartile range and 10th and 90th percentile

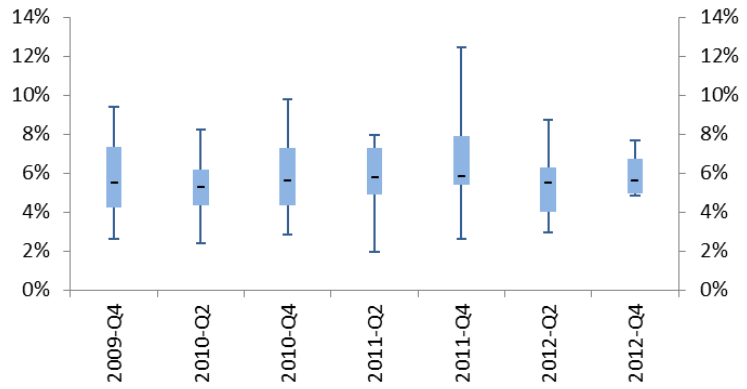


Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

Economic decline with high levels of unemployment and low interest rates may also lead to early surrenders in the life sector, especially if policy-holders can surrender their policies without penalties. This also limits market growth potential. In some cases, insurers could benefit from early surrenders, especially if penalties are high or the surrendered policies have high guaranteed returns. However, customers usually avoid surrendering policies with high guaranteed returns, while they reduce investments in products with low interest rates. This

would naturally lead to an adverse selection from the point of view of the insurer.

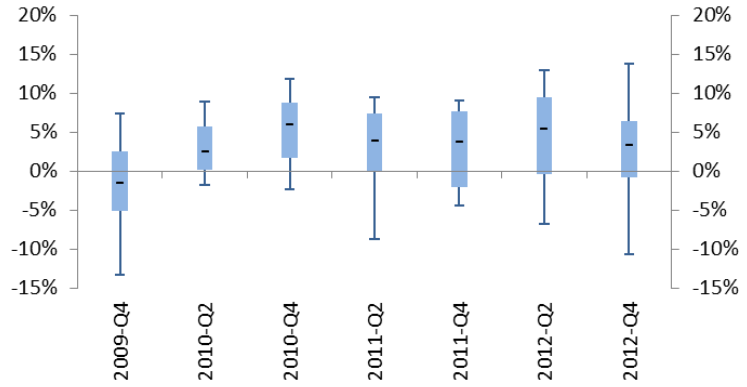
Figure 15 Lapse rates – Life. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

High lapse rates may also cause some liquidity concerns in affected insurers. Figure 15 shows the development in lapse ratios since the end of 2009. It documents a general increase in lapses in 2011, with some companies experiencing particular high lapse rates in the last quarter of 2011. However, lapse rates have generally come down in 2012 and the 90th percentile is at a low level compared to previous years.

Figure 16 Year on year growth in gross written premiums – Non-Life. Median, interquartile range and 10th and 90th percentile



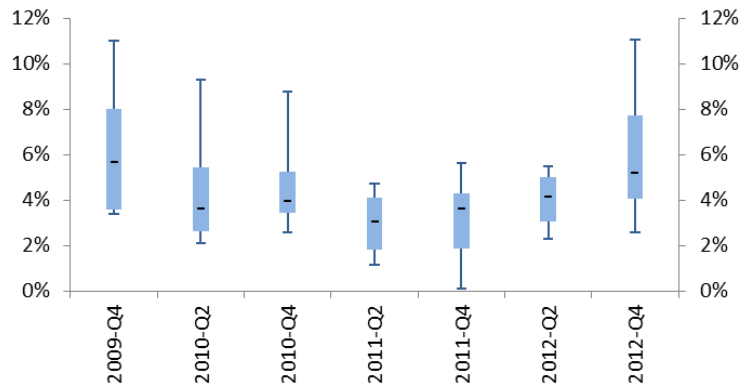
Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

In the non-life insurance sector, Figure 16 shows that year-on-year growth in premiums has remained positive since 2009, but the difference between the best and the worst performers is increasing. The worst performers experience negative growth of around 10 per cent. Increasing unemployment and reduced net household income is generally expected to decrease the demand for non-life products such as motor policies (especially in countries where it is not compulsory), and this line of business was among those reporting negative premium growth. Premium growth for credit insurance and suretyship was also weak. On the other hand, premium growth in accident and health has remained strong throughout the last few years. There is, however, as in many other indicators presented in this report, a clear trend of increasing divergence between companies.

3.2. Profitability

Return on equity picked up in the second half of 2012 both in the life and in non-life sector, limiting the immediate impact of low interest rates. With generally large asset holdings, life insurers benefited particularly from increased asset prices (see e.g. Figure 1). This translated into largely improved investment returns throughout the sector, documented in Figure 17. Combined with cost-cutting measures (the average decrease in net operating expenses in the life sector was 4.2% in 2012[12]) and improved risk management, this lead to substantially improved return on equity even in the lower percentile. The return on equity among the worst performers was higher than the median in the preceding 12 months (see Figure 18).

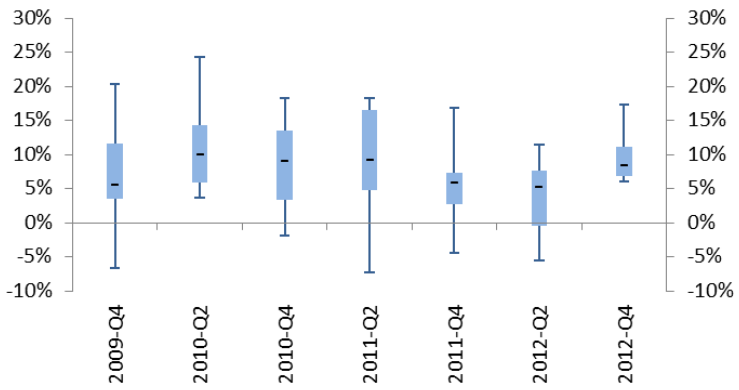
Figure 17 Investment return – Life. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

[12] This figure refers to the sample of large insurers reporting via national supervisors to EIOPA

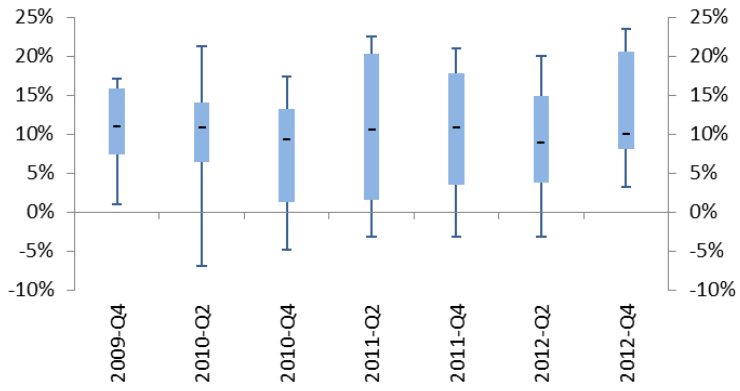
Figure 18 Return on equity – Life. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

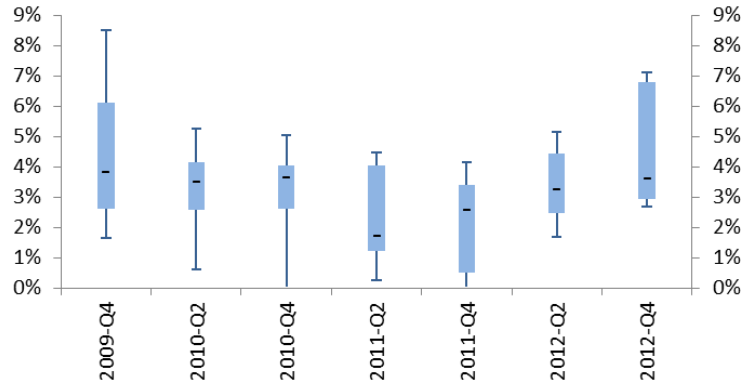
Return on equity in the non-life sector also improved in the lowest percentiles, with the worst performers reporting positive return on equity for the first time since 2009 (see Figure 19). However, even if the median return on equity was higher in non-life than in life, the spread between the best and worst performers in the non-life sector was much larger than in the life sector, a pattern which has been evident for some time, in particular if measured by the interquartile range. As was the case in the life sector, the relatively robust return on equity reported in the non-life sector was largely due to strong return on investments as shown in Figure 20.

Figure 19 Return on equity – Non-life. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

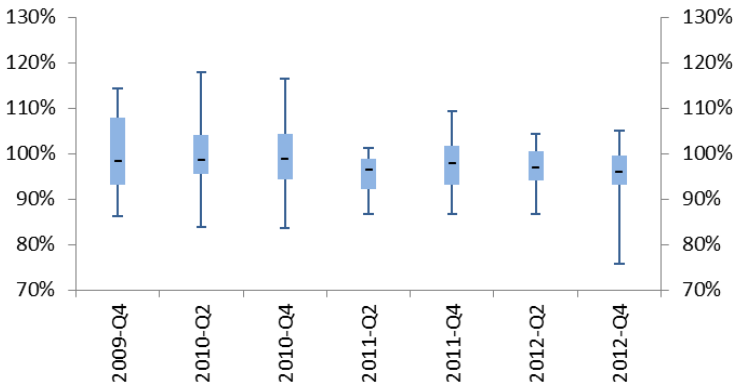
Figure 20 Investment return – Non-life. Median, interquartile range and 10th and 90th percentile



Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

For several non-life business lines, the strong investment returns where reinforced by relatively low combined ratios, as seen in Figure 21. The combined ratios improved in 2011 for a majority of the reporting firms, varying between 96% and 98% for the median insurer over the last two years (in the four quarters before that, the combined ratios tended to be about 1-1.5 percentage point higher). Several companies even report combined ratios close to 90%, supporting strong return on equity figures.

Figure 21 Non-life - Combined ratio. Median, interquartile range and 10th and 90th percentile



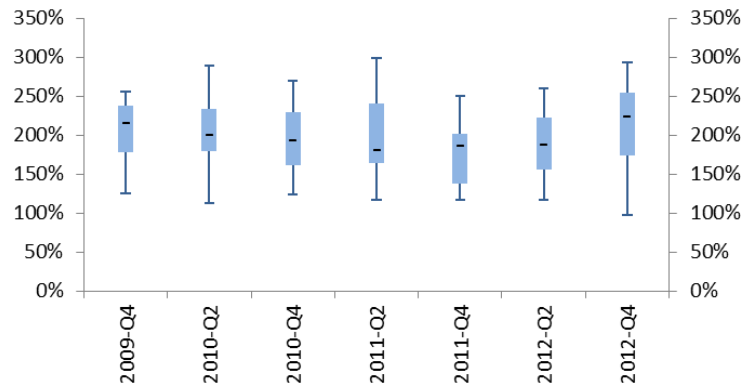
Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

3.3. Solvency ratios

Solvency ratios at the end of 2012 substantially improved for a majority of life insurers surveyed by EIOPA (see Figure 22), helping creating buffers to weather economic pressures in the Eurozone or challenging financial market conditions. The median solvency ratio was 222% compared to 186% a year earlier. To the

extent that declining sovereign bond spreads and increased equity prices are directly reflected in the capital position, these developments account for some of the improved solvency ratios. Generally improved profitability (ROE) as shown in the previous section also helped improve the solvency situation. However, even if solvency ratios remain robust at an overall level, Figure 22 also shows that the weak macroeconomic climate and low interest rates are negatively impacting a few insurers which report solvency ratios for life business close to 100%. The large difference in solvency ratios across the life sector adds to the general picture of diverging development across Europe. Importantly, the difference between the companies with the highest and lowest solvency ratios has been steadily increasing since 2011, and the lower percentile is lower than one year ago.

Figure 22 Solvency ratios – Life. 10th and 90th percentile, interquartile range and median



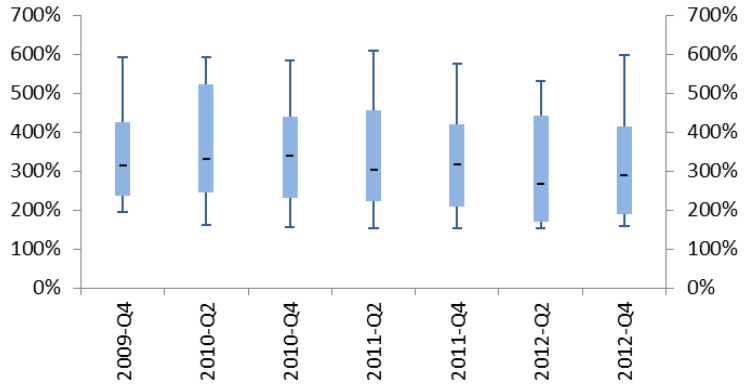
Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

Solvency margins in the non-life sector remain stronger than in the life sector due to continued underwriting profitability and lower sensitivity to the weak macroeconomic environment. Over the last six months, solvency ratios increased slightly for the weakest non-life insurer in the sample, resulting in a (somewhat) higher 10th percentile, 25th percentile and median shown in Figure 23. However, this pattern of half-year increase was also observed in 2011, and solvency ratios remain lower at the end of 2012 than they were at the end of 2011.

The reported solvency ratios are based on the Solvency I framework, which refers to a range of European directives regulating the insurance sector. The provisions spelled out in the directives are not fully harmonized across Member States, and therefore a rather heterogeneous set of rules still prevails in the EU. This means that valuation of both assets and liabilities is not consistent across countries. Historic cost accounting still prevails in most cases, and regulatory reporting and formal solvency assessments are often based on such valuations. Several national authorities, and some insurance companies, therefore complement their assessment of solvency ratios either with stress tests or with

reporting of solvency ratios on a market value basis. This information is used to provide a more nuanced picture, especially of the challenges faced by the life insurance sector due to the low interest rates. Naturally, in most cases where market valuation is applied without any limiting factors (such as matching adjustments or additions to the risk-free rate as under consideration for the Solvency II regime), solvency ratios are lower on a market value basis.

Figure 23 Solvency ratios – Non-life. 10th and 90th percentile, interquartile range and median

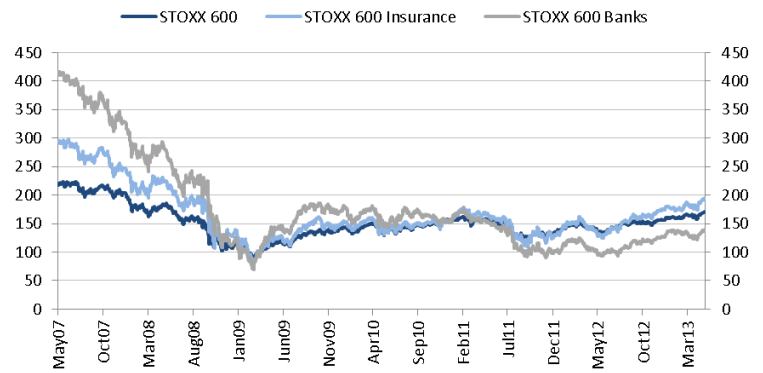


Source: EIOPA. Sample based on 30 large insurance groups in EU and Switzerland

3.4. Insurance sector equity prices, ratings and CDS spreads

After experiencing a dramatic decline following the financial crisis in 2007 and 2008, the equity prices of insurers started to increase in early 2009. Both insurance and bank equity prices had experienced a steeper fall than average market prices in the preceding two years (see Figure 24). The fall in insurance equity prices was possibly generated by a sell-off of equity issued by financial companies in general, reflecting concerns about the sustainability of the global financial system as a whole. It probably also reflected the insurance sector's investment exposure to large European sovereigns and banks. This was seen as a source of spill-over from the mainly banking-related crisis in 2007 and 2008. However, the equity prices of the insurance sector more closely tracked the general market price increases after the beginning of 2009, leading to an increasingly diverging development of bank and insurance equity. This may to some extent indicate that investors are again considering the two sectors separately.

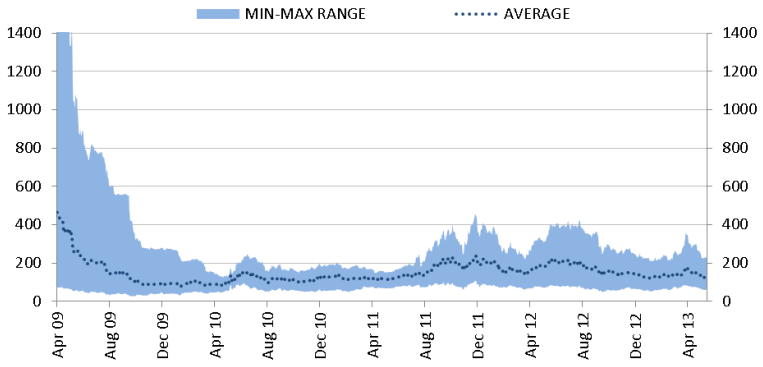
Figure 24 Development of equity prices for European insurers, banks and overall market



Source: Bloomberg. Indexed to 100 on 1 April 2009.

Amid equity price increases, the credit default swap (CDS) spreads for European insurance groups have come down and are now less than one third of the average level observed in April 2009. The fall in the CDS prices of individual insurance companies coincide with the observed decreases in sovereign CDS spreads, which have fallen dramatically following the recent policy responses. At the same time, Figure 25 clearly shows that the difference in CDS spreads among the companies surveyed (indicated by the min-max range) is relatively large, and larger than in 2010.

Figure 25 Development of CDS prices for a sample of large European insurers

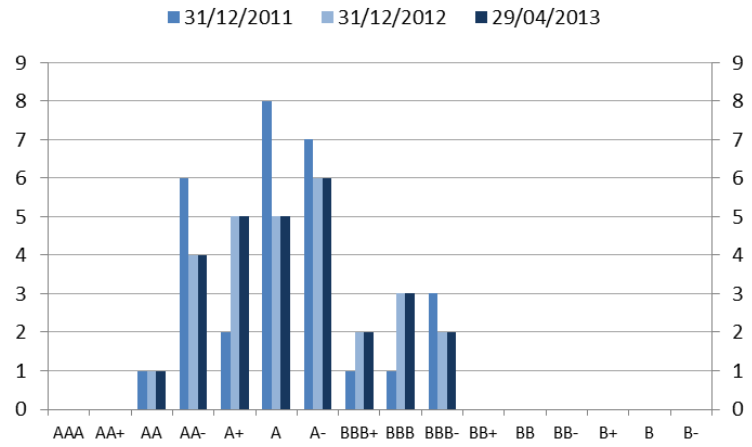


Source: Bloomberg. Sample consists of 12 large insurers.

European insurers experienced several credit rating downgrades during and following the financial crisis in 2008. In the previous EIOPA Financial Stability report published in December 2012, EIOPA noted that a higher number of the

leading European insurance groups were still rated BBB+ or lower than at the end of 2010. Several insurers were also on negative outlook. However, despite the relatively strong return on equity overall, lower CDS prices and increased equity prices (on equity issued by insurers) documented in this report, there has been very limited changes in the rating of large European insurance groups. In fact, in a sample of 28 insurance groups monitored by EIOPA, there were no net rating changes (there were one upgrade and one downgrade) in the first 5 months of 2013 (see Figure 26), and ratings are generally lower than in December 2011. This is likely to be a reflection, at least in part, of the sectors continued exposure to the risks outlined in Section 2 of this report, such as the prolonged period of low interest rates and the poor growth prospects in large parts of Europe and in emerging markets.

Figure 26 Development of large European insurance groups' credit ratings



Source: Standard & Poor's. Sample of 28 large European insurance groups

3.5. The reinsurance sector

Major loss events in 2012 and the beginning of 2013[13]

Global natural disasters caused USD 170bn in overall losses and USD 70bn in insured losses worldwide in 2012. Although this made 2012 the third-costliest year on record in terms of insured losses, these figures are significantly lower than in the previous year. In 2011, catastrophes such as the earthquakes in Japan and New Zealand and severe floods in Australia and Thailand resulted in overall losses of USD 400bn and insured losses of USD 119bn — both record amounts. The 2012 losses were above the long-term average of USD 165bn for

[13] See Munich Re: Topics Geo — Natural catastrophes 2012.

overall losses and of USD 50bn for insured losses. In the first quarter of 2013, loss activity was also relatively modest.

The year under review differs from the previous year not only in terms of absolute values, but also in respect to the distribution of the losses to the different regions and perils. In 2011 economic and insured losses came mainly from Asia-Pacific and stemmed predominantly from geophysical events like earthquakes, which was quite atypical. In 2012 the losses were dominated by severe weather event losses in America, especially in the USA where all the five largest natural catastrophes of 2012 occurred (see Table 2). Some 67% of overall losses and 90% of worldwide insured losses were incurred in the USA in 2012, compared with a long-term annual average of 32% and 57% respectively.

By far, the most severe single event in 2012 was Hurricane Sandy (about 38% of overall losses in 2012), which alone accounted for some USD 65bn in overall losses, while the insured losses are currently expected to be around USD 30bn including payments under the National Flood Insurance Program. Despite being only a category 1 hurricane before making landfall on the US East Coast, Hurricane Sandy is ranked third of the costliest events worldwide for the insurance sector since 1980. The main reason for this economic significance is the huge geographic area impacted by Sandy´s vast wind field, as well as record surge flooding along the heavily populated US east coast.

Table 2 The five largest natural catastrophes of 2012, ranked by insured losses

Date	Event	Region	Fatalities	Overall losses USD bn	Insured losses USD bn
24-31.10.20129	Hurricane Sandy	USA, Caribbean	210	65.0	30-35
June – Sept 2012	Drought	USA	100	20.0	15-17
2-4.3.2012	Severe storms, tornadoes	USA	41	5.0	2.5
28-19.4.2012	Severe storms, tornadoes	USA	1	4.6	2.5
28.6-2.7.2012	Severe storms, tornadoes	USA	18	4.0	2.0

Source: Munich Re, NatCatSERVICE, EQECAT

The second major loss event in 2012 was the prolonged drought in the Midwest of the USA. July 2012 was the warmest month ever in the USA and the year as a whole the country´s warmest since US records began in 1895. Due to the extreme dryness, the losses covered by the public-private multiple peril crop

insurance programme will be a record USD 15-17bn, which translates into a net loss ratio for insurers ranging from around 105% to 135%.

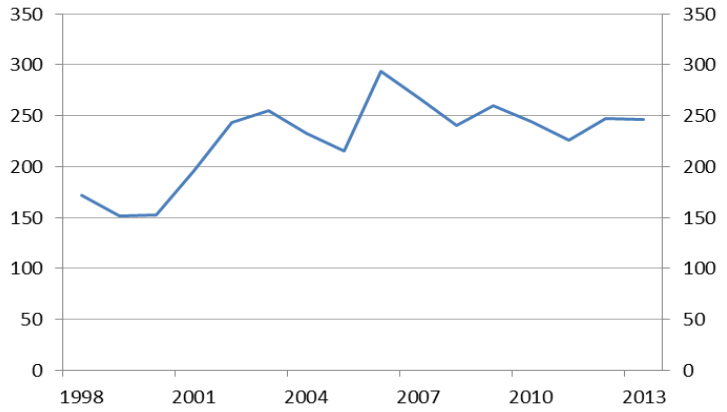
In Europe, the costliest events were the series of earthquakes in Italy´s Emilia Romagna region in May. In addition, a hard winter season affected some European countries which experienced heavy snowfall, high winds, ice and flooding. The wintry weather caused economic losses estimated about USD 1.8bn (EUR 1.4bn).

Market trends

In 2012, reinsurance prices went up modestly (see Figure 27). Although some more substantial increases in reinsurance prices occurred in the regions and insurance lines affected by high losses – and despite heavy losses in 2011, broad-based "hard-market" rate increases have not been observed. Furthermore, during the year 2012 the overall slight upward price tendency was dampened by a benign catastrophe activity in the first three quarters. Treaty renewals as of 1 January 2013 revealed no rate increases on average.

In the reinsurance market, underwriting capacity continues to outgrow demand. At the end of 2012, reinsurers' capital reached a new all-time high of USD 505bn in spite of Hurricane Sandy.[14] This corresponds with an increase of 11 per cent within the year 2012. Indeed the insurance sector was able to retain a consistent portion of losses with limited impact on the reinsurers' capital. Reinsurance supply remains higher than demand in all global regions.

Figure 27 Guy Carpenter Reinsurance Price Index (1990 = 100)



Source: Bloomberg

[14] See AON Benfield: Reinsurance Market Outlook April 2013, page 2.

The supply of reinsurance capacity has risen significantly over the twenty years since Hurricane Andrew in 1992. The ability of the insurance and reinsurance industry to raise capacity to sustain multiple events the size of Hurricane Andrew today is noteworthy.[15] This is also highlighted by the heavy disasters of 2011, which led to a reinsurance capacity only three per cent under the level of 2010.

There is also an enhanced capital-flow into the reinsurance market of about USD 35bn, flowing in through Insured-Linked Securities, whose market is now offering the lowest cost of reinsurance, and through non-traditional structures such as collateralized reinsurance and sidecars. Against the background of the on-going finance and debt crisis the diversifying nature of catastrophe-exposed business attracts investors such as hedge funds, pension funds and life insurance who are searching for safe investments. In an environment of low interest rate the attention to the reinsurance sector is mainly driven by the relatively good performance and the limited correlation with broader capital market movements. Low corporate and sovereign debt yields are likely to continue to produce more capacity for catastrophe and other reinsured risks with a depressing effect on the return rates.

Whereas the reinsurance capacity continues to increase, the reinsurance demand is still subdued. As a long-term trend insurers tend to raise the retention as insurers have increased their risk management. Furthermore, the competitive markets as well as low investment returns force the insurers to be increasingly price sensitive, whereas the insurers' capital basis rose along with the reinsures'. Especially the demand for reinsurance for non-catastrophe perils continues to decrease as the loss frequency declined. As a consequence the reinsurance prices continue to be subdued.

Altogether, there is an expectation that supply of reinsurance capacity will continue to exceed the demand of insurers in most global regions resulting in a stable or slightly increasing overall reinsurance price level. For that reason reinsurers' profitability remains under pressure, because they have to improve underwriting results in order to compensate increasingly low investment returns due to the challenging economic environment (euro-zone crisis, uncertainties in the capital markets, sustained low interest rates). As a consequence, the ability to release reserves from previous years appears to have been diminished.[16] Against this background getting risk-adequate prices is crucial for the reinsurance companies.

Nevertheless premiums growth and higher capital level are providing reinsurers the sources and the conditions for expansion into new market segments, and

[15] See AON Benfield: Reinsurance Market Outlook September 2012, page 5.
[16] See Guy Carpenter: GC Briefing January 2013, page 3.

into emerging markets[17]. In principle, this growth opportunity does not seem sufficient to offset the stagnant domestic economies but represents a tentative to generate profitability and mitigate risks by differentiation[18].

Income and profitability in the reinsurance sector

Despite a weak economic outlook and supply outgrowing demand, the main reinsurance figures show a slight improvement in the overall financial situation of the sector. The average combined ratio for the reinsurance sector has improved, sinking below 100% (roughly at the same level as in 2009) and remaining at a lower level than the insurance sector[19].

The positive development of prior year reserve also contributed to the reduction in combined ratios and to the underwriting results in 2012. Although profitability has been affected by the European debt crisis, overall profitability figures were solid in 2012. This was primarily due to a lower level of insured losses for natural catastrophes in combination with capital gains for investments diversification and strong risk management practices. Managing risks exposure and monitoring risk tolerances provided protection and limited the impact of market risks, catastrophe risk, reserve and underwriting risk.

Table 3 Financial performance of large European reinsurance undertakings (figures in Euro)

	Hannover Re		Lloyd's[3]		Munich Re		SCOR		Swiss Re[3]	
	Group-wide		Reinsurance		Group-wide		Group-wide		Group-wide	
	2011	**2012**	*2011*	**2012**	*2011*	**2012**	*2011*	**2012**	*2011*	**2012**
Gross written premiums (millions)	*12,096*	13,774	*10,441*	11,567	*49,452*	51,969	*8,586*[1]	9,514	*22,275*	24,643
Combined ratio (%)	*104.3*	95.8	*130.6*	91.0	*113.8*[2]	91.02[2]	*104.5*	94.1	*104.7*	83.1
Net investment income (millions)	*1,384*	1,656	*n.a.*	n.a.	*6,756*	8,436	*653*[1]	566	*3,016*	2,804
Return on investment (%)	*3.9*	4.3	*n.a.*	n.a.	*3.4*	3.9	*3.8*[1]	3.0	*4.4*	4.0
Net income (millions)	*677*	934	*n.a.*	n.a.	*712*	3,211	*368*[1]	418	*1,993*	3,263
Return on equity (%)	*12.8*	15.6	*n.a.*	n.a.	*3.3*	12.6	*8.5*[1]	9.1	*9.6*	13.4

Notes: [1] Pro-forma figures (including Transamerica Re); [2] Reinsurance only. [3] Values converted with a fixed euro exchange rate as of 15 May 2013.

[17] Swiss Re Global insurance review 2012 and outlook 2013/2014.
[18] See S&P: Global Reinsurance Highlights, 2012.
[19] See AON Benfield: The Aon Benfield Aggregate, April 2013, page 13.

The financial situation of the large European reinsurance undertakings also developed positively in 2012. Hannover Re, Lloyd's of London, Munich Re, SCOR and Swiss Re all reported growth in both premiums and net income (see Table 3). Combined ratios declined substantially due to a lower catastrophe claims – for all five reinsurers the ratios are now well below 100 per cent and all report improved return on equity, despite a reduction in investment income for two of the companies surveyed.

3.6. Insurance-linked securities[20]

The insurance-linked securities (ILS) market performed well in 2012 and the first months of 2013, continuing the trend of previous years which have proven that the transfer of insurance risks to the capital market is a viable business model. With USD 16.4bn as of end-March 2013 outstanding volume reached the highest level ever and new issuance in 2012 was the second-highest on record (only topped in 2007).

Primary issuance of catastrophe bonds and life-risk securitisations totalled USD 6.0bn in 2012, some USD 1.6bn more than in 2011. This was followed by another placement of USD 0.9bn in the first quarter of 2013, substantially outnumbering the volume of expiring bonds in this period. It is remarkable that the volume actually issued in 2012 was considerably higher than the originally planned volume – an increase of nearly 60% and coupon rates which have been lowered during the issuing phase demonstrate a strong demand for catastrophe bonds.

In 2012, US hurricane risk continued to dominate the market, comprising over 50 per cent of natural catastrophe bond issuance. US earthquake risk and Europe windstorm risk accounted for approximately 20 per cent and 15 per cent, respectively. Other natural catastrophes, life and health issuance make up the remaining part.

In the persistent low interest rate environment, investors' demand for catastrophe bonds is expected to remain strong, which might further depress the bonds' yields. This will raise the attractiveness of ILS further for sponsors who are expected to use the ILS market for diversification and to complement overall reinsurance purchases. With a number of bonds maturing in the second half of 2013 and successor bonds being issued, an issuing volume of last year's size can be expected.

Hurricane Sandy which hit New York in late October 2012 had a significant impact on the catastrophe bond market: Although no bond defaulted, two deals have been placed on credit watch negative by a rating agency. Further, most deals with an exposure towards US hurricane risk have experienced lower

[20] Based on Munich Re, ILS Market Review 2012 and Outlook 2013

market prices which can clearly be identified in the downturn of the Swiss Re Cat Bond Price Index. However, Figure 28 shows that the recovery set in soon after the event.

Figure 28 Swiss Re Cat Bond index

Source: Bloomberg

Still, while the ILS market is a niche in comparison with the overall securities market and remains small in comparison with the overall reinsurance market, it is of significant size when compared to the property-catastrophe reinsurance market. Munich Re estimates that the ILS market amounts to less than 5 per cent of the overall reinsurance market, though across different reinsurance exposures the use of ILS can vary significantly.

4. The European pension fund sector[21]

The occupational pensions sector in Europe is experiencing a large number of regulatory and tax changes. Several of these are related to the combined challenge of increased longevity and a prolonged period of low interest rates. Such regulatory changes are in many cases supported by market developments comprising product design (in particular changes in guarantee components) and the introduction of new products.

Pension insurance is a long-term business and longevity has increased faster than predicted. Higher unemployment in Europe, longer periods of full-time education and temporary employment contracts have necessitated several changes in the sector. However, the impact of the financial turmoil on the European occupational pension system has not been as severe as seen in other

[21] Note the data coverage and disclaimer note given in the Appendix which applies to the data presented in this chapter. This section generally concerns IORPs. However, some members also report on general developments in the pension fund sector, which may also be reflected in this report.

financial sectors, as the long-term nature of the liabilities affords some protection in this respect.

There is a trend towards the area of defined contribution schemes (DC) in some countries such as in Norway, Sweden and Portugal, where only initial contributions are guaranteed in comparison to the more traditional defined benefit schemes (DB), where the pension is guaranteed on a pre-defined formula neglecting market developments whilst guaranteeing a pension at a certain level. Hybrid pension plans also exist in the market and combine elements of both DB and DC pension plans.

Regulatory changes are also taking place. Some were already seen across Europe in order to increase the available options for scheme design and in order to better address social partners' preferences when facing current challenges.

In the UK, legislation is brought forward which will slowly phase out some tax concessions currently available for DB schemes. The UK government is also considering policy options available for the promotion of a Defined Ambition (DA) risk-sharing scheme under which the employer will bear some risk on behalf of its employees. In the Netherlands, Premium Pension Institutes (PPI) were relatively recently introduced. PPIs are only allowed to execute Defined Contribution (DC) arrangements, such that participants bear the risk of the investment outcome. To offer some predictability for policy holders, PPIs allocate their investments such that the risk of the investment allocation decreases when the participant approaches his pension date. At the pension date, because PPIs are not allowed to bear longevity risk or other insurance risks, participants have to use the built up pension capital within the PPI to acquire a pension product at an insurer.

In response to the crisis, the level or calculation of the discount rate was changed in several jurisdictions. In the Netherlands, an ultimate forward rate (UFR) equal to 4.2% was introduced to discount future liabilities of occupational pension funds. Similarly, in Denmark, as of June 2012, pension funds started using a modified discount rate which is extrapolated with a UFR of 4.2% for maturities above 20 years. Finally, the Swedish FSA’s intention to change the discount rate for technical provisions for insurance companies (see Section 0) will also apply to occupational pension funds on a voluntary basis.

4.1. Total assets

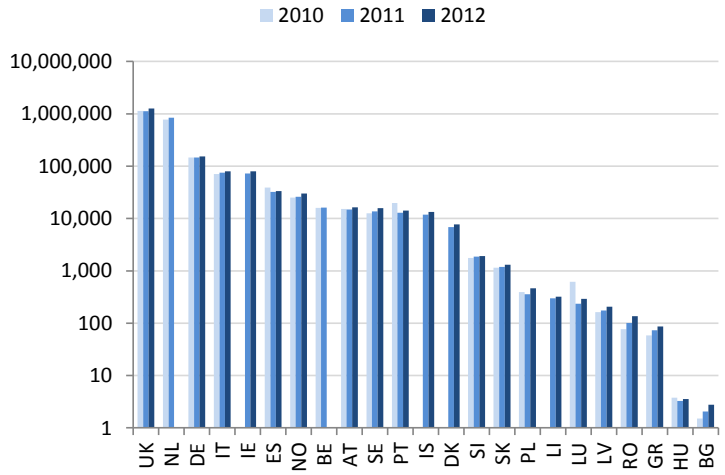
Measured by total assets, the European occupational pensions sector is still dominated by UK and the Netherlands which together account for more than 80 per cent of total assets (see Table 4). Figure 29, which depicts the total occupational pension fund assets per country on a logarithmic scale, show that in these two countries, the value of assets are almost ten times as high as in the third largest country. The differences between countries partly reflect the relative share of private and public provision of pensions, and to what degree schemes are funded. In the UK, for instance, the share of private provision of

pensions is high (and these are funded). In the Netherlands, the occupational pension schemes for public sector workers are also funded.

Table 4 Total assets per country as a share of total assets reported (2011).

UK	NL	DE	IT	IE	ES	NO	BE	AT	SE	PT	IS
46.80%	35.13%	6.10%	3.14%	3.02%	1.36%	1.09%	0.67%	0.62%	0.57%	0.54%	0.50%
DK	**SI**	**SK**	**PL**	**LI**	**LU**	**LV**	**RO**	**GR**	**HU**	**BG**	**Total**
0.29%	0.08%	0.05%	0.01%	0.01%	0.01%	0.01%	0.004%	0.003%	0.0001%	0.0001%	100.0%

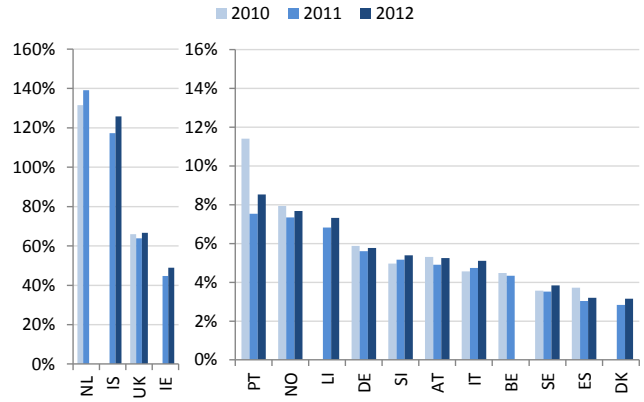
Figure 29 Total occupational pension assets (in EUR million, logarithmic scale)



Source: EIOPA. Note: For the UK figures relate to DB and hybrid schemes only. For BE and NL data for 2012 are not yet available.

The penetration rate, calculated as total size of assets as a percentage of GDP, gives an indication of the relative wealth accumulated by the sector. Figure 30 shows that in the majority of the countries covered, penetration rates slightly increased between 2011 and 2012. The average annual increase of the penetration rate across the sample was 1 percentage point. In addition to the two countries discussed above, penetration rates are also relatively high in Iceland and Ireland.

Figure 30 Penetration rates (Total Assets as % of GDP)



Source: EIOPA. Note: For BG, GR, LU, LV, PL, RO and SK figures are less than 2%. For the UK figures relate to DB and hybrid schemes only.

4.2. Investment allocation

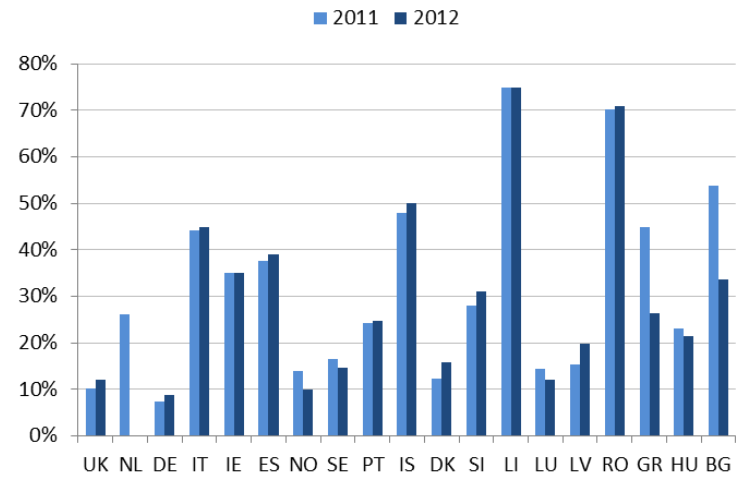
In general, the investment allocation of pension funds is fairly stable over time, reflecting in many cases legal or contractual obligations to maintain a certain asset mix. The three figures presented below indicate only modest changes in 2012 in comparison to 2011.

Pension funds have traditionally been large investors in sovereign bonds. Figure 31 shows that the share of sovereign bonds[22] as a percentage of investment assets varies between 10 and 75 per cent (the average is almost 30 per cent). For most countries, changes from 2011 to 2012 are minor. For two countries, however, changes were higher. Greece reported a drop of 18 percentage points in the sovereign bond investment share, reflecting an adjustment of the asset allocation towards time deposits, mutual funds and equity. Similarly, the 20 percentage point drop in Bulgaria was counterbalanced with 16 percentage point increase in investments in other bonds and 4 percentage point increase in the equity share.

Some changes in the sovereign debt in the portfolios of pension funds are not readily visible in the aggregated figures provided below. For instance, Spain reported that an increasing part of the occupational pension fund investments shifted from foreign public debt to Spanish public debt in 2012. The main cause of this trend in Spain is the increase of the yield of Spanish bonds compared to other European sovereigns. This increase was somehow moderated towards the end of 2012.

[22] Sovereign bonds (including supra-nationals and sub-sovereigns).

Figure 31 Sovereign bonds in % of Investment assets

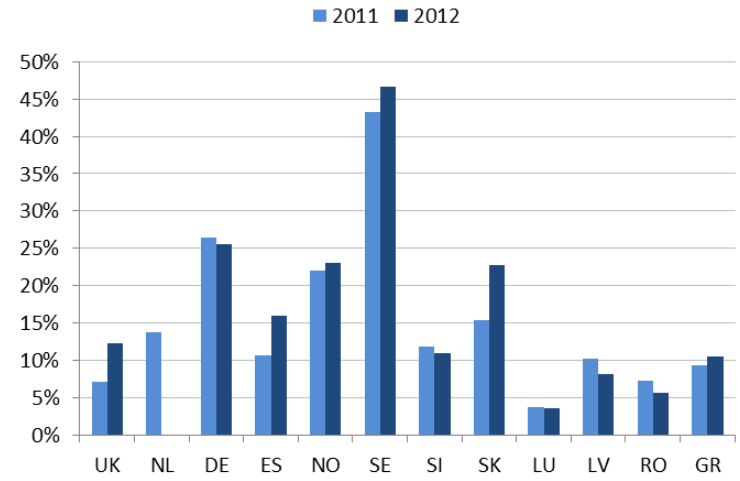


Source: EIOPA

Fixed-income instruments such as financial bonds have also been a traditionally important asset class for pension funds, and the share has been fairly stable over time in most countries (see Figure 32). In recent years, however, in the UK in particular, there has been a shift in DB asset allocation away from equities (Figure 33) in favour of fixed income investments. This shift, which has stabilised over the past year, reflects the growing maturity of DB schemes and the desire to reduce deficit volatility.

Moreover, Slovakia significantly increased its investment share in financial bonds in comparison to other countries (see Figure 32), while a smaller increase in the equity investment share (Figure 33) was counterbalanced by a decrease in the level of deposits held by the sector.

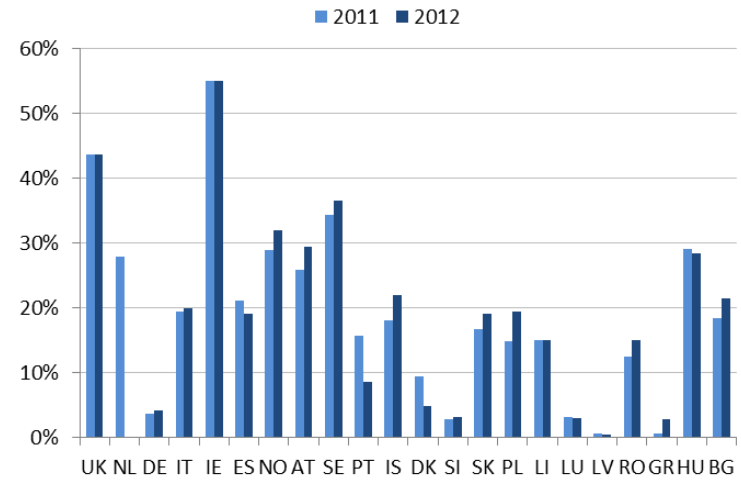
Figure 32 Financial bonds in % of Investment assets



Source: EIOPA

In the Netherlands, although data for 2012 is not yet available, the responsible authority reported that asset allocation among investments has not shown significant changes. However, a trend of the rising share of fixed income continues. This rise is caused by the declining share of real estate and equity investments.

Figure 33 Equity in % of Investment assets



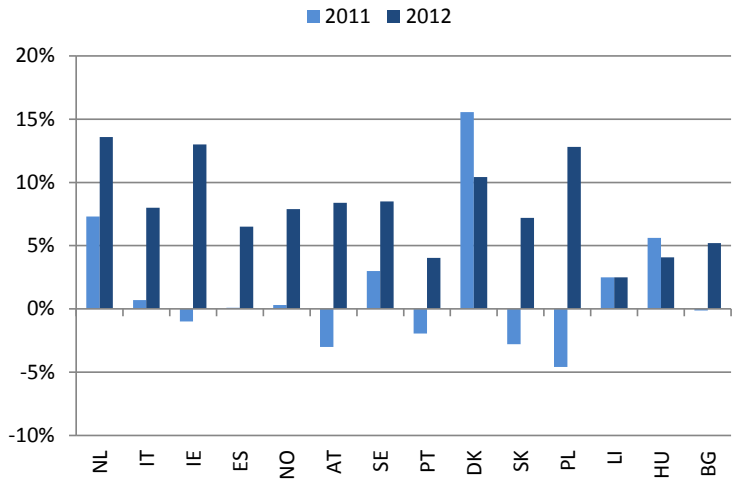
Source: EIOPA

The share of equity in the portfolio varies between countries. In countries like Germany, Slovenia, Luxembourg and Latvia, the share is particularly low, while in the UK and in Ireland, the share is higher. In Portugal, due to the transfer to Social Security of responsibilities (and assets) linked to the pensions of former bank employees, the relative weights of some asset classes have changed. Hence, a reduction in the share of equity of 7 percentage points (from 16 to 9 per cent) was reported (see Figure 33). No other major changes in asset allocation of occupational pension funds are observed.

4.3. Profitability

Pension funds across Europe reported higher returns on assets in 2012 than in 2011, partly due to strengthened economic confidence which in turn had a positive effect on the profitability of the pension funds. In all countries the total assets returns were strengthened quite substantially. Figure 34 below shows recent asset return developments. The average rate of return improved remarkably, from a mere 1.5% in 2011 to +8% in 2012.

Figure 34 Rate of return of total assets[23]



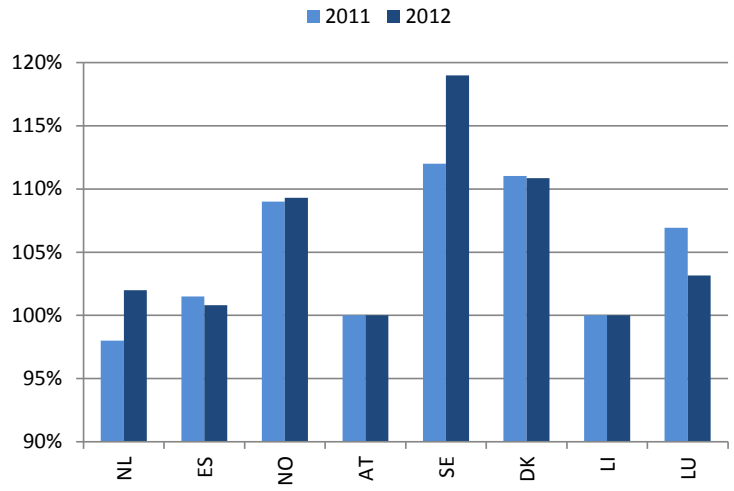
Source: EIOPA. Note: For the UK figures relate to DB and hybrid schemes only. For NL figures relate to DB schemes only.

4.4. Cover ratios

Total cover ratio is defined as the ratio of "net assets covering technical provisions" over "technical provisions for pensions". Total cover ratios for 2012 were reported by 8 countries (see Figure 35) and concern only DB schemes.

For 2011 and 2012, the average cover ratio was 104.8 and 105.6 respectively indicating a minor increase of 0.8 percentage points.

Figure 35 Total cover ratio %



Source: EIOPA

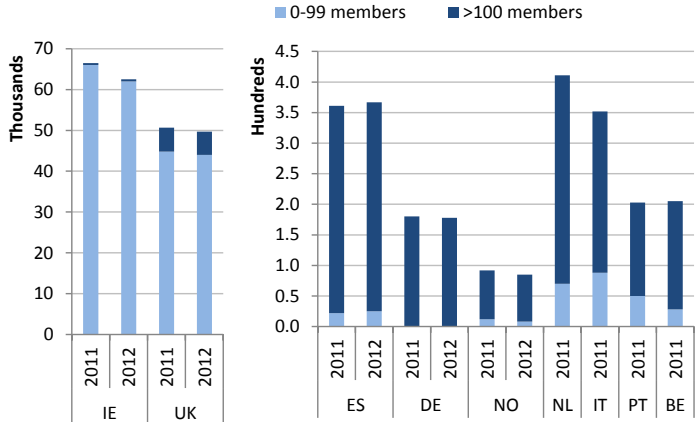
[23] Rate of return of total assets: Defined as net investment income as a % of average market value of assets between beginning and end of year less net investment income.

4.5. Number of IORPs

The European IORPs did not undergo significant number changes from 2011 to 2012. Due to a few closures in some countries and some mergers in others some very minor changes in the number of players were observed (see Figure 36 and Figure 37)

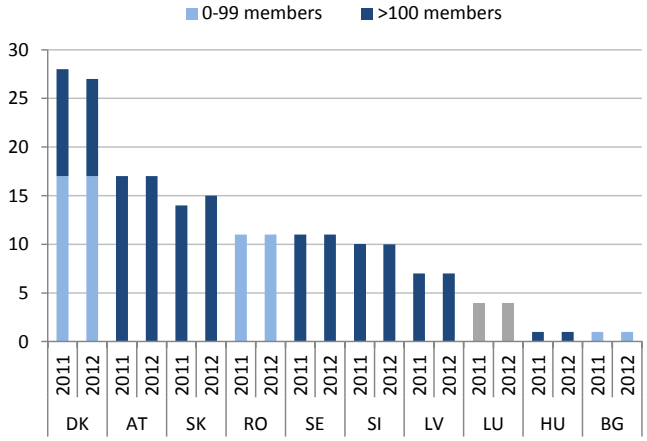
In the UK and Ireland IORPs are usually small in terms of members (0-99 members), whereas in other countries they usually incorporate 100 and more members. Since October 2012, the UK law requires employers to automatically enrol (AE) all of their employers into a pension scheme if they are not already in one. Employers cannot "opt out" of their duties. This process will continue until 2017 and is estimated to increase the number of members between 6 and 9 million. While the number of IORPs is hence most likely increasing even further, the opposite is happening in other countries. For instance, the number of IORPs in the Netherlands is declining, whilst their membership rate remains stable.

Figure 36 Total Number of IORPs (countries with high number of IORPs)



Source: EIOPA

Figure 37 Total Number of IORPs (countries with small number of IORPs)



Source: EIOPA. Note: LU did not specify the number of members for each IORP category. The number for RO refers to personal schemes.

4.6. Box: Preliminary results for the QIS on IORPs

On 9 April 2013, EIOPA published the preliminary results for the QIS on IORPs. The QIS was conducted between mid-October and 17 December 2012 in a number of European countries where defined benefit pension provision is most prevalent. Countries included in the preliminary results were the UK, Netherlands, Germany, Ireland, Norway, Belgium, and Sweden. The exercise was either completed by IORPs, the national supervisory authority or in a combination of both. The market share of the countries covered in the report is 95% of defined benefit liabilities in the EEA.

The QIS tests the various options in the quantitative part of EIOPA's advice on the review of the IORP Directive. A key element of EIOPA's advice is the holistic balance sheet proposal. It allows IORPs to explicitly recognise all security mechanisms (regulatory own funds, sponsor support, pension protection schemes) and adjustment mechanisms (conditional indexation, benefit reductions) available in the different member states.

All items on the holistic balance sheet have to be valued on a market-consistent basis to achieve comparability and transparency of an IORP's financial situation. Although the preliminary results indicate an undercapitalisation overall under these assumptions, there is also a large variation in impacts between and within member states. In some countries IORPs show on average an excess of assets over liabilities and surplus over the solvency capital requirement (SCR), in other countries IORPs report substantial shortfalls, both relative to liabilities and the SCR.

Although this QIS provides useful insight in the workings of the holistic balance sheet approach, the outcomes of this first QIS should be viewed as preliminary and must be treated with caution. The final report will contain analysis and a more detailed description of the approaches taken by QIS participants and their assessment of the results. The final report will be published in mid-2013.

5. Appendix

5.1. Data coverage and disclaimer - The insurance sector

EIOPA collects consolidated figures from 30 large insurance groups.[24] The data is provided by undertakings through the national supervisory authorities on a best effort basis. This means that the data is not subject to internal or external audit. Although effort is made to keep the sample for each indicator as representative as possible, the sample may vary slightly over time. As data is provided on an anonymous basis, it is not possible to track the developments on a consistent sample.

5.2. Data coverage and disclaimer - The reinsurance sector

The section is based on information released in the annual and quarterly reports of the largest European reinsurance groups. The global and European market overview is based on publicly available reports, forecasts and quarterly updates of rating agencies and other research and consulting studies.

5.3. Data coverage and disclaimer – The pension fund sector

The section on pension funds highlights the main developments that occurred in the European occupational pension fund sector, based on feedback provided by EIOPA Members. Not all EU countries are covered, in some of them IORPs (i.e. occupational pension funds falling under the scope of the EU IORPs Directive) are still non-existent or are just starting to be established. Furthermore, in other countries the main part of occupational retirement provisions is treated as a line of insurance business respectively held by life insurers, and is therefore also not covered in this section. The country coverage in this section is 80% (24 out of 30 countries).[25]

Data collected for 2011-2012 was provided to EIOPA with an approximate view of the financial position of IORPs during the covered period. At this stage many countries are in the process of collecting data so in many cases 2012 figures are incomplete or based on estimates which may be subject to major revisions in the coming months. In addition to that, the main valuation method applied by each country varies due to different accounting principles applied across the EU[26]. Consequently, data on total assets and investments assets are not always directly comparable. Furthermore some countries report total assets on a net (of reinsurance) basis, others on a gross basis. The difference is not material but noticeable.

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[24] The list of insurance groups is available in the background notes for the risk dashboard published on https://eiopa.europa.eu/publications/financial-stability/index.html.

[25] Countries that participated in the survey: AT, BE, BG, DE, DK, EE (only qualitative), ES, GR (only quantitative information sent), HU, IE, IS, IT (only quantitative information sent), LI, LU, LV, NL, NO, PL, PT, RO, SE, SI, SK and the UK.

[26] Main valuation method: Based on market value: 19 countries; Based on acquisition cost value: 3 countries. Other: 1 county.

It should be noted that not all Member States of the EEA operate occupational pension provisions. Data availability varies substantially among the various Member States, which hampers a thorough analysis and comparison of the pension market developments between Member States. The table below provides an overview of the data scope for each Member State.

Country	Data scope
Austria	Data includes all occupational pension contributions to Pension Undertakings covered by the Austrian "Pensionskassen Act" which implements Directive 2003/41/EC. The Pillar II provisions are not compulsory. Contributions cover about 18 per cent of the working population.
Belgium	Pension fund statistics relate to institutions for occupational retirement provisions, i.e. occupational pension funds and so called "pensioenkassen" for the self-employed.
Bulgaria	Pension fund statistics relate to institutions for occupational retirement provisions.
Czech Republic	The Czech private pension funds are not occupational based in nature. The beneficiaries can enter in a contract with the pension fund directly regardless of their occupational status.
Denmark	The pensions fund sector in Denmark is very limited. This sector has the size of 2 per cent of the Pillar II sector (the entire occupationally pensions sector) in Denmark. The number of active (working) members in all pension funds in DK is about 7,000 persons and the total amount of assets is approximated EUR 5 bn. Consequently Finanstilsynet in Denmark do not, for the pension fund sector, regularly report to EIOPA.
Germany	The pension funds statistics relate to institutions for occupational retirement provision that fall under the scope of the IORP Directive, i.e. Pensionskassen and Pensionsfonds. Beside these two types of implementing occupational pensions there exist three further types, namely Direktzusage (book reserves), Unterstützungskassen (support funds) and Direktversicherung (direct insurance) that do not fall under the scope of the IORP Directive and are therefore not considered.
Iceland	The pension fund sector in Iceland does not regularly report to EIOPA as it is not regulated under the IORP directive 2003/41/EC. The directive has been implemented but no IORP has yet been registered.
Hungary	The data for Hungary has been based on the mandatory DC private pension funds. These pension schemes are autonomous, DC and operate on a funded basis. Based on the World Bank's classifications, mandatory pension funds belong to the 2nd pillar. The mandatory private pension funds don't fall under the scope of the IORP Directive. Since 2010 the regulation of this pillar has been transformed fundamentally and 97 per cent of the members returned to the 1st state pillar.
Ireland	The pension fund data for Ireland relate solely to occupational pensions schemes that fall within the scope of the IORP Directive and are supervised by The Pensions Board/An Bord Pinsean. These are group defined contribution and defined benefit schemes. Other arrangements, e.g. personal pensions are not included.
Italy	Data covers autonomous pension funds related to contractual pension funds, open pension funds (occupational and personal) and autonomous pre-existing pension funds (including pre-existing funds whose resources for retirement benefits are held by insurance companies) Data does not cover book reserve schemes and PIP (personal pension schemes implemented through insurance policies).

Latvia	Pension fund statistics relate to private pension funds and cover both occupational and individual pensions.
Luxembourg	There are two supervisory authorities in Luxembourg. The CSSF is the competent authority for pension funds governed by the law of 13 July 2005 relating to institutions for occupational retirement provision in the form of SEPCAVs and ASSEPs and the Commissariat aux Assurances is the competent authority for insurance products as well as pension funds governed by the Grand Ducal Regulation of 30 August 2000. Pension fund statistics generally cover pension funds governed by the law of 13 July 2005 relating to institutions for occupational retirement provision in the form of pension savings undertakings with variable capital (SEPCAVs) and pension savings associations (ASSEPs). For the Spring 2013 report, the data presented only contains data from the Commissariat aux Assurances.
Netherlands	Pension fund statistics relate to all Pillar II institutions for occupational retirement provisions.
Norway	Pension fund statistics relate to institutions for occupational pensions (so-called "pensjonskasser"), and cover both private and municipal pension funds.
Poland	Occupational pension schemes operated in Poland cover i) occupational pension funds, ii) agreements with life insurance undertakings, iii) agreements with investment fund undertakings, iv) foreign management undertakings. All information included in the pension funds statistics relates only to occupational pension funds. The activity of the occupational pension funds in Poland is based on similar regulations as the open pension funds.
Portugal	Data include all occupational pension schemes including substitutive funds from the banking and telecommunications sectors established through collective agreements. No figures regarding technical provisions are provided due to the distinctive legal framework under which Portuguese pension funds operate.
Romania	The statistics refer to the voluntary pensions, regulated by the Law no. 204/2006 regarding the voluntary pensions, as amended and modified (according to the IORP Directive provisions).
Slovakia	Pension fund statistics relates only to the privately managed voluntary DC pension system (3rd pillar) supplementing publicly managed PAYG system and retirement pension savings (2nd pillar).
Slovenia	Data includes all contributions to pension undertakings, mutual pension funds and contributions collected by insurance undertakings from pension contracts.
Spain	All the data relates only to occupational pension funds (by Directive 2003/41/EC) which account for about 40 percent of the total pension fund sector. In addition, there are also individual and associated pension funds operated in Spain.
Sweden	The Swedish pension fund statistics refers to Occupational Pension Funds (Sw. "tjänstepensionskassor") and accounts for less than 10 percent of the overall non-state related occupational pensions. The remaining occupational pensions are almost entirely covered by life insurance undertakings and included in the insurance services statistics.
United Kingdom	Data for the UK mainly relates to schemes covered by the Institutions for Occupational Retirement Provision Directive. Data sources include statistics collected by the Office for National Statistics (MQ5), some information from non-IORP schemes and survey-based data has also been included in order to give an indicative view for the UK. Funding level data has been provided from end-of-year estimates by the UK Pension Protection Fund based on S179 funding.

5.4. Country abbreviations

AT	Austria	IT	Italy
BE	Belgium	LI	Liechtenstein
BG	Bulgaria	LT	Lithuania
CY	Cyprus	LU	Luxembourg
CZ	Czech Republic	LV	Latvia
DE	Germany	MT	Malta
DK	Denmark	NL	Netherlands
EE	Estonia	NO	Norway
ES	Spain	PL	Poland
FI	Finland	PT	Portugal
FR	France	RO	Romania
GR	Greece	SE	Sweden
HR	Croatia	SI	Slovenia
HU	Hungary	SK	Slovakia
IE	Ireland	UK	United Kingdom
IS	Iceland	CH	Switzerland