
2006-2007

Risk Update

- NOTICE -
CEIOPS prepares a Financial Stability Report on the European insurance and occupational pension fund sector on a semi-annual basis. The autumn report is primarily based on supervisory information, whereas the spring report is primarily based on market information. The current version is the public version of the spring report and only contains public information. Although some detailed information has been left out from this public version, the overall assessment on the European insurance and pension fund sector has not changed.

Introduction

This report is based on the main findings of the semi-annual analysis of the financial stability of the insurance market and the pension fund sector in the EU/EEA conducted by CEIOPS’ Financial Stability Committee (FSC). An interim report on the financial conditions and financial stability in the insurance and pension fund sector had been discussed at the EFC Financial Stability Table on the macro-financial conditions and overall stability of the EU financial system at its meeting 3 and 4 April 2007.

This current report is based on:

- fast-track reporting of key figures from a number of major European insurance groups or companies for 2005 and 2006;
- supervisory data on the pension fund sector for 2003 - 2005;
- qualitative information from the insurance supervisors pertaining to the insurance, reinsurance and pension fund market situation in the respective countries; and
- market information on the (re)insurance sector.

The report covers the following main headings:

1. Summary of recent trends and developments
2. Developments on financial markets
3. Developments in the European insurance sector
4. Developments in the European reinsurance sector
5. Developments in the European pension fund market
6. Risks and challenges facing the European (re)insurance and pension fund sector

Annex 1: Scope of CEIOPS’ pension fund data
Annex 3: Maximum guaranteed rates life insurance
Annex 4: List of abbreviations

1. Summary of recent trends and developments

- Following some years with a healthy premium growth in the non-life sector, the trend seems to have turned towards lower premium rates in a number of countries, at least for some products. This appears to be accompanied by an even lower growth in claims. The weighted average combined ratio decreased slightly to 94 in 2006, which is very low in a historic perspective. Good underwriting results contributed to healthy profits in the non-life sector in 2006.

- The premium growth in life insurance last year seems to have slowed down compared with the preceding years. In most countries unit-linked or index-linked products show a clearly higher growth rate than traditional products with guaranteed interest rates. Good returns on equity investments contributed to healthy profits in the life sector in 2006.

- Solvency has improved during 2006 both for the life and non-life sectors. The rise in long term interest rates observed in 2006 indicates a higher probability that future investment returns will exceed the guaranteed interest rates in life insurance.

- A light year 2006 for natural catastrophes provided welcome relief to the reinsurance industry after two successive years of record losses. Reinsurers were able to improve their capitalisation. Ongoing financial restructuring measures as well as the implementation of a selective and earnings-oriented underwriting policy provided for additional positive effects and contributed to a stable profit situation.

- Recent pension reforms in Europe aim to address the economic implications of ageing population which entails an increasing level of future pension liabilities. As a result, growth of the occupational pension fund sector is expected to accelerate further over the coming decades as a means of diversifying some of the longevity risk related to traditional social security systems.

- The financial position of the defined benefit (DB) occupational pension fund sector has improved in most member states, due to positive developments in equity markets as well as growth in contributions. In a number of member states DB plans are gradually being phased out and replaced by new defined contribution (DC) plans. This gradual trend will help reduce the vulnerability of the pension fund sector to funding risks traditionally related to DB plans. However, it will also mean a transfer of investment and longevity risk from the pension fund sector to the household sector.

- The European insurance industry and pension fund sector as a whole faces several risks and challenges, of which the most prevalent are financial risks and risks related to financial market volatility, e.g. the risk of a prolonged period of low interest rates or of a sudden interest rate rise, or even a return
to falling rates, as well as risks related to equity markets. Member states also report, as important factors, reinsurance risks, premium competition, the risk of further natural disasters as well as longevity risks.

2. Developments on financial markets

Market trends provide a good indication of financial conditions facing insurance firms, even if they themselves do not have actively traded shares or bonds. Most importantly, general market developments have a significant effect on firms’ investment revenue, capital position and ability to write business. In addition, market developments also provide a good indication of the sector’s business and financing prospects. For example, relatively weak equity and bond prices for insurance companies would suggest that investors are taking a negative attitude towards the earnings prospects for the sector and are placing a higher risk premium on insurance firms. Both factors are likely to make additional capital from whatever source more difficult and more expensive to raise.

*Figure 1 European long- and short-term interest rates*

<table>
<thead>
<tr>
<th>%</th>
<th>Year-end 2005 - May 7, 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 month Euribor</td>
<td>2.25 2.50 2.75 3.00 3.25 3.50 3.75 4.00 4.25 4.50</td>
</tr>
<tr>
<td>10 year Euro benchmark bond</td>
<td>2.25 2.50 2.75 3.00 3.25 3.50 3.75 4.00 4.25 4.50</td>
</tr>
</tbody>
</table>

*Figure 2 European and world equity indices (Year-end 2005 = 100)*
After some years of steady decrease, long term interest rates started increasing again since the third quarter of 2005. Short term interest rates also rapidly increased after the consecutive interest rate increases by the European Central Bank (starting on 6 December 2005 in seven steps from 2.0% to 3.75% in March 2007) with the three month Euribor approaching 4% in April 2007 coming from a more or less stable 2.10% for over two years (figure 1). With the long-term government bond yields in the euro area fluctuating at a level just below 4% for some time, the yield curve had become close to an inverse position at several instances until recently. Market participants expect further interest rate increases in Europe, generally based on a positive global economic outlook, which might be confirmed by the recent hike in long term rates, possibly based on increasing inflation expectations. European and global equity markets continued and even accelerated their revival that had started beginning of 2003, however, some market turbulence occurred in May/June 2006 and again in February 2007 (figure 2). Overall, the equity markets increased over 2006 as a whole, which has helped insurers and pension funds to improve their financial position via its positive impact on equity investments (see also further on).

*Figure 3 EU stock market indices (Year-end 2005 = 100)*
Over 2006, the development of share price indices of the European life insurance and reinsurance sectors fell behind the positive growth of the European wide share index (figure 3). The non-life sector slightly outperformed the European wide index. The insurance stock price indices were strongly affected by the market turbulence in May/June 2006 and again in February 2007. Life insurers and reinsurers in particular were evaluated with scepticism. The cautious market assessments suggest that investors are giving the existing risks on both markets a stronger weighting. Ongoing strong performance of insurers with primarily non-life business lines reflected favourable conditions throughout 2006 and the ongoing restructuring of the non-life business. The information on share prices is broadly confirmed by other market risk indicators, such as ratings. In terms of financial strength ratings, European insurers have again been subject to more upgrades than downgrades since the end of 2005 (table 1 and figure 4). Most of the insurance ratings have a stable outlook, which suggests that much of the continued improvement expected in 2007 is already factored into ratings. Only very few large European insurers continued with a negative outlook.

Figure 4 The development of European insurance financial strength ratings
Outlook / credit watch distribution
Explanatory note - Rating outlooks are defined as follows:
A Standard & Poor's rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future CreditWatch action.
- Positive means that a rating may be raised
- Negative means that a rating may be lowered
- Stable means that a rating is not likely to change
- Developing means a rating may be raised or lowered

3. Developments in the European insurance sector

The analysis of the developments in the European insurance sector is based on the fast-track reporting of key figures from a number of major European insurance groups or companies for 2005 and 2006. The reports cover at least 50% of each national market, and in many cases (close to) 100%. For some countries however no information is available, which means that the analysis can only remain tentative.

Development in premiums and claims
According to the CEIOPS fast-track reporting statistics (covering up to 18 countries), the weighted average gross premiums in life insurance enterprises increased by 1.7 % from 2005 to 2006 (see figure 5). The weighted average gross written premiums in non-life insurance enterprises increased by 4.1 %. The corresponding growth rate was 10.6 % for composite insurance enterprises in 2006.

Figure 5 Growth in gross premiums written from 2005 to 2006 (local currency)
Life sector
A majority of the countries experienced a positive premium growth in the life insurance sector in 2006. The weighted average gross premiums increased by 1.7% from 2005 to 2006. The premium growth in life insurance seems to have slowed down in 2006 compared with the preceding years, although a number of countries, especially in the eastern part of Europe, experienced high growth also in 2006 (see figure 5). In most countries the growth in unit-linked or index-linked products is clearly higher than the growth in traditional products with guaranteed interest rates.

The increase in unit-linked and index-linked products can be related to the low interest rate environment, where policyholders seek to increase the investment return by choosing products that are linked to equities and other assets with a higher expected return than interest bearing securities. These more risky assets are often limited in traditional guaranteed business, where solvency considerations induce the companies to invest in interest bearing securities. In particular, asset liability matching in a fair value regime makes investments in long-term bonds particularly attractive for traditional business with guaranteed interest rates.

Companies that offer guaranteed products with small capital buffers will face severe limitations on their investment possibilities, which make it very hard for them to compete in the market. The move away from guaranteed products to unit-linked products means that policyholders bear a larger part of the investment risks.

In several markets, tax and pension reforms that affect life insurance products have been implemented. As a consequence, there are cases of strong shifts towards new products that are tailored to the new legislation.

Non-life sector
The average growth in gross written premiums in the non-life sector was
somewhat higher than in the life sector last year. The weighted average growth in the reporting countries was 4.1% from 2005 to 2006.

Following some years with a healthy premium growth in the non-life sector, the trend seems to have turned towards lower premium rates in a number of countries, at least for some products. This is mainly caused by increased competition spurred by the very good underwriting results.

The moderate growth in premiums seems to be accompanied by an even lower growth in claims. In most countries net combined ratios are still at a low level (figure 6). The aggregate net combined ratio for the reporting countries was 93.7 in 2006, compared with 95.1 in 2005. The average combined ratio is still very low in a historic perspective.

Figure 6 Net combined ratio*

Given the low level of the combined ratio in the last couple of years, it was expected that a higher competitive pressure in the market would increase the combined ratio and reduce the high underwriting profitability in many countries. The combined ratio observed in 2006 has been lower than expected in some countries, maybe due to unusual low claims levels partly explained by the absence of large catastrophes. The storms in Europe in January 2007 may contribute to a higher claims level this year than in 2006.

Financial strength and profitability of the insurance sector

The overall profitability has improved in the life sector as well as the non-life sector the last years. Good returns on equity investments contributed to positive profits in the life sector in 2006, while profits in the non-life sector were also favoured by good underwriting results. Measured by the return on equity, profitability in 2006 in general looks healthy. A majority of the reporting countries experienced a positive growth in profits from 2005 to 2006 for both the life sector and non-life sector. There are, however, large variations between different countries.
The positive profit development the recent years has improved the financial strength of the EU/EEA insurance sector, especially for the non-life companies. The relatively low interest rates in recent years have, however, raised some concerns over the ability of life insurance companies to meet the long-term obligations for products with guaranteed interest rates. In most countries, this is not reflected in the solvency ratio, as liabilities are not valued at market value. The rise in long-term interest rates observed in 2006 indicates a higher probability that future investment returns will exceed the guaranteed rates.

There were no severe incidents of insolvencies in the insurance sector in 2006, although cases have been reported where the company in question has been closed for new business. In addition there are some cases where companies on a temporary basis have had insufficient capital to meet the solvency margin requirement. None of these cases have resulted in losses for policyholders.

Supervisors in many countries have reported the use of stress testing to evaluate the ongoing solvency situation of insurance firms. Results of these tests seem to confirm the financial strength of the life sector and its ability to withstand shocks in equity and bond markets. In many countries the regular stress tests do not consider the effect of interest rate shocks on the liabilities side, as these are currently not valued at market value on the balance sheet. In addition to regular stress test, the quantitative impact studies (QIS) for Solvency II also provide supervisors with valuable information on the financial strength of the participating companies.

**Asset allocation**

There are no apparent general trends in the overall assets allocation the last couple of years. Many countries report a stable mix of assets. Some countries report that investments in bonds and other fixed income securities have increased relative to other assets. More countries report that equities have increased their share of total assets, although in many cases merely reflecting the increased value due to the rising market prices. In most cases the equity exposure is still considerably lower than in 2000.

Reported figures\(^1\) indicate on aggregate a shift in the asset mix from fixed income securities to equities during 2006.\(^2\) The aggregate equity share of total balance sheet assets was 28 % in the insurance industry at the end of 2006, up from 25 % at the end of 2005 (figure 7)\(^3\). Fixed income investments amounted to 47,5 % of total assets at the end of 2006, down from 51,5 % at the end of 2005. In the life insurance sector, equity investments amounted to 34 % and fixed income investments to 46 % of total assets at end 2006. In the non-life sector, the share of equities was almost 20 % and the share of fixed income investments was 45 % at end 2006. For the composite companies, the asset mix was 4 % in equities and 52 % in fixed income investments at the end of 2006.

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\(^1\) Based on the reported fast track figures, which for this indicator only cover 11 countries.

\(^2\) Most countries have reported market values for both 2006 and 2005. Accordingly, the figures should in general be comparable.

\(^3\) Investments for the benefit of policyholders bearing the investment risk are excluded.
4. Developments in the reinsurance sector

Introduction
A light year 2006 for natural catastrophes provided welcome relief to the reinsurance industry after two successive years of record losses⁴. IAIS therefore states in its Global Reinsurance Market Report 2006, no significant events affecting the reinsurance industry worthy of specific comment have been reported⁵. Gross reinsurance premiums earned by the reinsurance companies reporting to IAIS declined by 1 % in 2005⁶.

Structure of the European reinsurance market
European reinsurers play a dominant role in the world reinsurance market. They rank number 1 to 4 of the top 5 reinsurance groups in 2005. By decreasing order of gross premiums written these companies were Munich Re, Swiss Re, Lloyd’s and Hannover Re, representing 35 % market share⁷. As regards the regional distribution within the EU major reinsurers have their headquarters domiciled in France, Germany, Luxembourg and the UK as can be seen from figure 8.

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The reinsurance markets in the countries with pure reinsurers are highly concentrated. The ten largest reinsurers have market shares ranging from 83% for Luxembourg to 100% for Denmark, Spain, Finland, Iceland, Liechtenstein and Norway (see figure 9).

**Figure 9: Reinsurance market – concentration ratios (2005)**

On a world-wide scale, the 10 largest reinsurers account for over 60 % of the overall market.

**Developments in the reinsurance sector in 2005 and 2006**

While the encouraging trend of the previous years continued until early 2005 EU reinsurers initially performed positively. However, major natural catastrophes, especially US hurricanes in the third and fourth quarter of 2005 became a considerable burden also for EU reinsurers, especially domiciled in Germany and the UK, and entailed substantial losses. The insured losses caused by the US
hurricanes Katrina, Rita and Wilma amounted to approximately $62 bn. The majority of claims was settled in 2006.

As a result of these losses especially countries with major reinsurers, like France, Germany and the UK, reported an increase in the net combined ratio above the threshold level of 100% in 2005.

Due to a rather benign hurricane season and a lack of severe earthquakes in the United States in 2006 the negative development of incurred losses of late 2005 did not continue. Thus reinsurers were able to improve their capitalisation. This development was additionally enhanced by the continuing recovery of financial markets which led to higher earnings from investments.

Ongoing financial restructuring measures as well as the implementation of a selective and earnings-oriented underwriting policy provided for additional positive effects and contributed to a stable profit situation.

*Figure 10: Gross premium earned 2003-2005 (million Euro)*

*Figure 11: Net premium earned 2003-2005 (million Euro)*
Development in the reinsurance market in 2007 and outlook

Central-/north-western Europe was hit by winterstorm Kyrill on January 18th. At least 47 people were killed, roofs were ripped off, power to hundreds of thousands of homes was knocked out and all forms of transport were severely disrupted. Kyrill hit Germany with the highest impact and caused damages of about € 1,9bn. In Germany the proportional market will suffer losses as well as the first layers of catastrophe programmes. Sometimes even the second layers will be affected partially. In the other European countries only isolated insurance companies will recover from their catastrophe programmes 8.

Figure 12 Losses from Kyrill (January 2007)

A.M.Best outlook for the global reinsurance sector is negative. The outlook is driven by the weak underlying stability of the current market 9.

S&P’s outlook on the market is stable. Influencing factors taken into account are numerous capital-raising initiatives by existing players, several new company formations, increasing usage of alternative forms of capital (sidecars and catastrophe bonds) and substantially improved pricing and terms and conditions in catastrophe-exposed lines of business. According to S&P reinsurance enterprises might be challenged by changing weather patterns that may lead to increase in frequency of severe natural catastrophes. To cope with this challenge, reinsurers have improved risk management and risk modelling 10.

Fitch’s rating outlook also remains stable. In their opinion underwriting, operating and capital trends support reinsurers’ current ratings, although they expect moderate premium rate reductions in reinsurance business in 2007 11.

Moody’s also has a stable rating outlook for reinsurance companies. They emphasize the sound balance sheets and good earnings momentum of most reinsurance enterprises. They are also aware of the inherent volatility of catastrophe-exposed business, the current pricing pressure on casualty lines of

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8 See Guy Carpenter, Speciality Practice Briefing, Winterstorm: Kyrill: Reinsurance Market Roundup.
business and the ease with which capital enters the market. Moody’s expects a change in the reinsurers’ policy, trying to sign more casualty business to reduce the impact of the more volatile catastrophe exposures\(^\text{12}\).

Meteorologists forecast a very active hurricane season 2007. Landfall probabilities for the 2007 hurricane season are said to be well above their long-period averages\(^\text{13}\).

**Table 3 Hurricane activity as of April 2007**

<table>
<thead>
<tr>
<th>Year</th>
<th>named storms</th>
<th>hurricanes</th>
<th>intense hurricanes (category 3-4-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 (forecast)</td>
<td>17</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>2006</td>
<td>10</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>2005</td>
<td>27</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>1900-1949 (50 years)</td>
<td>189</td>
<td>101</td>
<td>39</td>
</tr>
<tr>
<td>1956-2005 (50 years)</td>
<td>165</td>
<td>83</td>
<td>34</td>
</tr>
<tr>
<td>average (1950-2000)</td>
<td>9,6</td>
<td>5,9</td>
<td>2,3</td>
</tr>
</tbody>
</table>

Source: Colorado State University, 2007 figures are estimated.

Reinsurers must therefore be aware of potential claims of high damages. Nevertheless reinsurance prices have peaked and even the cost of cover for regions exposed to US hurricanes is becoming more competitive\(^\text{14}\).

5. Developments in the European pension fund market

**Scope of the pension fund sector analysis**

The current scope of analysis on the financial conditions and financial stability of the pension fund sector is based on data provided by national competent authorities to EuroStat according to the data definitions prescribed in the Methodological Manual for Pension fund Statistics\(^\text{15}\). The business statistics on pension funds are developed in the frame of Council Regulation n° 58/97 concerning structural business statistics. This regulation is the main legal reference for the collection, compilation and transmission of EU structural business statistics in the various sectors, including the occupational pension funds sector.

The coverage of the business statistics on pension schemes is generally limited to Pillar II schemes that are linked to a professional occupation. Such schemes usually operate on a funded basis. Moreover, they frequently provide cover for biometric risks (mortality, invalidity and longevity). Occupational schemes are organised either as autonomous pension funds or trusts, non-autonomous

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\(^\text{13}\) See Department of Atmospheric Science, Colorado State University, Extended Range Forecast of the Atlantic Seasonal Hurricane Activity and U.S. Landfall Strike Probability for 2007, page 3.

\(^\text{14}\) See Financial Times Germany, Competitive climate is driving down reinsurance prices, April 2nd, Page 15.

pension funds (or book reserve mechanisms) or group life insurance contracts, depending on institutional and traditional differences between countries.

Autonomous pension funds or trusts are established separately from any sponsoring undertaking or trade. They receive the contributions, invest them and pay retirement benefits. Non-autonomous pension funds mainly refer to the book reserve system. The employer undertakes to pay benefits to his employees and makes provision for commitments on the liabilities side of his balance sheet. In the case of group life insurance contract, the contributions are paid to a life insurance company which invests the contributions and pays the benefits. These schemes are excluded from the pension business statistics as they are already covered by the insurance services statistics.

Likewise, Pillar I compulsory social security schemes and Pillar III individual retirement savings are excluded from the scope as these are not covered by the business statistics on pension schemes. It should be noted that not all countries of the EEA operate occupational pension provisions (see annex 1 for an overview of the reporting basis for each country). Data availability varies substantially among the various countries, which hampers a thorough analysis and comparison of the pension market developments between countries.

In September 2005, the IORP Directive entered into force. The directive provides provisions for the activities and supervision of institutions offering occupational pension schemes. Marking a first step towards a European internal market for occupational pension schemes, the directive enables pension funds established in one member state to operate pension schemes of employers in other member states. The directive focuses on all pension products offered by pension funds as well as by life insurers.

In this section, the term "pension funds" refers only to Institutions for Occupational Retirement Provision (IORPs) that fall under the scope of Directive 2003/41/EC on the activities and supervision of institutions for occupational retirement provision. This means that e.g. book reserve systems are not covered by the report because they do not fall under the scope of the IORP Directive.

Accumulated wealth of the occupational pension funds sector
The total size of assets as a % of GDP gives a good indication of the relative wealth accumulated by the pension fund sector. The size of pension funds is to a large extent related to their maturity and labour market coverage. This is especially the case for countries where pension fund assets exceed GDP. In some countries retirement provision is mainly financed through occupational pension funds. Where traditional public sector pensions, other similar national arrangements and group life insurance contracts play a dominant role in the retirement system, the size of the occupational pension fund sector is relatively small. This is especially the case for continental European countries.

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16 See the Annex for an overview of the scope of the pension fund statistics for the different countries.
17 Directive 2003/41/EC on the activities and supervision of institutions for occupational retirement provision.
The differences in maturity and labour market coverage of the pension fund sector across Europe is also evidenced by the difference in the volume of assets held per a pension fund member (both active and retired members).

In general, Central and Eastern European countries that have started from a relatively small asset base are experiencing strong growth in net additions to the fund. This growth is often accelerated by fiscal incentives (tax deductibility of employer contributions, tax relief on investment income and/or benefits paid to employees, as well as an exemption from social security tax on employee contributions). However, the labour market coverage often remains low due to the limited financial education and awareness of the benefits of pension plans or due to the high cost of servicing such pension plans.
In general, growth of the occupational pension fund sector is expected to accelerate further over the coming decade as public and private initiatives are intensifying to help prepare for the rapid demographic changes in terms of a declining ratio of contributors-to-beneficiaries. Pension reform efforts are now geared towards the economic implications of increasing life expectancy and towards promoting retirement provisions through Pillar II and Pillar III pension schemes. Growth in these types of schemes will help diversify some of the longevity risks, especially in countries that traditionally rely on Pay As You Go (PAYG) social security systems. It is expected that, by supplementing PAYG state pensions with funded private pensions, the cost and risks of an ageing population remain manageable.

**Development in contributions and benefits**
The sources of pension fund funding are primarily contributions received and investment income such as dividends, proceeds of the sale of assets and interest income. Funding drains are mainly pension benefits paid and losses made on the sale of assets. The difference between revenues and expenditures is a good approximate measure of the net additions to the fund, which in turn are related to the absolute size and maturity of the pension fund sector in a given country. Large and mature markets generate substantial amounts of net additions.
*Net additions* = Total Net contributions - Total Net benefits + Net investment income + Other income - Other expenses

However, when the net additions are related to the size of total assets (see Figure 17), the less mature markets seem to be adding wealth to their pension fund sector at a much faster pace than the more matured markets.
Growth rates in pension contributions vary substantially across countries, ranging from 105% to 10%, or even negative growth in some markets. Such negative growth might be due to contribution holidays in DB plans or transfer of funds into group life contracts. For some markets, the substantial growth relates to the adoption of IAS 19, which has required additional employer contributions to eliminate the funding deficits that emerged.

Figure 18: Growth (%) of gross contributions receivable

For defined benefit schemes (DB) in particular, contributions are expected to rise further as a means of reducing deficits in individual schemes and as a means of offsetting the increase in pension obligations due to the ageing population. Considering that DB schemes are gradually being phased out in a number of countries, a substantial increases in contributions into new defined contribution plans (DC) can be expected in future.

Figure 19: Allocation of gross contributions receivable between DC, DB and Hybrid schemes (2005)
This trend will help reduce the vulnerability of the pension fund sector as a whole to funding risk, as a growing part of the investment risk will be transferred to the household sector. This could be especially beneficial to those countries that currently still largely operate DB plans. Other countries have accumulated largely or exclusively DC plans. On average (both in terms of gross contributions and number of members by type of plan), the retirement landscape in Europe is largely organised by DB plans.

**Figure 20: Allocation of members between DC, DB and Hybrid schemes (2005)**

![Figure 20: Allocation of members between DC, DB and Hybrid schemes (2005)](image)

Source: EuroStat

In most countries, benefit payments have been increasing only slowly over the last few years, however with some exceptions. However, substantial increases in payments can be expected over the next few years when members of the baby boom generation start benefiting from their retirement provisions, compounded by the current and future retired members living longer than expected.

**Figure 21: Growth (%) of gross benefits payable**

![Figure 21: Growth (%) of gross benefits payable](image)

Source: EuroStat
Financial strength
Pension fund financial strength in terms of available funding as a % of accrued (or projected) value of pension obligations and asset cover ratio’s is heavily dependent on asset performance. The recovery of financial markets into 2005 has generated positive returns on assets (based on net investment income) in most reporting countries. However, differences in rates of return and growth in return rates between countries are substantial.

Figure 22: Return on assets (based on net additions to the fund)

A large number of countries continue to consistently capitalize substantial amounts into their funds. Based on net investment income only, all countries have benefited from strong returns.

Figure 23: Return on assets (based on net investment income)

Source: EuroStat
These positive trends are also reflected in the adequacy of cover ratios of technical provisions for most countries. It should be noted however, that the actuarial bases for calculating minimum technical provisions differ between jurisdictions (e.g. ABO\textsuperscript{18} method, PBO\textsuperscript{19} method, the use of technical interest rate or term structure, or other methods) which in turn means that cross-country comparisons are not very meaningful. In addition, in some countries the increase in the average cover ratio is, at least partly, the result of recent changes in the actuarial basis for technical provisions or an amendment of the benefit system, e.g. from projected final-career salary to a lower average-career salary).

\textbf{Figure 24: Average cover ratio (\%)}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure24.png}
\caption{Average cover ratio (\%)}
\end{figure}

\textit{Asset allocation}

The industry seems to be moving towards more diversity in the asset portfolio, although differences across countries exist. In the majority of countries, bonds are the predominant investment instrument constituting up to 68\% of the portfolio. Other countries tend to be exposed towards equities. In several countries shares in mutual funds account for more than 70\% of the portfolio, although these funds are mostly mixed funds which are predominantly invested in bonds. Some countries also report a relatively important exposure to real estate assets, as a means to diversify away from spread risk and equity risk.

\textsuperscript{18} Accumulated Benefit Obligations (ABO) refers to a method for calculating the present value of future pension obligations towards employees on the basis of actual salaries, inflation and mortality rates.

\textsuperscript{19} Projected Benefit Obligations (PBO) refers to a method for calculating the present value of future pension obligations towards employees on the basis of prospective assumptions about future salaries, inflation and mortality rates.
It can be expected that pension funds might consider diversifying away from equities, as a market downturn such as the one seen in 2000 can quickly lead to a sharp fall in funding surpluses. In addition, stock market volatility exposes funds to larger swings in the coverage of their pension obligations, which under IAS/IFRS accounting rules will be reflected in the sponsoring entity’s balance sheet.

In a number of countries pension funds are also exposed to interest rate risk on their fixed income holdings, especially in defined benefit plans. In the case of defined contribution plans, some countries require pension funds to guarantee a minimum return on employer contributions and on employee contributions, so that the sponsoring entity is exposed to the investment risk as well. In the current relatively low interest rate environment, it might be difficult for funds to obtain the required minimum returns, as a result of which additional employer contributions might need to be injected into those funds to prevent them going into a funding deficit.

**Degree of concentration**

Some countries appear to be characterized by a relatively high degree of concentration of single entities within the pension fund sector. This feature is mainly related to the less mature markets and/or countries with limited labour market coverage or those operating sectoral funds, where a limited number of funds manage most of the assets.
In addition, some countries are experiencing a significant amount of transfers of pension obligations into life insurance companies in the form of group life contracts, which has increased the degree of concentration of the pension fund sector over time.

6. Risks and challenges facing the European (re)insurance and pension fund sector

Various challenges and vulnerabilities are reported by member states regarding their insurance and pension fund sectors. Financial risks and risks related to
financial market volatility appear to be the most important risk factors facing insurers and pension funds. Despite the gradual rise in interest rates since the third quarter of 2005 and even though macro-economic conditions are strong, inflation expectations are growing and short term interest rates are rising, long-term interest rates are still low in a historic context. The prolonged period of low or even again decreasing interest rates is perceived as a major risk for the life insurance sector. Life insurance companies, and pension funds to a lesser extent, traditionally have a high exposure to interest rate risk through their fixed income securities holdings (life insurers currently invest about 65% whereas pension funds invest about 42% of total investment assets in fixed income securities). In those cases where insurance contracts include guarantees, this could result in investment returns that do not cover the guaranteed rates and thereby endanger the solvency of at least some companies in the medium term.

The persistent low yield environment has induced several risk mitigation actions, both from supervisory authorities and from insurance companies and pension funds. A number of member states further reduced the maximum guaranteed interest rate in 2005 and 2006 (see annex 3 for an overview of the current maximum guaranteed rates for life insurers). As this in most countries only applies to new contracts, a relief for the whole portfolio of contracts may thus not become effective for many years. Insurers on the other hand increasingly aim at lowering the interest guarantee connected with insurance products, below the maximum rates, offering fewer products with interest guarantees or linking conditions to their products to prevent that currently guaranteed rates are extended to future premium collections. Additionally, it is noticed that interest rate risk is, to an increasing extent, passed on to policyholders through unit-linked contracts. Member states also mention that interest rate risk on liabilities is mitigated by the use of interest rate derivatives by insurance companies. Moreover, insurers and pension funds have extended their portfolio maturities in order to reduce the asset-liability maturity mismatch by purchasing ultra long term government bonds recently issued in some European countries. Finally, insurers and pension funds have improved risk management practices and also increasingly rely on asset liability management and stress tests to mitigate their financial risks.

The risk of an upward shift in interest rates is mentioned as well. In general, a moderate upward shift in interest rates would result in increasing returns on new investments in fixed income securities, thus improving future profitability prospects. The resulting reduction in the value of technical provisions would, given the existing asset-liability maturity mismatch, exceed the reduction in the value of bonds and similar interest related securities, thus improving the solvency position. However, a more sudden and material upward shift in interest rates might negatively impact the financial position of insurers, if the sudden sharp rise in interest rates were to be accompanied by a drop in equity values.

Member states also point to the risks related to equity markets and their importance for life insurers and pension funds. Holdings of equity are gradually rising again, by new investment as well as increase in value. Equity investments amount to about 27% of total investment assets in the European insurance industry as a whole and on average about 32% by European pension funds. This risk may have become less pressing over the past year, partly because of recovery in equity markets, and partly because of efforts by firms and pension
funds which had a heavy equity exposure to diversify their portfolios or hedge against share price fluctuations. However, some member states point to a possible major downturn of the equity markets given the impression of economic conditions being close to or at a peak, e.g. comparable with the turbulence in February 2007 and May/June 2006, which would have some negative impact on life insurers. Some countries reported a higher proportion of corporate exposures in higher return bonds resulting in increased credit risk exposure. One country also mentions the specific risks associated with the increasing investments of insurers and pension funds in hedge funds and private equity funds. Another member state pointed to the potential overvaluation of the property market and the risk of an adjustment which might have serious consequences. In general, insurers rely on enhanced asset liability management techniques and stress tests to mitigate these financial risks. At the same time, insurance companies hedged part of the remaining equity exposure. While limiting their equity risk in this way, it also prevented companies to fully benefit from the recent rebound in stock prices since beginning of 2003.

Member states report challenges associated with changes to the legal environment and reporting requirements. Many of these relate to changes at the national level, but the Europe-wide initiatives on IAS, reinsurance supervision and Solvency II are also specifically mentioned. At the positive side, Solvency II should also strengthen risk management practices. Several member states highlight specific taxation and system reforms on a national level which mean significant challenges to the insurance sector and which vary from a regime shift in the health insurance and pension systems, to the withdrawal of tax incentives on several life products and changes in specific (tax or other) regulations.

Member states report various non-life insurance risks, of which the most common ones are related to the premium cycle, claims inflation and reinsurance (uninsurable risk). Various member states draw attention to the risks related to premium competition in the non-life sector. Some member states indicate that this put downward pressure on the premium rates in some business lines, in order to secure or even expand their market share. Moreover, improved underwriting results gave leeway for some market players to decrease prices. The risk is that competition could induce insurers to offer their policies at below cost price. A few member states voice concern over rapidly rising cost of claims and rising overall expenses of insurers (claims inflation).

Risks related to reinsurance are highlighted by a number of member states. In that respect, an emerging trend towards higher damage claims owing to natural (and man-made) catastrophes is noted. In addition to a tightening pricing and acceptance policy, companies are becoming more exposed to changes in the reinsurance market. The trends indicate that on the one hand, reinsurance has become more expensive for a given coverage as a result of a general tightening in the reinsurance capacity while at the same time insurance companies have not been able to fully pass on the rise in reinsurance costs to their policyholders, thereby also increasing the non-financial sector’s vulnerability to adverse developments. In that respect some members states also note that primary insurers are retaining a larger part of the risks and ceding less to reinsurers, which may be linked to higher reinsurance costs. Other member states signal that the increases in international reinsurance premium rates, e.g. after the autumn 2005 hurricanes in the USA (see also the section on the reinsurance...
sector), have gradually found their way to the premiums charged by direct insurers. A few member states highlight concerns about a tightening reinsurance market, leading to certain risks (e.g. natural catastrophes and claims arising from terrorist events) being offered reduced protection or even excluded from coverage.

A longer term challenge for the annuity business of life insurers and of pension funds that is highlighted by some member states, is the faster than expected improvement in longevity (life expectancy). This could hurt insurers' and pension fund reserves for a long period of time. Member states report on the development and application of updated mortality tables stressing the fundamental uncertainty as to the duration of future improvements.

Finally, a few member states highlight the fragility of clients’ confidence, resulting in policy lapses, due to mis-selling practices in the life insurance sector as well as due to the prevalent lack of contract certainty in some non-life insurance markets. Some new EU member states mention the challenges posed by the entry of new insurance firms in their markets following the EU accession.
Annex 1: Scope of CEIOPS’ pension fund data

Austria:
Data includes all occupational pension contributions to Pension Companies covered by the Austrian “Pensionskassen Act”. The Pillar 2 provisions are not compulsory. Contributions cover about 11% 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.

Finland:
Statistics do not include Finnish statutory pension schemes operated by individual companies/foundations/funds. Statistics only relate to occupational pension funds by Directive 2003/41/EC.

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.

Italy:
Data covers autonomous pension funds instituted both as independent legal entities (contractual pension funds) and as pools of segregated assets (open pension funds) set and managed by financial intermediaries. The data does not include book reserve schemes.

Luxemburg:
The Commission de Surveillance du Secteur Financier 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 pension savings companies with variable capital (SEPCAVs) and pension savings associations (ASSEPs).

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:
1. occupational pension fund
2. agreements with life insurance companies
3. agreements with investment fund companies
4. foreign management companies
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 investment funds.

Portugal:
Data include all occupational pension schemes including 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.

Slovakia:
No data was reported for 2003 until 2005 as recent pension system reforms have introduced mandatory funded occupational pensions only as of January 2005.

Spain:
All the data relates only to occupational pension funds (by Directive 2003/41/EC) which account for about 40% 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 a special form of “friendly societies” and accounts for less than 10% of the overall non-state related occupational pensions. The remaining occupational pensions are almost entirely covered by life insurance companies.
Annex 2: Statistical Annex (SA) (see icons below)

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Table 4: INVESTMENT ASSETS OF OCCUPATIONAL PENSION FUNDS
Table 5: SIZE OF THE OCCUPATIONAL PENSION FUND SECTOR

Explanation: 0 means zero or not available.
## Annex 3: Maximum guaranteed rates life insurance

<table>
<thead>
<tr>
<th></th>
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</tr>
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<td>AT</td>
<td>unchanged</td>
<td>2.25% (from January 1, 2006)</td>
<td>2.75% (as of January 1, 2004)</td>
<td>3.25%</td>
<td>4.0% until July 1, 2000 3.0% until January 1, 1995</td>
<td></td>
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<tr>
<td>BE</td>
<td>3.25% (as of 1/1/2007) unchanged</td>
<td>unchanged</td>
<td>3.75%</td>
<td>3.75%</td>
<td>4.75% until January 1, 1999</td>
<td></td>
</tr>
<tr>
<td>DE</td>
<td>2.25% (as of 1/1/2007) unchanged</td>
<td>unchanged</td>
<td>2.75% (as of 1/1 2004)</td>
<td>3.25%</td>
<td>4.0% until July 1, 2000 3.5% until July 1, 1994</td>
<td></td>
</tr>
<tr>
<td>DK</td>
<td>unchanged</td>
<td>unchanged</td>
<td>2.0%</td>
<td>2.0%</td>
<td>5.0% until July 1, 1994 3.0% until January 1, 1999</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>2.42%</td>
<td>2.42%</td>
<td>2.68% (from 1/1/2004)</td>
<td>3.15%</td>
<td>4.0% until June 21, 1997</td>
<td></td>
</tr>
<tr>
<td>FI</td>
<td>unchanged</td>
<td>Unchanged</td>
<td>2.5%</td>
<td>3.5%</td>
<td>4.5% until January 1, 1999</td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td>unchanged</td>
<td>Lt: 2.25% (from 11-2006) St: 2.75%</td>
<td>Lt:2% St: 2,5%</td>
<td>Lt: 2,5% St: 3%</td>
<td>Lt: 3% St: 3,75% (until January 1, 1998)</td>
<td></td>
</tr>
<tr>
<td>HU</td>
<td>unchanged</td>
<td>2.9% (from 1/4/06)</td>
<td>4.0%</td>
<td>4.0% (as of 1/1 2002)</td>
<td>5,5%</td>
<td>5,5% (from Jan 1997)</td>
</tr>
<tr>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>2.25% (from 1/1/2006) 2% (from January 1, 2006) unchanged</td>
<td>unchanged</td>
<td>2,5% (from December 1, 2003)</td>
<td>3,0%</td>
<td>3% (from 1/7/1998) 2,5% (from 1/9/1999) 3% (from 1/5/2000)</td>
<td></td>
</tr>
<tr>
<td>LT</td>
<td>2.16</td>
<td>2.25%</td>
<td>2.99%</td>
<td></td>
<td></td>
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<tr>
<td>LU</td>
<td></td>
<td>2,25% (from 1 April 2005)</td>
<td>2,5%</td>
<td>2,75%</td>
<td>3,75% before 1998</td>
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<td>NL</td>
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<td>3.0%</td>
<td>3.0%</td>
<td>4.0% before 1998</td>
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<tr>
<td>NO</td>
<td>Unchanged</td>
<td>2,75% (from 1/1/2006)</td>
<td>3.0% for new premium income, 1/1 2004</td>
<td>3,0%</td>
<td>4,0% until November 1993</td>
<td></td>
</tr>
<tr>
<td>PL</td>
<td>3,33% from May 2007</td>
<td>3,48% from 1/4 2006</td>
<td>3,96%</td>
<td>4,5%</td>
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<tr>
<td>PT</td>
<td>unchanged</td>
<td>Unchanged</td>
<td>4.0%</td>
<td>4.0%</td>
<td></td>
<td></td>
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<tr>
<td>SE</td>
<td>unchanged</td>
<td>2,75% (for new business), 3,0-3,25 for existing portfolio (from 1/2/2005)</td>
<td>3.0%</td>
<td>3.0%</td>
<td>4.0% before 1998</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>2,75% (from 1/1/2007) unchanged</td>
<td>2,75% (for liab. in foreign currency (from 1/3/2005); 3,25% (for liab in Slov. Tolars)</td>
<td>3,25% (from 1/3/2002)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
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</table>

Source: National insurance supervisory authorities

Notes:
- **Belgium**: Maximum technical interest rate of 3.25% applies to life contracts denominated in Euro. For contracts with a duration of less than 8 years, an actuarial rate based on the spot rate of Belgian Government bonds for that duration is used.
- **France**: Two different interest rates are used, for durations above (Lt) and below (St) 8 years.
- **Lithuania**: The maximum interest rates are gradually reduced four times a year.
- **Portugal**: The maximum interest rates are subject to the term structure of business written and may only be allowed if stress tests show the capacity of the company to pay these rates.
- **Spain**: A dynamic adjustment to market changes (based on Spanish Treasury bonds) is used. Nevertheless the entity can use the interest rates applicable when the policy was subscribed (with several requirements).
following maximum interest rates for mathematical provisions are used in each year (there are some exceptions related to matched portfolios):

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate 1</th>
<th>Year</th>
<th>Rate 2</th>
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<tbody>
<tr>
<td>1998</td>
<td>3.20%</td>
<td>2003</td>
<td>2.89%</td>
</tr>
<tr>
<td>1999</td>
<td>3.15%</td>
<td>2004</td>
<td>2.68%</td>
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<tr>
<td>2000</td>
<td>3.15%</td>
<td>2005</td>
<td>2.42%</td>
</tr>
<tr>
<td>2001</td>
<td>3.11%</td>
<td>2006</td>
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</tr>
<tr>
<td>2002</td>
<td>3.11%</td>
<td>2007</td>
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</table>

**Sweden** Maximum guaranteed rates: February 2005 2.75% (for new business from March 1 2005, for older business 3.0 - 3.25%).
### Annex 4: Abbreviations

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