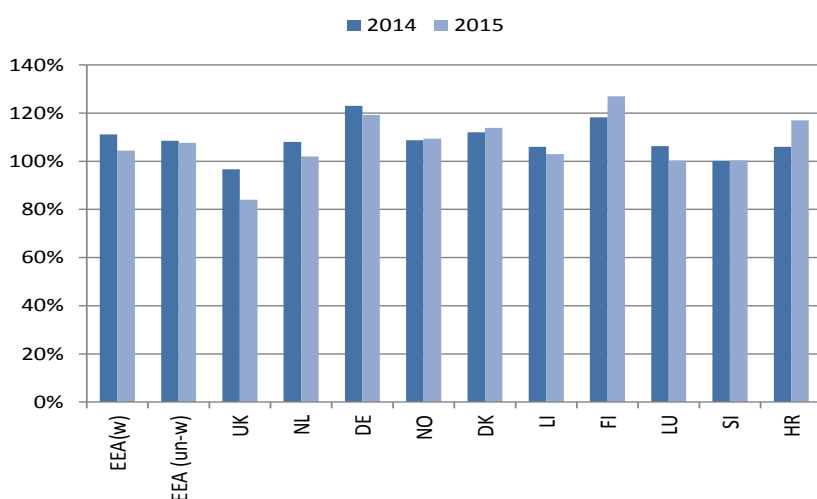


4. The European pension fund sector¹⁸

The ongoing low interest rate environment continues to generate challenges to the European occupational pension fund sector.

Traditional Defined Benefit plans (DB), which make up approximately 75 per cent of the sector in terms of assets, are affected by such developments. This type of plan provides employees with a defined level of pension, although market developments may affect funding levels, which may have impacts on sponsors and/or members depending on how risks are shared across the parties. DB funds in many countries are long-term investors, whose liabilities have a longer duration than their assets, potentially leading to long-term asset-liability mismatches that sometimes can be greater than those experienced in the insurance sector. In the course of 2015, lower interest rates had a further negative effect on cover ratios for most of the countries of the sample.

Figure 4.1: Cover ratios (in per cent)



Source: EIOPA

Notes: Both the weighted and un-weighted averages for the cover ratio are calculated on the basis of the 10 countries that provided data and are depicted in the chart. The weighting is based on total assets. Cover ratios refer only to DB schemes. Due to different calculation methods and legislation, the reported cover ratios are not fully comparable across jurisdictions. Data for 2015 is preliminary and subject to major revisions. FI did not participate in the stress test but provides Eiopa with data.

Cover ratios for DB schemes further decreased from 111 per cent in 2014 to 104 per cent in 2015 (Figure 4.1). The un-weighted average cover ratio decreased from 109 per cent to 108 per cent for the same period.

¹⁸ All data employed in this section refers to IORPs pension funds.

Cover ratios¹⁹ below 100 per cent are a concern for the future of the sector in the existing low interest rate environment. Countries within the EU have different approaches to deal with low cover ratios. In a few countries, for example, there is full sponsor support available whilst in others guarantees on DB plans exist. In a number of countries also pension protection schemes are put in place which provides insurance for some or all of the promised benefits. Finally, changes in the value of the future benefits may take place. These value changes may become necessary in order to tackle the future consequences of the low cover ratios and the viability of the schemes, if they persist for a long period. These measures also involve transfers of risk over time as well as across the different entities such as the IORP sponsors, members and beneficiaries and pension protection schemes.

If full sponsor support is in place, the question will arise as to whether the sponsors can cover for the future losses. Sponsor support can be effective in many cases. However, in the event of an extreme risk reversal scenario, there is the risk that sponsors will not be (at least not fully) in a position to cover the cost, particularly if the scenario endures over the longer-term. An alternative way to deal with the issue of low funding is to adjust future benefits of the members and beneficiaries to the new economic environment. Currently in some countries adjustments are taking place but this has negative long- term implications to the future income of households. In most of the cases these adjustments affect new contracts or contributions.

Until 2015, in the absence of a harmonised market-based valuation reporting regime for pension fund liabilities, it was difficult to assess the impact on schemes across countries on a consistent basis. Consequently, in countries, where national prudential regimes were not sensitive to market price changes, risks may have been underestimated. EIOPA's first stress test exercise on the occupational pensions sector identifies these vulnerabilities. A common methodology was applied in this stress test to tackle the issue of heterogeneity in reporting regimes of different member states.

4.1 EIOPA IORPs stress test 2015

The aim of the 2015 EIOPA IORPs stress test was to test the resilience of defined benefit (DB) and hybrid pension schemes against adverse market scenarios and increases in life expectancy. Additionally, a satellite module on defined contribution (DC) schemes was included, which modelled the outcomes on example DC scheme

¹⁹ Defined as net assets covering technical provisions divided by technical provisions

member based on different future investment return scenarios, consistent with the DB stress test assumptions. Both models were based on 2014 year-end data.

Overall, the stress test exercise assessed the potential impact on IORPs under a set of severe stress scenarios and was designed for countries where the IORPs sector exceeded EUR 500mn in assets. In total 17 countries participated in the stress test.²⁰ For the majority of the countries, the target of market coverage of over 50 per cent (in terms of total assets or, where relevant number of scheme members) was achieved.

For the DB part, EIOPA decided to conduct its stress test exercise both on the basis of current national prudential standards and on the Common Methodology that was developed. This Common Methodology was included in the exercise in order to enable comparison of IORPs across Member States on a like-for like basis, by applying common valuation bases and allowing for more consistent EU-wide comparisons.

a) DB stress test results

The impact of two instantaneous adverse market scenarios²¹ and one instantaneous longevity scenario on DB schemes was evaluated against the baseline (i.e. the situation before stress) with respect to the national balance sheet (NBS) as well as the Common Methodology.

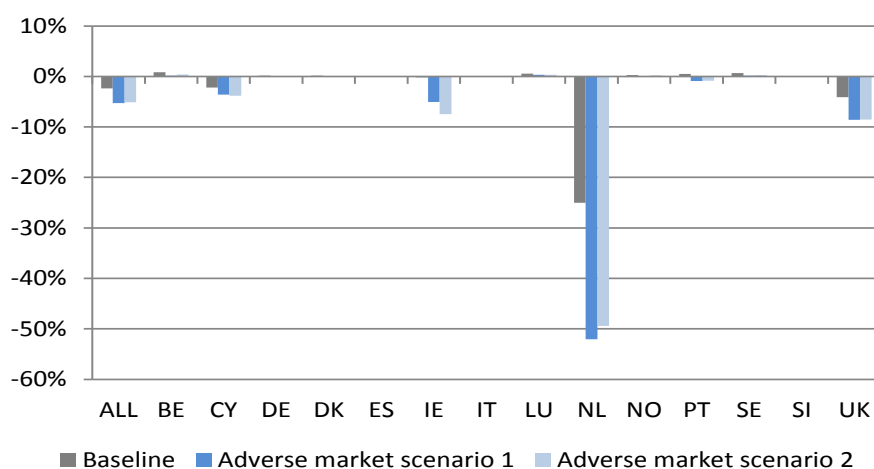
Under the NBS methodology insufficient assets covering funding requirements under both baseline and stress scenarios imply a potential financial burden for a sponsor, where sponsor support exists, or benefit reductions of members and beneficiaries with potential negative implications for the overall financial stability (Figure 4.2²²).

²⁰ AT, BE, CY, DE, DK, ES, IS, IE, IT, LU, NL, NO, PT, SE, SI, SK and the UK

²¹ These scenarios are further described in the material published on [EIOPA's website](#) together with the IORPs stress test specifications.

²² The relatively high impact for the NL is partly driven by the size of its IORPs sector and its regulatory framework. The NL has a large IORPs sector as it has built up pension assets in the second pillar over the last few decades. Furthermore, the funding requirement for Dutch IORPs equals 127 per cent of liabilities, valued on a market consistent basis. Moreover, benefit reductions are allowed only as an ultimate solution. This means that benefit reductions are not possible if the funding ratio is above 100 per cent and legally enforceable sponsor support is only available for some individual IORPs. Benefit reductions are therefore only allowed as part of a recovery plan and can be smoothed over time.

Figure 4.2: Surplus (deficit) over the national funding requirement before and after stress, per Member State (in per cent of nominal annual GDP, NBS approach)



Source: EIOPA

Note: The results do not only depend on the scenario, but also on the national regulatory framework.

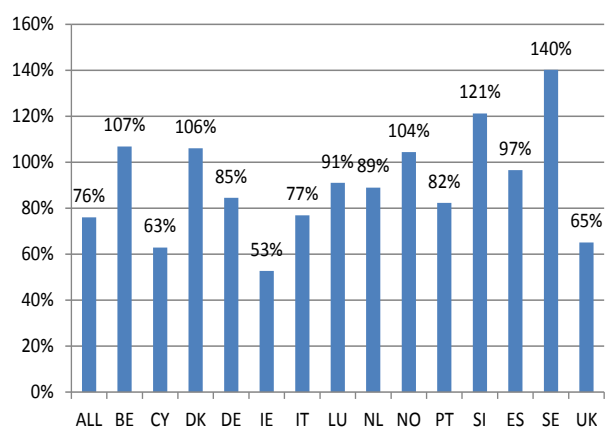
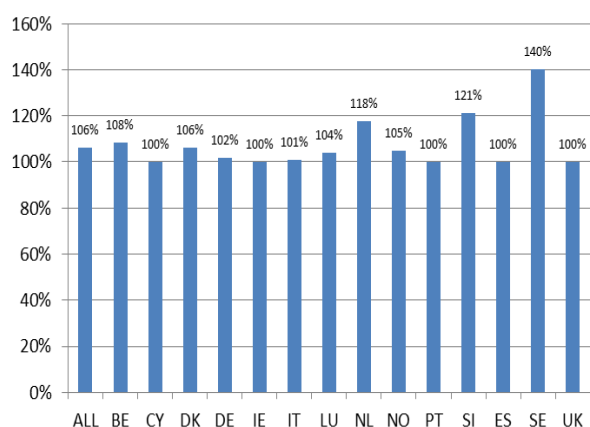
In case of a funding ratio below 100 per cent, the potential financial burden and therefore also the potential default of some sponsors depends on the size of the funding shortfall relative to the strength of the sponsor as well as the timeframe of when the deficit would need to be balanced by the sponsor, as in many Member States IORPs could use substantial recovery periods. However, the results also reflect the fact that national valuation methods, national regulatory frameworks as well as the size of the IORPs sector differ considerably among Member States. The national valuation does not allow more consistent cross-country comparisons although it does reflect the position which IORPs would actually face in practice.

The Common Methodology allowed a consistent cross-country comparison using common assumptions and recognised sponsor support, pension protection schemes (PPS) and benefit adjustment mechanisms, in particular using the balancing item approach which imposes a balancing of the deficit situations. However, it should be noted that the Common Methodology is not in place for European IORPs and hence national funding requirements are not based on it. According to the Common Methodology, all participants valued the technical provisions discounting at the risk free rate (RFR)²³, and took account of any available benefit adjustment mechanisms, sponsor support and pension protection schemes (PPS).

²³ This corresponds to 'Level A' from the technical specifications.

Funding ratios using the Common Methodology base line differ a lot from those under the national balance sheet baseline scenario, both with and without sponsor support (Figure 4.3 and Figure 4.4). With sponsor support the average funding ratio is 106 per cent whereas it drops to 76 per cent without sponsor support. This implies a deficit of EUR 428bn for the sample that participated in the stress test.

Figure 4.3: Aggregate assets over liabilities based on Common Methodology approach (in per cent) *Figure 4.4: Aggregate assets (excl. liabilities based on Common Methodology sponsor support) over liabilities (before in baseline using the balancing item benefit reductions) on Common Methodology in baseline (in per cent)*



Source: EIOPA

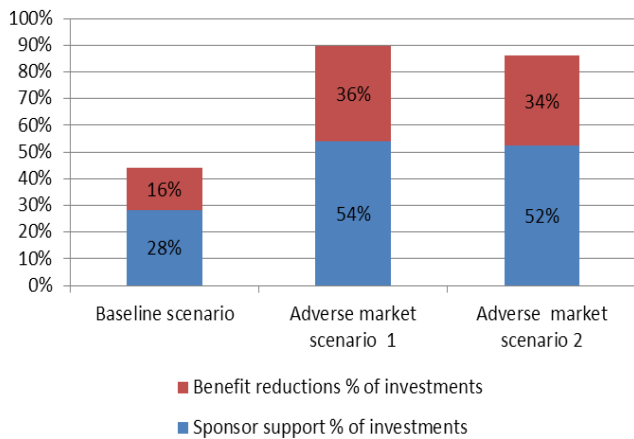
However, these results should be interpreted with caution. Even in the event that funding requirements were fixed at 100 per cent of the liabilities (as determined by the common methodology), it could not be concluded that an aggregated shortfall of EUR 428bn exists that needs to be funded immediately.

In a hypothetical scenario in which the excess of assets over liabilities of certain IORPs could be used to offset the deficit of other IORPs, this shortfall would be the aggregated amount of security and adjustment mechanisms that the participating IORPs would depend on. Since the compensation is not possible, EUR 428bn is still a prudent estimation of the total amount required to rebalance the underfunded IORPs in the stress test sample. This can be done either by quantifying the present value of the adjustments needed in the benefits or by quantifying the support required from sponsor's balance sheets in the years to come until the benefits have to be paid.

The reliance in the baseline scenario on sponsor support and benefit reductions to balance the funding ratios in the near future becomes much more severe under stressed circumstances.

According to the estimates in the stress test, the impact of the two adverse market scenarios would imply approximately a doubling of both benefit reductions and sponsor support as a share of total investments (Figures 4.5).

Figure 4.5: Impact of adverse market scenarios on sponsor support and ex-post benefit reductions (in per cent of total investments, Common Methodology)



Source: EIOPA

b) DC stress test results

The DC satellite module included 64 IORPs from nine European countries with total assets of almost EUR 83bn. This represents around 17 per cent of the total DC IORPs assets in these countries. The DC sector in all participating countries was greater than EUR 500bn.

For the DC module, the impact on balance sheets was not assessed as in the case of the DB stress test. Instead the impact on expected retirement benefits for three representative plan members (35y, 20y and 5y before retirement) was investigated under five scenarios: two shock scenarios and one longevity scenario (all three in line with the DB module) plus two additional low return scenarios (not in DB module).

The two shock scenarios in the DC part would affect the pension member profiles with a fall in asset prices and declining interest rates. The time to retirement is a key driver of the impact: the closer to retirement, the higher the accumulated pension wealth and the less time remains to recover from the shock. In essence, these plan members will be the most sensitive to a fall in asset prices. The decline in interest rates is assumed also to result in lower investment returns on assets. This has the largest impact on representative members farthest away from retirement, as it affects

a larger part of their life-cycle. In the two low return scenarios, young plan members were more heavily impacted than the plan members closest to retirement in all the countries as young members will be affected by the low returns for longer.

4.2 Latest market developments

Total assets held by occupational pension funds in the EEA (European Economic Area) increased by 14 per cent in 2015 following a more moderate growth of 11 per cent in 2014. A large part of this increase is attributed to the exchange rate fluctuations between the EUR and the GBP. It should also be taken into account that UK assets are proportionately large in relation to the aggregate. The EA (euro area) growth rate of total assets has been at 2 per cent in 2015, significantly lower than 2014, when an increase of 15 per cent was reported (Figure 4.6)). This figure describes better the situation given the persistent low interest rate environment and the low performance of the equity markets over the second half of 2015 as described in chapter 1.

The UK and the Netherlands account for most of the European occupational pensions sector (about 86 per cent of total assets for the sample used in this report, see Table 4.1). Cross-country differences are mainly driven by the relative share of private and public provisions of pensions based on countries' legislations and state supports. Pension funds under Pillar I are not covered in this chapter.

Table 4.1: Total assets per country as a share of total assets reported for 2015 (in per cent)

UK	NL	DE	IT	ES	NO	IS	AT	SE	PT	DK
52.14%	34.18%	5.45%	3.34%	1.07%	0.91%	0.61%	0.57%	0.54%	0.49%	0.23%
LI	FI	LU	SK	GR	SI	PL	LV	RO	HR	HU
0.15%	0.12%	0.05%	0.05%	0.033%	0.018%	0.012%	0.010%	0.007%	0.003%	0.0001%

Source: EIOPA

Note: For many countries 2015 figures are preliminary and subject to major revisions. Penetration rates for GR, HR, RO, PL and HU are lower than 1 per cent.

The average penetration rate of the occupational pension fund sector remained at the same level in 2015 (Figure 4.6). This ratio is calculated as the total size of assets over GDP. It gives an indication of the relative wealth accumulated by the sector. In most of the countries penetration rates did not change significantly (Figure 4.7).

Figure 4.6: Total Assets (LHS: in EUR billions, RHS: in per cent)

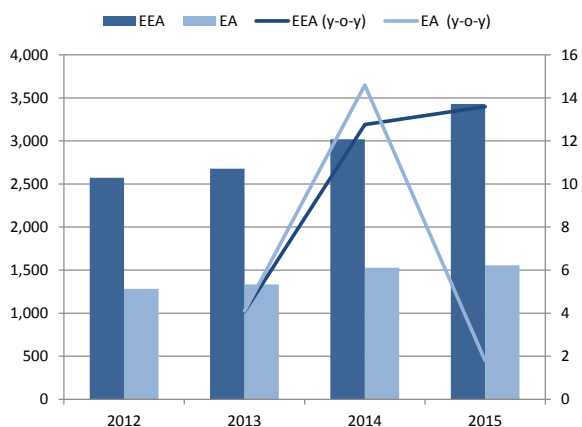
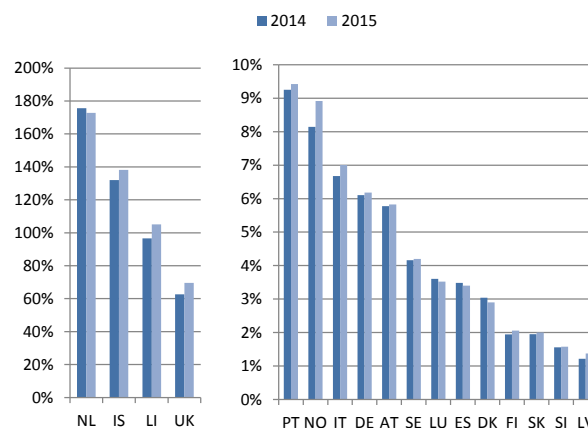


Figure 4.7: Penetration rates (total assets as per cent of GDP)



Source: EIOPA

Note: For many countries 2015 figures are preliminary and subject to major revisions. Penetration rates for GR, HR, RO, PL and HU are lower than 1 per cent. For the UK penetration rates refer to DB and HY sectors only.

4.3 Investment allocation and performance of the sector

The investment allocation of pension funds (in EA and EEA) has remained broadly unchanged in 2015. Debt and fixed-income securities account for the highest share. The total exposure to sovereign, financial and other bonds added up to approximately one third of total assets in 2015. Due to the long-term horizon of investments of pension funds, equity also represents a higher share of investments in the pension fund sector than in the insurance sector (Figure 4.8 and Figure 4.9).

The investment mix is relatively constant over time and across countries. In some countries, this is due to strict legal or contractual obligations for pension funds that aim to maintain stability over time. A shift towards fixed-income investment continues in the UK, albeit at a slower pace than in previous years. A few other countries also reported increased investment allocation to equities due to the low interest rates. The monitoring of this trend is recommended as, in case it persists, it has increased exposure of the sector to market risk.

Figure 4.8: Investment Allocation in EEA (in per cent)

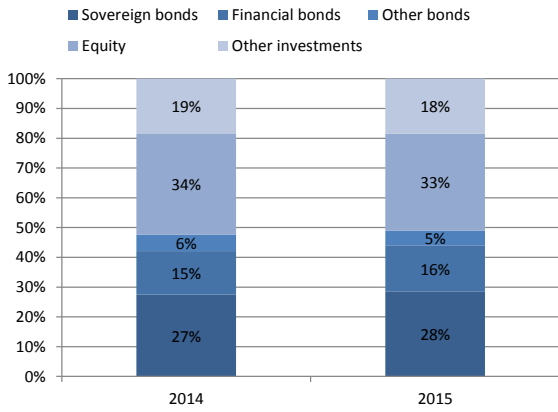
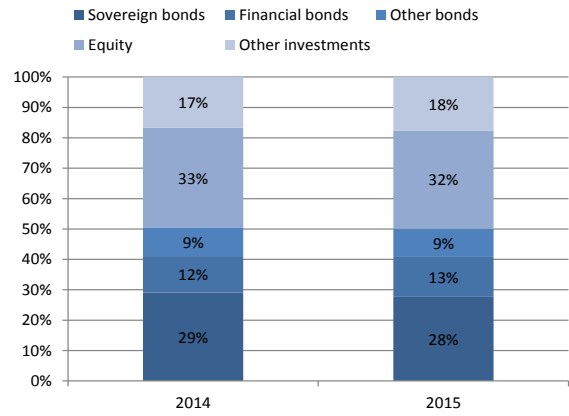


Figure 4.9: Investment Allocation in the EA (in per cent)

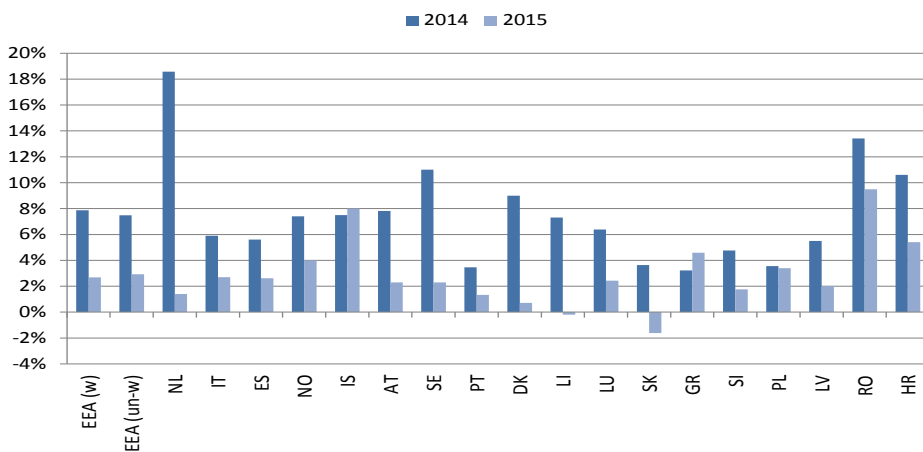


Source: EIOPA

Note: Data is preliminary and subject to revisions. Data on NL include DB schemes and for the UK DB and HY schemes only.

The average rate of ROA has significantly dropped from 8 per cent to 3 per cent in 2015 (Figure 4.10). This can be attributed to the low performance of the equity and fixed income markets during the second half of 2015. Additionally, the current low yield environment also puts additional pressure on the overall performance of occupational pension funds.

Figure 4.10: Rate of ROA (in per cent)



Source: EIOPA

Notes: Both the weighted and un-weighted averages for the EEA are calculated on the basis of the 18 countries that provided data and are depicted in the chart. The weighting is based on total assets. Data for 2015 is preliminary and subject to major revisions. For a few countries including the UK returns are not yet available. Consequently the weighted average is likely to be revised by the end of the year.