



Institutions for occupational retirement provision in Europe: ongoing challenges

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Author
Dieter Bräuninger
+49 69 910-31708
dieter.braeuninger@db.com

Editor
Barbara Böttcher

Deutsche Bank AG
Deutsche Bank Research
Frankfurt am Main
Germany
E-mail: marketing.dbr@db.com
Fax: +49 69 910-31877

www.dbresearch.com

DB Research Management
Ralf Hoffmann

In mainland Europe, the financial position of many institutions for occupational retirement provision (IORPs), which offer defined benefit pension plans, has improved in recent years. The average funding ratio of pension plans in the Netherlands and of private pension funds in Switzerland, for example, has rebounded markedly to about 110% at end-2013, respectively. This trend reflects the recovery in equity markets and the stabilisation of bond markets – albeit at historically low levels.

Nonetheless, the market conditions facing occupational pension schemes remain tough. One of the main challenges here is persistently low yields on high-quality bonds. However, the current situation also presents opportunities for highly-rated sponsoring undertakings offering pension plans that are not fully funded. These entities may find it worthwhile to issue bonds and to use the resultant proceeds as a source of finance to better fund these plans.

Low bond yields are accentuating an all-too-familiar challenge for IORPs: plan members' growing life expectancy. Life expectancy in the European Union (EU) is currently rising by around two-and-a-half months every year. However, experts reckon that people in future will live even longer than previously expected. A one-year rise in life expectancy can increase the present value of a typical pension plan's liabilities by between 3% and 5%. This would increase the liabilities of the German DAX 30 companies' plans alone by about EUR 15 billion.

New regulatory approaches and the looming prospect of huge costs both suggest that the hedging of risk – especially longevity risk – is becoming increasingly important. IORPs can, in principle, hedge this risk either by passing it on to an insurer or reinsurer or by transferring it to the capital markets, especially in the form of swap solutions.

The forthcoming revision of the EU Directive on Institutions for Occupational Retirement Provision ('IORP II') is also likely to pose a challenge for many IORPs. Although the recently published draft directive contains no new quantitative stipulations for IORPs' risk-based capital adequacy, these institutions will need to be prepared to meet more stringent requirements with respect to reporting, disclosure and risk management.



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Introduction

Equity indices in the euro area and Switzerland

1

Weekly averages,
1st calendar week of 2008 = 100



Sources: WEFA, Deutsche Bank Research

Yield on 10-year German government bonds

2



Sources: WEFA, Deutsche Bank Research

As Europe's equity markets have rallied and its bond markets have stabilised, the financial position of many institutions for occupational retirement provision (IORPs), which offer defined benefit pension plans, has improved. Their assets have grown considerably. In addition, the increase in liabilities that had posed a problem for many IORPs and sponsors has at least noticeably levelled off. This reflects the fact that the interest rates on high-quality bonds widely used for the discounting of liabilities have remained relatively flat in the core eurozone countries and Switzerland.

Nonetheless, the market conditions facing occupational pension schemes remain tough. The economic environment – especially the persistently low level of interest rates – continues to pose a challenge for many pension funds and IORPs¹. The longer this period of low interest rates lasts, the more difficult it will tend to be for many occupational pension schemes to earn investment returns that are sufficiently high to enable them to meet their benefit obligations over the long term. In a nutshell, the challenge facing many IORPs is that, despite low or even negative real interest rates, they still have to generate attractive, positive returns in real terms, especially as many defined benefit plans adjust their retirement benefits in line with wage-price or consumer-price indices and, consequently, offer (annual) pension increases in real terms.

Given that life expectancy is growing, many pension funds are faced with the prospect of their expenses continuing to rise sharply. New regulatory requirements are also threatening to impose further costs. It is therefore recommendable for pension funds to do all they can to mitigate risks and contain their costs.

Those responsible for (social) policy, welfare and regulation in a number of countries have taken steps to help ensure that defined benefit plans can be funded over the long term. This essentially includes reducing the mandatory benefits offered by such plans or making their provision more flexible. A case in point is (the wider range of) options for aligning benefits with pension fund performance. In addition to appropriate measures taken by pension funds to de-risk their portfolios and pursue a prudent asset liability management strategy that is also geared to the requirements of a low-interest-rate environment; such adjustments can help to halt the current trend for organisations to shun defined benefit plans and, instead, adopt purely defined contribution plans – a trend that is unsatisfactory for both employees and, ultimately, employers as well.

These developments offer a compelling reason to take a closer look at the trends affecting IORPs and their sponsors in selected European countries. We start by outlining the situation in which pension funds find themselves following the financial market turmoil of recent years. We then examine the risks attaching to pension funds with emphasis on the longevity risk. The final chapter focuses on imminent changes in the regulatory environment, especially the progress made on revising the EU Directive on Institutions for Occupational Retirement Provision. What are the main themes and potential implications of this directive, which the European Commission presented in draft form on 27 March?

¹ Both terms are used here synonymously. Where the term 'pension fund' refers specifically to the (fifth) type of occupational pension scheme available in Germany (Pensionsfonds), this is explicitly stated in the text.



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Digression on defined benefit and defined contribution plans

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The employer, as the sponsor of **defined contribution plans** (DC plans), usually undertakes to pay certain (scheduled) predetermined contributions – of a defined absolute amount or as a (defined) percentage of the employee's remuneration or other relevant metrics such as the company's profit – for the purpose of providing a retirement pension. The employer does not take on any further obligations. The usual opportunities and risks associated with funded pension schemes – e.g. with respect to investments and biometric changes – therefore accrue to the plan members, i.e. the employees concerned.

In the case of **defined benefit plans** (DB plans) the employer undertakes to provide certain predetermined benefits when the employee reaches retirement age. Depending on the type of benefits that have been promised, the employer either bears individual risks ('hybrid' plans, see below) or all relevant retirement pension risks.

The distinction between these two types of plan is especially relevant to the accounting treatment and recognition of occupational pension schemes under the International Financial Reporting Standards (IFRS) applicable in the EU and the European Economic Area (EEA). The pertinent requirements are specified in IAS 19 Employee Benefits.

IAS 19 states that in the case of DC plans, only the (defined) contributions paid by sponsoring undertakings to IORPs on behalf of employees in the respective financial year are recognised as personnel expenses in the financial accounts of the entity concerned. The pension assets accumulated through the contributions paid to IORPs on behalf of employees and the plan members' resultant entitlements are not recognised in the financial accounts of the sponsoring undertaking concerned.

By contrast, IORPs that are responsible for DB plans must use certain (actuarial) methods and metrics to recognise and measure the relevant pension liabilities and the resultant payment obligations. The key metric here is the discounted liabilities – or 'defined benefit obligations' (DBOs) – which correspond to the present value of the plan members' vested pension entitlements at the measurement date. The discount rate used for these calculations must be based on the interest rate available on high-quality fixed-income corporate bonds. When the balance sheet of the relevant IORP or sponsoring undertaking is prepared, these defined benefit obligations must be offset against the plan assets. Only assets that meet a range of strict criteria qualify as plan assets. For example, they must be used solely to settle the pension liabilities of the sponsoring undertaking (employer) and, in the event of insolvency, the sponsor's creditors must not be able to access these assets. This applies internationally to all assets held by pension funds. In Germany, assets that have been outsourced by means of special contractual trust arrangements (CTAs) or external types of occupational pension scheme (pension funds [*Pensionsfonds*], German retirement funds [*Pensionskassen*] and, in certain circumstances, benevolent funds [*Unterstützungskassen*]) qualify as plan assets.

However, the twelve possible (basic) varieties of pension plan** available under Germany's highly complex occupational pension law, which permits three forms of entitlement* and five types of occupational pension scheme, cannot be neatly classified as either DB plans or DC plans. Instead, what counts is essentially the structure of the individual plan concerned. It is generally the case, however, that contribution-based benefit entitlements, and the benefit entitlements that can be funded by non-insurance-based types of occupational pension scheme (direct pension entitlements or benevolent funds) are classified as DB plans. On the other hand, plans funded by direct insurance are generally classified as DC plans because the sponsoring undertaking bears none of the typical pension provision risks under this scheme. The classification of pension funds and German retirement funds depends partly on whether the sponsor is obliged to pay additional contributions and whether it benefits from the investment returns, for example in the form of corresponding reductions in future contributions. Funds under both of these scenarios would generally be classified as DB plans.

Hybrid plans, which shift some of the risk from the sponsoring undertaking to the employee, are becoming increasingly important internationally. These plans can limit the interest-rate and investment risk, for example, by linking the annual indexation of pension entitlements not to a fixed value or return but to a value that varies in line with financial market returns, e.g. the respective pension fund's investment performance. In the case of plans that link the indexation of occupational pensions to wages or consumer prices, hybrid plans can limit the inflation risk, for example, by stipulating maximum values for the annual adjustment of pension entitlements or by basing these adjustments on mixed indices that factor in not just prices and wages but also the macroeconomic situation, e.g. growth in real gross domestic product (GDP).

* Benefit entitlements, contribution-based benefit entitlements, defined contribution schemes with minimum benefits.

** Defined contribution schemes with minimum benefits cannot be funded by direct pension entitlements or benevolent funds.

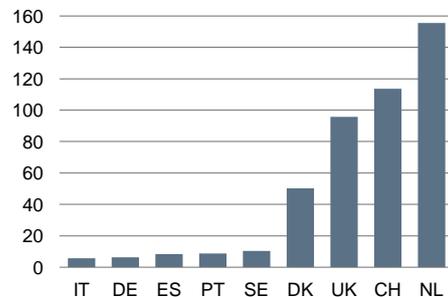


Current situation of IORPs

Pension fund assets*

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2012, % of GDP



*Autonomous pension funds

Source: OECD

According to statistics (adjusted for Germany) from the OECD, pension funds in the eurozone had accumulated assets of approximately USD 2.288 trillion by the end of 2012. If Switzerland (USD 734 billion) is included in this calculation, the total comes to roughly USD 3.022 trillion. A year earlier this total had been USD 2.675 trillion.² This represented an increase of 13%. Data from several countries like Germany and the Netherlands suggests that the assets have grown further in 2013. The growth achieved in recent years reflects the additional capital allocated to these funds as well as the substantial capital appreciation of the assets in these funds.

Most – almost two-thirds – of the assets held by pension funds in the aforementioned region are attributable to the Netherlands and Switzerland. Measured as a proportion of GDP, the assets held by pension funds in these countries at the end of 2012 amounted to 156% (end of 2013: 158%) and 114% respectively. If one disregards Iceland, these two nations therefore also top the list of OECD countries in this respect – ahead of the United Kingdom (104%) and Australia (92%). In the case of Germany, where five different types of occupational pension scheme are available, the OECD's statistics only included the assets held by German retirement funds and pension funds, which amounted to 6% of GDP. If companies' externally invested plan assets are included (see below), this figure is likely to rise to around 15%.

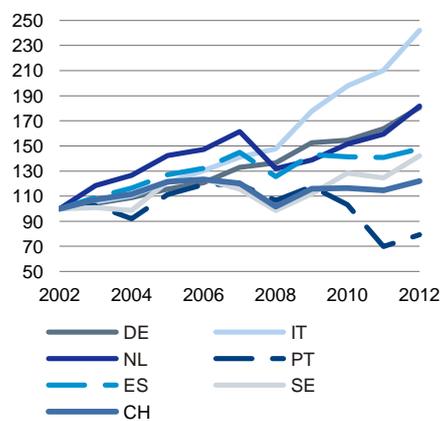
The bulk of these assets have been accumulated for either DB plans or hybrid plans. Both types of plan are widespread in the Netherlands and Germany. The compulsory occupational pension system operating in Switzerland only allows DB plans. The only major eurozone countries in which DC plans play a role, by contrast, are Italy and, in particular, Spain. The actuarial reserves accumulated by insurance companies in Germany for 7.41 million direct insurance policies – which, from the employer's perspective and for accounting purposes, are DC plans – are not included in the figures stated here.

The financial position of IORPs offering DB plans and/or hybrid plans in the eurozone countries and Switzerland has improved in recent years. Whereas the assets held in many funds have continued to grow sharply, the increase in accounting liabilities observed for some time started to slow significantly in 2012. In some countries these liabilities even decreased slightly in 2013.

Pension fund assets over time

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% of GDP, 2002 = 100



Sources: OECD, Deutsche Bank Research

The growth in pension fund assets partly reflects the rally in share prices on the respective domestic and other relevant international markets. It also reflects the rising prices of high-quality corporate bonds and investment-grade government bonds. IORPs with substantial holdings of such securities – such as German retirement funds – have especially benefited from this trend.

This means that the deep scars initially often left by the global financial and economic crisis and, subsequently, the euro crisis in many IORPs' asset portfolios have now healed or, at least, are no longer quite so deep. It is, of course, true to say that the picture in Europe differs from one region to another, especially as asset allocation strategies have to meet country-specific requirements. Although the crash during the crisis was more severe in countries where a significant proportion of pension fund assets are traditionally invested in equities, the recovery was also generally stronger. These countries include Switzerland and, in the eurozone, the Netherlands in particular. In 2012 Spain became the first of the peripheral EU countries whose pension fund assets exceeded their pre-crisis levels – at least as a percentage of GDP – whereas this has not (yet) happened in Ireland or Portugal, for example.

² OECD (2013). Pension Markets in Focus 2013.

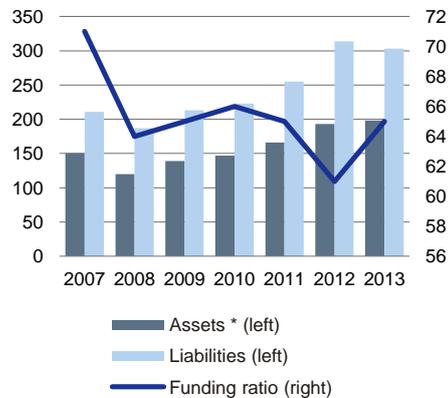


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DAX 30 company pension plans over time

6

EUR bn (left), % (right)



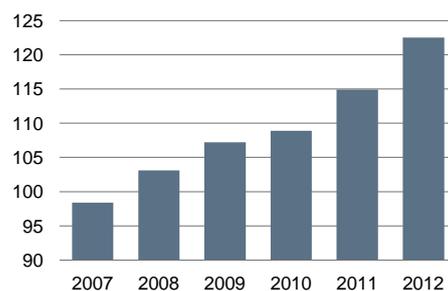
* Plan assets

Source: Towers Watson

German retirement fund assets

7

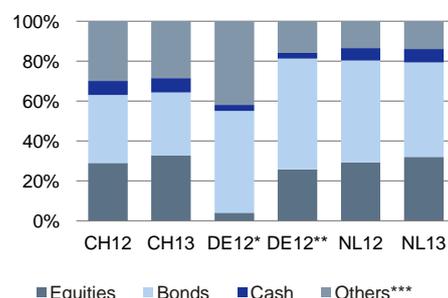
EUR bn



Source: German Federal Financial Supervisory Authority (BaFin)

Pension fund asset allocation 2012 & 2013

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* Pension funds and retirement funds; ** DAX 30 company plans; *** Real estate, insurance policies, private equity etc.

Sources: DNB, OECD, Towers Watson, Deutsche Bank Research

Pension fund assets as a percentage of GDP in Switzerland and the Netherlands grew by around 19 percentage points and 59 pp respectively between 2008 and 2012, with most of the increase in the Netherlands in particular taking place in 2011 and 2012. Having suffered a sharp decline in 2008, asset holdings in Switzerland staged a strong recovery the following year. This reflected the relatively high proportion of equities in both countries' pension fund assets. Narrowing credit spreads on high-yield bonds also had a positive effect.

Because five different types of occupational pension schemes are available in Germany, a distinction needs to be made here. Just like direct insurance, which is not included in this survey, the other two insurance-based types of occupational pension scheme – retirement funds and (generally) pension funds – are also governed, in terms of their investment decisions and in other respects, by different restrictions than the non-insurance-based schemes (direct pension entitlements and benevolent funds). In the case of the latter two schemes, it is not a legal requirement for companies to invest their pension assets externally. There is, however, a tendency for large companies – especially publicly traded ones and those listed in the leading DAX or MDAX indices – to invest their direct pension entitlement assets externally. Contractual trust arrangements (CTAs) have proved especially useful in this respect.³

According to research conducted by the consultancy Towers Watson, the plan assets held by Germany's largest publicly traded companies (DAX and MDAX) totalled approximately EUR 215 billion (or 7.9% of GDP) at the end of 2013 compared with EUR 210 billion at the end of 2012. Roughly EUR 198 billion of this amount was attributable to the 30 companies listed in the DAX index.⁴ German companies' total plan assets are likely to be much higher than this because large family-owned firms, for instance, also invest some of their pension assets externally. German retirement funds held total investments of EUR 122.5 billion (4.6% of GDP) at the end of 2012. The assets held by German pension funds at the end of 2012 amounted to EUR 26.3 billion, or 1% of GDP. However, a significant proportion of these assets relates to large companies' external plan assets.⁵

In contrast to the assets of many IORPs outside Germany, the assets held by German retirement funds have grown fairly steadily, rising by an aggregate 35% between 2008 and 2012. These assets increased slightly even during the more challenging years. In 2012, however, there was significant growth, which can be explained by the relatively high proportion of fixed-income securities among the assets held by German retirement funds (registered bonds 30%, promissory notes and loans 21.5%, bearer bonds and others 10%; by contrast, equities and profit-sharing rights held mainly in the form of investment funds accounted for only 4.4%). The performance of assets invested externally to cover direct pension entitlements has been more volatile. Having contracted sharply in 2008, the plan assets held by the DAX 30 companies have grown by more than a third (approximately 35%) over the past three years alone, and they have increased by almost two-thirds since their low of 2008. According to figures published by Towers Watson, the plan assets held by DAX companies are mainly (55%)

³ CTAs are subject to only minor investment restrictions. Sponsoring undertakings can use them as an efficient way of improving their key financial performance indicators, mitigating the risk of pension commitments and protecting their employees' entitlements in the event of insolvency.

⁴ Towers Watson (2014). Finanzierung von Pensionsplänen: Erholungstrend setzt sich dank guter Aktienperformance fort. Press release, January 2014; and DAX-Konzerne: Rückenwind für die betriebliche Altersversorgung. Press release, March 2014.

⁵ In the case of publicly traded companies that account for their pension plans under IAS 19, any pension assets that have been outsourced to CTAs as well as the assets of a special type of pension funds and, where applicable, assets held by German retirement funds (see page 3) qualify as plan assets which, for accounting purposes, are offset against pension liabilities. In the case of companies that account for their pension plans under the German Accounting Law Modernisation Act (BilMoG), this option is only available for assets held by CTAs.

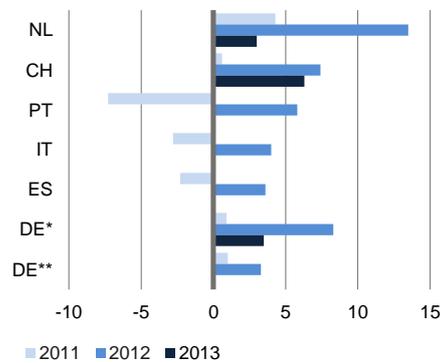


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Returns on pension funds

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Net real returns, %



* Plan assets of DAX 30 companies
** Retirement funds (Pensionskassen)

Sources: Mercer, OAK, OECD, Towers Watson, Deutsche Bank Research

invested in fixed-income securities – primarily corporate and government bonds. Equities account for just under a quarter (24%) of the assets held. However, the allocation of additional capital has also contributed significantly to this growth.

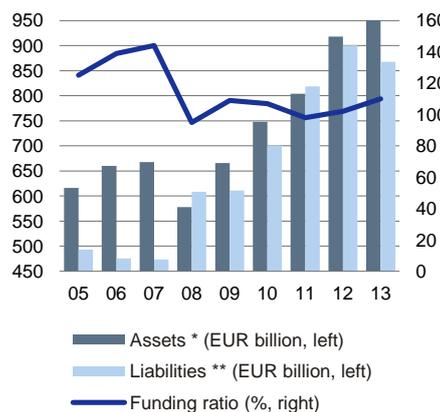
The rising prices of key fund assets in many countries over recent years are reflected in the rates of return achieved by pension funds in Europe. Pension funds in the Netherlands led the field in 2012 with a (real) return of 13.5% (2013: 4.8%, real 3%, according to estimates from Mercer). High returns were also generated by Swiss retirement funds (7.4% in 2012 and 6.1% in 2013). German retirement funds yielded a return of 3.3% in 2012. The asset managers hired to invest the plan assets of major German companies achieved returns of 10.3% in 2012 and just 5.1% in 2013. The high current prices of high-quality bonds in particular do, of course, make it more difficult to invest the funds of IORPs.

However, the generally prevailing environment of low interest rates poses a problem for IORPs not only when investing their assets. Low yields on high-quality bonds held as part of DB plans also affect the level of liabilities. The discount rate that publicly traded companies use to measure their occupational pension plan liabilities under International Financial Reporting Standards (IAS 19) is based on the yields available on high-quality corporate bonds. In departure from this procedure, the discount rates applied to IORPs in individual countries are subject to diverse regulatory requirements.⁶

Funding ratios of pension funds in the Netherlands

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Year-end figures, EUR bin (left), % (right)



* Assets invested at funds' own risk
** Technical provisions

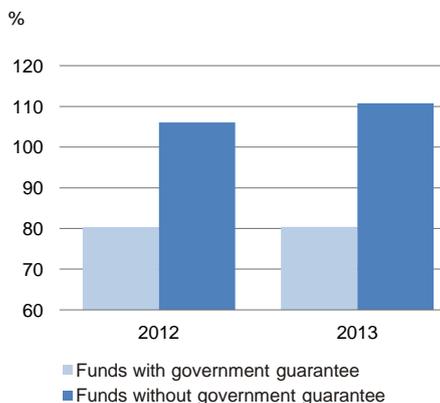
Source: Dutch central bank (DNB)

The sharp fall in these rates of return during the previous years up to 2013 has, therefore, caused a corresponding substantial increase in the liabilities of pension funds offering DB plans. In some cases this effect was more pronounced than the positive returns generated on the pertinent bond holdings on the assets side. The broad-based uptick in returns last year slightly reduced these liabilities.

The divergent and, in some cases, countervailing trends in pension plan assets, on the one hand, and liabilities, on the other, are illustrated by IORPs' funding ratios. This metric represents the assets held by pension funds at their own risk in relation to the funds' liabilities or technical provisions. The funding ratio of Dutch pension funds, for example, has fluctuated considerably over time. After the financial crisis broke, this ratio plunged from 144% to only 92% in the first quarter of 2009. It then rose to 112% in the first quarter of 2011 before falling right back to 94% over the following 15 months. At the end of 2013 it had rebounded to 110%.

Funding ratios of retirement funds in Switzerland

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Source: OAK BV

Although the funding ratio of Swiss retirement funds also fell sharply in the wake of the financial crisis, it has since recovered with just occasional fluctuations. There is, however, a substantial difference between the 1,810 private-sector retirement funds (as recorded in the official statistics of the Swiss Supervisory Commission for occupational pensions [*Oberaufsichtskommission Berufliche Vorsorge OAK BV*]) and the 95 public-sector funds there. Whereas the funding ratio of private-sector retirement funds averaged 110.8% at the end of 2013, the respective figure for funds with government guarantees was only 80.4% and almost three-quarters (72%) of public-sector funds were underfunded.⁷

⁶ The discount rates applicable to German retirement funds are prescribed by the German finance ministry. The rate currently applicable to new, recently concluded pension contracts is 1.75%, while the rate for older contracts is much higher in some cases. Pension funds that offer limited guarantees can use a discount rate that corresponds to their expected investment yield minus a markdown. The BilMoG requires pension fund liabilities to be discounted at the respective average market interest rate for the previous seven financial years, this rate corresponding to the respective liabilities' residual maturity in each case. In certain cases the average market interest rate determined for an assumed residual maturity of 15 years may be applied across the board. Appropriate benchmark rates are published by the Bundesbank. Retirement funds in Switzerland use the 'technical' interest rate to measure their liabilities. This rate is set by regulatory bodies and is currently 3% (plus up to 0.25%). Pension funds in the Netherlands use a market-based yield curve with an ultimate forward rate of 4.2% at the long end.

⁷ The underfunding of public-sector retirement funds is partly due to the fact that the pertinent regulatory requirements allowed these funds' pension plans to be underfunded until end-2011.



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The average funding ratio for the pension liabilities of DAX 30 German companies fell by around 5 percentage points over the course of 2012 to 61% after having recovered in previous years from its sharp decrease in 2008. Its renewed decline in 2012 primarily reflected the further fall in the discount rate that year. According to research conducted by Towers Watson, the funding ratio rebounded to 65% in 2013 as the interest rates on relevant high-quality bonds edged up. The relatively low funding ratios for German pension plans compared with the corresponding ratios in other countries are primarily attributable to the fact that German companies started only at a fairly late stage – in some cases not until the previous decade – to ensure that their direct pension benefits were funded by externally-invested capital. By contrast, pension funds in other countries – such as those in the Netherlands and Switzerland – must comply with the regulatory requirement for their liabilities to be fully funded. Regulatory requirements stipulate that pension plans funded by insurance-based types of occupational pension scheme in Germany must also be fully funded.

IORPs continue to face substantial risks

1. Challenge posed by low-interest-rate environment

Interest-rate and investment risk

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Because a period of several decades may elapse between the time when younger members pay into a pension plan and the point at which they draw benefits under the scheme, it is virtually impossible to provide matched-maturity funding for the plan by means of correspondingly long-dated bonds. The availability of bonds with maturities of 30 years or more in European countries is usually either insufficient or totally non-existent. Derivatives can, however, be used as an alternative here. In cases where matched-maturity funding has not been – or cannot be – provided for benefit entitlements and payouts, pension funds are exposed to investment risk and, in particular, interest-rate risk. Falling interest rates increase the present value of future liabilities and their duration.

Even though the situation for many pension funds has recently improved significantly, market conditions remain tough. The low level of interest rates continues to be a major issue. Low interest rates pose a challenge for all funded pension schemes. This is particularly true of IORPs that fund pension plans offering fixed, defined benefits irrespective of the levels of interest rates and investment income. These include insurance-based DB plans that offer guaranteed rates of return on accumulated contributions – irrespective of prevailing market returns – during the vesting and/or payout period. Such low interest rates have serious consequences. Firstly, IORPs offering such plans find it difficult to invest sufficiently profitably the cash that they receive from contributions paid, current income and/or the proceeds of their investments. And secondly, low bond yields drive up the present value of liabilities without usually equally increasing the assets held for the purpose of funding these obligations.

The extent to which individual IORPs are affected depends on the (maturity) structure and, consequently, the cash flows of their assets and liabilities (i.e. their asset allocation). This situation poses greater challenges for pension funds that currently have relatively high (net) cash inflows and need to (re)invest this cash accordingly than it does for IORPs that have modest investment requirements. And these challenges particularly affect IORPs whose investments – perhaps for regulatory reasons – are heavily focused on assets that are currently yielding low returns. Given the generally very lengthy time horizons of their benefit commitments, IORPs are usually hit hard by falling or low rates of return in terms of the impact on their liabilities. This is especially true of IORPs with mature pension plans whose ratio of (younger) pensioners to active members (and, thus, the level of future net benefit payouts) is relatively high. Experts reckon that accounting liabilities – and, consequently, the necessary provisions – rise by as much as 20% in Germany if the pertinent discount rate falls by 1 percentage point (100 bp).⁸ In the Netherlands a 1 pp fall in market interest rates would cause the average funding ratio of the Dutch pension plans to decline about 15%, if there was no interest rate hedging.⁹

⁸ Heubeck AG (publisher) (2013). Niedrigzins belastet die bAV: Gesetzgeber ist jetzt gefordert. Press release, October 25, 2013.

⁹ De Nederlandsche Bank (ed.) (2013). Pension sector hedges half the interest rate risk. DNBulletin, 3 September 2013.



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The main problem in terms of funding is that falling interest rates lengthen the duration of liabilities (i.e. they have a similar effect to an increase in life expectancy). At a time when investment returns are declining, IORPs that pursue risk-based investment policies – as regulators are increasingly demanding (see below) – therefore need to lengthen the duration of their assets as well. However, the supply of suitable bonds with sufficiently long maturities is relatively small, especially in Europe, and, of course, at present there is the problem of low yields. Derivatives can, however, be used as an alternative here.

It is likely that those IORPs which have been particularly affected by the low level of interest rates will be on the lookout for higher-yielding alternatives to fixed-income investments from among the universe of assets that the regulatory authorities have approved for them. Various options are available here. In the case of larger IORPs, for example, we are likely to see a more pronounced trend towards investing in infrastructure and other alternative assets. A major challenge in this context will be to exploit the potential for superior returns while mitigating the (investment) risk as far as possible.

The signs are that interest rates in the eurozone and Switzerland are set to remain relatively low for the time being. The IORPs that thrive in this environment will be those that act swiftly and decisively to take the necessary measures (without being impeded by regulatory restrictions).

However, this situation should not obscure the opportunities currently available to highly-rated sponsoring undertakings offering pension plans that are only partially funded, like many plans in Germany. Given the low yields available on high-quality corporate bonds at present, it might be worthwhile for the respective (German) entities to raise debt capital by issuing such bonds and to use the resultant proceeds to (fully) fund their pension liabilities externally, for example by transferring these proceeds to a new CTA or by allocating additional capital to an existing CTA. External financial assets that have been accumulated in this way can be used to substantially reduce the risks inherent in DB plans by means of appropriate liability-driven investments.¹⁰

2. Although low inflation rates can reduce current liabilities, inflation risk remains

The prevailing low-interest-rate environment has generally been accompanied by relatively low rates of inflation. The indications are that eurozone inflation will not rise much more strongly in the foreseeable future. Economic growth is set to remain moderate for the time being despite the gradual recovery. Even Germany is fairly unlikely to grow above trend on average over the next few years. And unemployment in the peripheral eurozone countries will probably only decline gradually. Deutsche Bank Research expects inflation in the euro area to remain relatively low at 0.8% and 1.3% in 2014 and 2015 respectively. Consumer prices in Switzerland are also likely to rise only marginally.

All other things being equal, i.e. viewed in isolation and excluding the impact of interest rates, consistently low rates of inflation relieve some of the pressure on pension plans whose benefits are pegged to consumer price indices or correlated wage levels. The extent to which these schemes are benefiting from

Changes in GDP and inflation rates

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As of May 2, 2014; year-on-year changes (%)

	Real GDP			Inflation rates		
	2013F	2014F	2015F	2013	2014F	2015F
EU-18	-0.4	1,1	1.5	1.3	0.8	1.3
DE	0.4	1.5	2,0	1.6	1.2	1.7
FR	0.3	1.0	1.4	1.0	1.0	1.1
IT	-1.8	0.6	1.1	1.3	0.7	1.2
ES	-1.2	0.7	1.5	1,5	0.5	1.1
NL	-0.8	0.9	1.4	2,6	0.5	1.2
CH	2.0	1.8	2.0	-0.2	0.4	0.8
GB	1.7	2.9	2.2	2,6	1.6	1.8
SE	1,5	2.7	3.0	0,0	0.5	1.8

Source: Deutsche Bank Research

¹⁰ Today's asset management professionals employ a wide range of strategies when investing institutional pension assets. In the context of liability-driven investment (LDI) strategies, an approach with different portfolios has become increasingly important in recent years, partly as a result of the low investment returns available. This strategy involves splitting the assets under management into a low-risk, liability oriented portfolio and a return-seeking portfolio. The liability portfolio is invested conservatively and according to the pertinent liabilities' (maturity) profile which also includes instruments to reduce typical risks of a pension plan. This enables asset managers to invest the other, yield-seeking portfolio with the more specific aim of generating superior returns.



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Inflation swaps

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An inflation swap involves exchanging payments at a predetermined future date in accordance with predefined conditions in order to hedge against unexpected price increases. The party – such as a pension fund – looking to hedge its exposure (inflation buyer) undertakes to pay a predetermined sum that may, for example, correspond to the value of anticipated pension payments (assuming defined levels of inflation and interest rates) plus a premium. By contrast, the other party (inflation seller) – such as an investment bank – pays on the due date an amount that is linked to the actual level of inflation, as defined by an agreed (benchmark) inflation index.

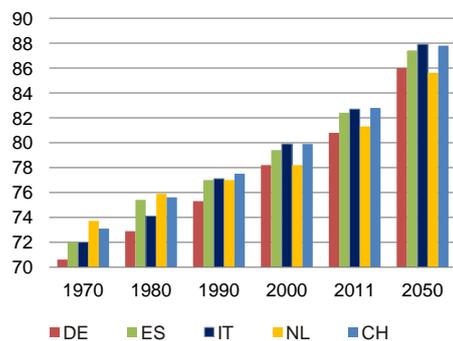
this trend depends partly on the number of current pension recipients or the amount of annual benefits paid as a proportion of the total number of plan members and the amount of plan assets. These effects would normally be expected to arise in the case of pension plans that offer traditional benefit entitlements, such as those that were widely available in the Netherlands and Germany prior to 1999.

The prospect of consumer prices rising only moderately for the foreseeable future does not, of course, necessarily mean that inflation will remain permanently low and eradicate any inflation risk for IORPs. Inflation forecasts relating to the longer term – especially over the sort of periods relevant to pension schemes – involve huge amounts of uncertainty. Inflation risk, therefore, needs to be monitored accordingly. This issue is particularly acute because even minor deviations in inflation trends can substantially increase the amounts expected to be paid out by pension plans that offer indexed benefits. Consequently, many pension funds have adopted measures such as appropriate investment strategies that include inflation swaps and/or they have outsourced their liabilities to (re)insurers in order to mitigate or hedge their inflation risk (see also page 12).

Life expectancy at birth

15

Boys and girls (years)

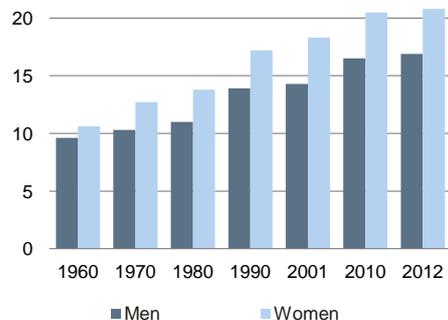


Sources: OECD, UN

Pension drawdown periods under Germany's statutory pension scheme*

16

Years



* Retirement and disability pension benefits paid in western Germany

Source: German statutory pension insurance scheme

3. Longevity risk

Low bond yields are accentuating an all-too-familiar challenge for IORPs: plan members' growing life expectancy. Life expectancy at birth in the major eurozone countries has risen by around 10 years since 1970. In Germany, men aged 65 years – which in several countries still is the statutory retirement age – can today expect to live for at least another 18 years. Men of this age in Italy, Spain and Switzerland can expect to live for another 19 years. In all these cases, this is about 6 years more than in 1970. The increase in life expectancy both at birth and for 65-year-olds has been especially substantial over the last ten years.

Because the actual retirement age has fallen in many countries throughout much of the past few decades, the period for which pensions are drawn has generally risen even more sharply. Under Germany's statutory pension insurance scheme, for example, it has increased by almost eight years, or 70%, since 1970. The actuarial models used to compute occupational pensions also reflect these changes. For example, a pension entitlement granted to a 30-year-old today according to the (Heubeck) mortality tables commonly used in Germany at present would have to factor in – from the age of 65 – a pension drawdown period that was roughly 50% longer than the one applicable under the '1983' mortality tables that were used until 1997.¹¹

A rise in life expectancy has two effects. Firstly, a higher percentage of plan members reach pensionable age. And secondly, the period for which pension benefits are drawn increases considerably. All other things being equal, both of these effects raise the numbers of pensioners and, consequently, increase the amounts spent by pension funds on retirement benefits.

In actual fact, both the number of pension beneficiaries and IORPs' spending on retirement benefits have already risen sharply – albeit, of course, not solely owing to longevity. In Switzerland, for example, the number of occupational retirement pensions paid during the 16-year period from 1996 to 2012 grew by 83% while spending on retirement benefits more than doubled (up by 121%), which averaged out at an annual nominal increase of 5.2%. In Germany, the number of occupational pensions protected from insolvency by the German Pension Protection Association (PSVaG) – primarily pensions funded by direct

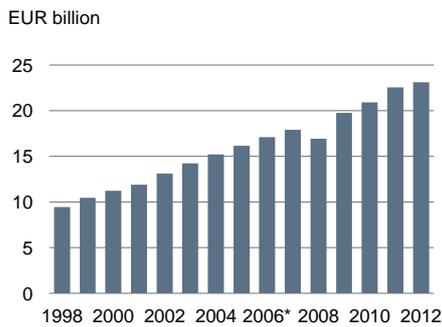
¹¹ Andersen, Jan et al. (2012). Die betriebliche Altersgrenze wandert – wohin wandern die Kosten? In: BetrAV – Betriebliche Altersversorgung. 68th annual edition, booklet 06/2013, page 473.



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Retirement benefits paid by Dutch pension funds offering DB plans

17



*Break in the data series

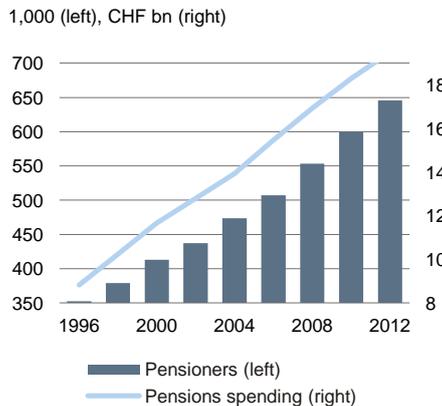
Source: Dutch central bank (DNB)

entitlements and benevolent funds – rose by almost 30% between 1995 and 2012. The retirement benefits paid by Dutch pension funds offering DB plans grew by an impressive 44%, or 7.6% p.a., in nominal (gross) terms in the first half of the last decade. The corresponding increase between the beginning of 2006 and 2013 was 38%, or 4.6% p.a.

Demographic trends suggest that spending on retirement benefits is set to rise particularly sharply over the coming decade. This is the period when Western Europe's baby boomers are due to retire. Providing adequate retirement benefits for what by then will be huge pensioner cohorts every year will pose a challenge for IORPs, especially as the pension drawdown period is also likely to increase further. The medium scenario projection assumed by the German Federal Statistical Office is that boys' life expectancy at birth is set to rise by a further 7.3 years to 85 years by 2060, while girls should see their life expectancy at birth increase by 6 years to 89.2 years over the same period. This means that pension funds will have to be prepared to pay a large number of long-term retirement benefits unless the pensionable age is raised substantially. This, therefore, gives rise to an urgent need to accumulate sufficient pension assets.

Occupational retirement pensions in Switzerland*

18



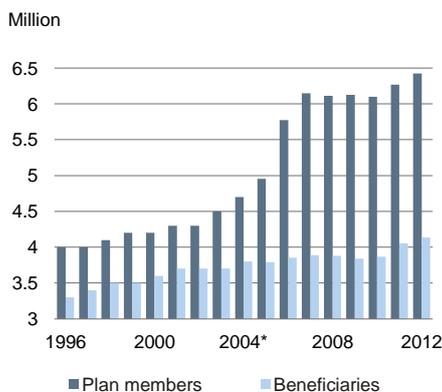
* All retirement funds

Source: Swiss Federal Statistical Office (BFS)

This sharp rise in the number of pensioners at the same time as the working population is tending to decline is also problematic because there is uncertainty about future life expectancy trends. Assumptions deemed to be sufficiently cautious about future levels of liabilities can quickly become obsolete if, for example, medical advances or lifestyle changes mean that retirees are drawing occupational pensions for much longer than originally expected. Cologne-based statistician Eckhard Bomsdorf caused a stir some time ago when the calculations produced by his models suggested that the life expectancy of infants born in 2010 was almost 10 years longer than the figure shown in the official statistics. According to his calculations, the life expectancy of 65-year-old men was approximately 1½ years longer than the relevant figure published by the German Federal Statistical Office, while the corresponding number for women was roughly 2 years longer than the official figure.¹² More recent research findings reveal that particularly strong future gains in life expectancy can be expected for people in the over-80 age bracket. In addition, further medical and pharmaceutical advances in reducing mortality caused by cardiovascular disease (heart attacks) or in the fight against cancer could substantially raise pensioners' life expectancy. It is generally the case, however, that the reasons for changes in life expectancy vary depending on their timing and the age of the person concerned, which increases the uncertainty of projections.

Pension entitlements covered by the German Pension Protection Association*

19



* Pension entitlements protected from insolvency by the German Pension Protection Association (PSV);

** Increase from middle of last decade due to deferred compensation scheme

Source: German Pension Protection Association (PSV)

Having to pay pensions for a longer period than expected poses a significant risk for IORPs and their sponsors. Changes in the basic actuarial assumptions made for pension plans must be recognised in the financial accounts of the entity concerned as soon as they become known. They can lead to a situation where a plan is underfunded and the sponsoring undertaking is thus obliged to pay additional contributions into the plan.

The extra level of financial burden imposed by an increase in life expectancy in any given case will depend on a number of factors. In addition to the age structure of the plan's members, the interest-rate environment will also play a role here. Any divergence between actual and projected life expectancy will have a greater impact when interest rates are low than when they are high.

Academics and practitioners have in recent years increasingly been turning their attention to the issue of biometric risks – and longevity risk in particular – because of their impact on costs.¹³ Figures from the International Monetary

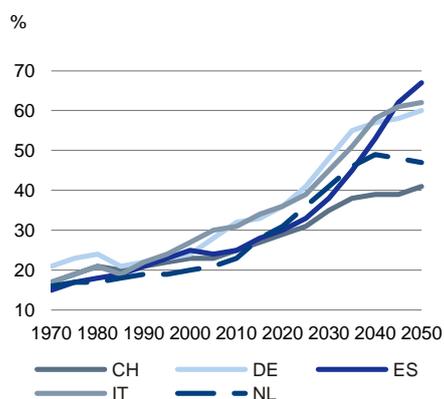
¹² Bomsdorf, Eckard (2010). Die Lebenserwartung in Deutschland – ein Blick in die Zukunft. Ifo Schnelldienst 22/2010, page 25 onwards.

¹³ Life expectancy is the most important of the so-called 'biometric' risks. Many IORPs also grant disability benefits and/or pay pensions to surviving dependants (widows/widowers and orphans).



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Sharp rise in old-age dependency ratios 20



* Number of people aged over 65 for every 100 people aged 15 to 64

Source: UN

Fund (IMF) suggest that a one-year rise in life expectancy can increase the present value of a typical pension plan's liabilities by between 3% and 4%. In the case of the Netherlands, for example, which has hybrid and DB plan liabilities totalling EUR 861 billion, the IMF's assumption would result in additional liabilities of up to approximately EUR 34.5 billion. Experts reckon that this scenario would increase Germany's future payments by as much as 4% to 5%. This would mean that the liabilities of the DAX 30 companies' plans alone would grow by some EUR 15 billion.

These figures illustrate how important it is to address the issue of longevity. The first stage in this process is to identify the longevity risk, which involves documenting and anticipating as accurately as possible the probable mortality conditions in a given cohort of plan members.¹⁴ Furthermore, many IORPs have started to introduce measures to limit their longevity risk.

There are essentially two ways of hedging longevity risk: IORPs can either outsource it to an insurer or reinsurer (buy-out or buy-in solution) or transfer it to the capital markets, usually by using swap solutions (longevity swaps, see page 12). The markets for both buy-out and buy-in solutions and for longevity swaps performed well in 2013. This shows that at a time when yields on high-quality bonds remain low, sponsoring undertakings have been using available liquidity and/or favourable borrowing facilities to de-risk pension plans.

The indications are that the hedging of longevity risk is becoming increasingly important. The European Insurance and Occupational Pensions Authority (EIOPA) has been advocating that pension funds should control and manage their business risks on a wider scale (see below). The general public's awareness of longevity risk is, in any case, likely to be raised – if it hasn't already – by the growing number of pensioners as a result of demographic trends. Even if life expectancy does not rise as sharply as some experts have predicted, the additional liabilities borne by many sponsors of DB plans could potentially be considerable. However, it makes little sense for the entities concerned to shoulder these risks themselves and, in effect, to act as a kind of insurer while also conducting their core business. This is especially the case at present because the low interest rates available on high-quality bonds are making it particularly difficult for IORPs subject to investment restrictions to fund their potential additional liabilities.

Capital-market-based solutions offer several advantages in the mitigation of these risks. Firstly, the new regulatory (solvency) requirements (Solvency II) could reduce insurance companies' risk appetite.¹⁵ And secondly, there are many parties that are likely to be interested in accepting longevity risk that has been mediated through the capital markets. Potential candidates would theoretically be any major market participants whose opposing cash flows and, consequently, countervailing risks offset those of pension funds. These include, for example, (re)insurance companies that offer term life insurance (or reinsure the relevant risks), pharmaceutical companies that offer product ranges tailored to elderly customers, and operators of care homes and retirement homes. Because longevity risk is not correlated with capital market risks, other investors – such as hedge funds and sovereign wealth funds – should be interested in entering into swaps of this kind.

¹⁴ Life expectancy is strongly correlated with gender and social factors. It is well known that women live much longer than men. Another well-known factor is the strong correlation between life expectancy and income levels, which can be explained by the fact that people with higher incomes usually live more healthily. Before analysing longevity risk, it is therefore essential to know the structural characteristics of the pertinent cohort of plan members. Because health risks and relevant behaviours are also rooted in the social contexts and environments in which people live, actuaries in the United Kingdom sometimes use the postcodes of residential areas to estimate the longevity risk attaching to pension plans.

¹⁵ After several delays, Solvency II will enter into force on January 1, 2016 (see box on page 13).



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Digression on ways of mitigating longevity risk

21

Pension funds can essentially outsource their longevity risk either to an insurance company or to the capital markets.

Insurance-based solutions are available internationally in two varieties.

The first is the **'buy-out' solution**. This involves outsourcing or transferring the pension plan in its entirety to an insurer or reinsurer. The insurance company then takes the place of the IORP. It assumes all the liabilities specified in the plan and, consequently, accepts all the associated risks. In return, sufficient assets must be transferred to the insurer. This type of solution thus presupposes that all benefit obligations have been fully funded. The administration of the plan is usually outsourced as well.

Under the second variety – the **'buy-in' solution** – the IORP remains both formally and *de facto* obliged to pay pension benefits to the plan members. However, these liabilities are fully covered by (re)insurance. Buy-ins are often only used for a certain portion of the liabilities, for example to cover retirement benefits for the current occupational pensioners or individual groups of plan members or pensioners, such as (former) senior employees. In order to hedge liabilities to occupational pensioners, the IORP purchases from a (re)insurance company a 'bulk annuity', which means that the (re)insurer undertakes – in return for an appropriate premium – to remit to the IORP the (monthly) payments needed to provide a lifelong pension ('annuity') for the pensioners concerned. This option usually also presupposes that the relevant benefit obligations have been fully funded and that the plan assets can be used to finance the 'premium', for example by being transferred to the (re)insurer. If this is not the case, this kind of transfer would impose substantial costs on the sponsoring undertaking. Although a buy-out or buy-in solution enables pension funds and sponsoring undertakings to offload the risk of any pertinent adverse trends, it also prevents them from exploiting the upside potential of benign trends (e.g. in the capital markets).

A further option is to use the capital markets (e.g. **longevity swaps**) to hedge pension liabilities. Under this scheme, the pension fund (the 'protection buyer') pays the 'protection seller' – usually an (investment) bank or a reinsurer – a pre-arranged (fixed) premium for each period of the term to maturity. This premium is determined by the pension benefits expected to be paid during the relevant period – these benefit payments being calculated on the basis of the actuarial assumptions agreed by both parties – and includes a premium for accepting the risk. In return, the protection seller in each period remits payments that are determined by the pension benefits actually paid in each case. Protection sellers – especially investment banks – often pass on some or all of their risk to other interested parties in the capital markets.

This type of hedging differs significantly from the insurance-based solutions. Under this scheme, for example, the IORP retains control over the plan assets and, consequently, is free to determine the (long-term) investment strategy. It can also use separate hedges that are specifically tailored to longevity risk criteria. This means that the IORP itself can decide to what extent and in what ways it wishes to hedge other types of risk (e.g. inflation risk). Longevity swaps can therefore be combined with swaps used to hedge inflation risk and interest-rate risk or with other instruments used in liability-driven investment strategies, such as those offered by professional asset managers. This enables IORPs to pursue comprehensive risk hedging strategies. Such solutions are known as **do-it-yourself (DIY) buy-ins** or synthetic buy-ins. Pension funds can mitigate the risk of the counterparty or protection seller defaulting (counterparty risk) by, for example, obtaining collateral security, carefully selecting their counterparties and/or collaborating with a number of partners.

Index-based swaps are suitable for hedging smaller pension plans. The payments that the protection seller remits in this case are determined not by the pension benefits actually paid by the fund but by the varying level of the mortality index that has been chosen as a benchmark. This approach also helps to mitigate the problem of asymmetric information ('lemon' risk) that can occur with customised solutions, i.e. the fact that pension funds, when measuring the longevity risk concealed in their plans, tend to possess superior information. However, here the pension fund bears a certain basis risk to the extent that the actual mortality of plan members differs from that of the benchmark population tracked by the index. Yet, such products generally offer the advantage of liquidity and commensurate marketability.

A further option being debated is **longevity bonds**, although the necessary markets have yet to be established.



Swap-based solutions can be customised for certain pension schemes, especially those with large numbers of plan members or occupational pensioners. The advantage of these solutions is that they are very accurate at mitigating the associated risks to the exact extent desired by the IORPs in each case. However, highly customised swaps are not very marketable and, consequently, offer little liquidity.

Index-based swaps can be used to mitigate the risk of fairly small retirement plans. The risks attaching to the pension plan are hedged to the extent that the plan members' biometric data is consistent with that of the (benchmark) population tracked by the index. A sufficient number of suitable indices is required if as many DB plans as possible are to be hedged to a large extent. Several institutions are working to achieve this goal, one of them being Germany's Deutsche Börse. One of the main institutions active in this area at European level is the London-based non-profit organisation Life & Longevity Market Association (LLMA), which is working to establish a liquid market in standardised, index-based products that can be used to hedge longevity risk.¹⁶

Only limited changes in the regulatory environment?

Solvency II

22

Solvency II stipulates requirements for insurance companies' capital adequacy, risk management and reporting systems. This regulatory framework will be fully applicable with effect from January 1, 2016. It must be transposed into national law by no later than March 15, 2015. The preparatory phase of this process started on January 1, 2014. The regulatory framework will be applied by the 28 EU member states and by the other three countries of the European Economic Area (Iceland, Liechtenstein and Norway).

Solvency II is usually broken down into three 'pillars' and subdivided into 15 subject areas for implementation purposes:

– *Pillar I* essentially comprises quantitative requirements and methods for their calculation. These include harmonised rules for the market-consistent and risk-based measurement of assets and liabilities. They also stipulate (solvency) capital requirements and rules concerning entities' own funds. These regulations are designed to ensure that these entities possess sufficient equity at all times.

– *Pillar II* imposes qualitative (regulatory) requirements on insurance companies' risk management and organisation (governance) and on their supervision. Pillar II covers the internal management and control system, the supervisory review process (SRP) and the own risk and solvency assessment (ORSA).

– *Pillar III* specifies reporting obligations towards regulatory authorities and policyholders in order to enhance transparency and strengthen market discipline. These include extensive disclosure requirements, the promotion of transparency, and closer integration with International Financial Reporting Standards (IFRSs).

Source: German Federal Financial Supervisory Authority (BaFin)

IORP II: no quantitative requirements

Many pension funds and their sponsoring undertakings – especially those in Germany – have for some time been preoccupied not just by economic and demographic trends but also by regulatory changes that European institutions are looking to introduce. At the heart of these preoccupations, is the process of revising the EU Directive on Institutions for Occupational Retirement Provision from 2003 (Directive 2003/41/EC on the activities and supervision of IORPs [IORP Directive]), which has been ongoing for several years now. This directive, which in Germany covers only pension funds and retirement funds, has partially harmonised the supervisory legislation governing pension funds, issued minimum qualitative standards concerning the security of IORPs (e.g. rules on technical provisions), established basic investment principles (essentially based on the prudent person principle) and put in place some of the necessary preconditions for IORPs' cross-border activities.¹⁷ By introducing the proposed reforms, the European Commission intends to refine existing supervisory legislation and thus increase the contribution made by supplementary retirement benefit schemes to providing 'adequate, safe and sustainable pensions'.¹⁸ The work being done on the new directive (IORP II) forms part of plans to improve financial regulation in the single European market. Over the course of the Solvency II process, which was launched more than ten years ago, the Commission has raised the issue of harmonising the regulatory requirements applicable to insurers and pension funds.

However, the suggestion to base the supervisory legislation for IORPs on the Solvency II regulation, which was originally intended for (life) insurance companies, has always been controversial. This applies especially with respect to the quantitative (solvency) requirements, which are specified under the first 'pillar' of the three-pillar Solvency II approach. This firstly concerns the market-

¹⁶ LLMA members are AVIVA, AXA, Deutsche Bank, J.P. Morgan, Legal & General, Morgan Stanley, Munich Re, Pension Corporation, Prudential PLC, RBS and Swiss Re.

¹⁷ These IORPs can now operate in other countries as well. See Deutsch, Klaus (2002). A single market for occupational pensions. Deutsche Bank Research. Current Issues no. 239.

¹⁸ European Commission (2010). GREEN PAPER towards adequate, sustainable and safe European pension systems. Brussels, July 7, 2010.



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consistent measurement of the assets and, in particular, the liabilities of the institutions being regulated. Such market-based measurement is intended to ensure timely disclosure of risks and potential funding shortfalls that would not be revealed if non-market (higher) discount rates were used. This does, of course, mean that the pertinent carrying amounts are more sensitive to interest-rate changes and, consequently, more volatile. The first pillar also covers various complex risk-based minimum and solvency capital requirements, including complex instructions as to how they are calculated. However, there was a broad consensus that the wholesale application of these risk-based requirements to IORPs would be inappropriate given the distinctive nature of occupational pension schemes. The relevant specifics here include sponsors' guarantee obligations as well as the protection and guarantee schemes common in many countries, such as the Pension Protection Association (PSVaG) in Germany.

EIOPA, Europe's regulatory authority, which is advising the Commission on these planned reforms, is therefore calling for the introduction of a holistic balance sheet (HBS) for IORPs. Under this approach, pension funds would have to disclose not just their assets but also (the value of) any relevant guarantees or schemes protecting plan members from losses. Such a holistic balance sheet would also accurately reflect national variations in pension funds' and sponsors' ability to reduce pension benefit entitlements where appropriate, e.g. as part of a recovery plan. The aim of the HBS approach is to introduce a transparent risk-based system of accounting that ensures a level playing field throughout Europe.¹⁹

EIOPA carried out an impact assessment in the fourth quarter of 2012 in order to clarify its ideas and illustrate any potential consequences.²⁰ The findings of this study, which was based on a survey of almost 100 pension funds and regulatory authorities in seven EU countries, were published in July 2013.²¹ They revealed significant variations between countries.²²

However, there remain widespread misgivings – especially in Germany – about a harmonised form of solvency regulation that is based on the Solvency II approach and aims to enshrine market-consistent measurement and risk-based

¹⁹ The idea of the HBS, however, is not to replace the 'conventional' balance sheet but to provide it with a 'tool of prudential regulation'. S. Gohdes, Alf and Georg Thurnes (2013). Anmerkungen zur Quantitative Impact Study (QIS) für EbAV. In BetrAV – Betriebliche Altersversorgung 03/2013, page 179 onwards.

²⁰ EIOPA (2013). Report on QIS on IORPs. Frankfurt, July 4, 2013.

²¹ The seven countries were Belgium, Germany, Ireland, the Netherlands, Norway, Sweden and the United Kingdom. The UK regulatory authority carried out the necessary calculations on behalf of all the pension funds in the country. Although Portugal also participated in the survey, the national regulator decided not to publish the resultant data owing to problems with its quality and completeness. EIOPA (2013), page 4.

²² In those countries where the IORPs surveyed already applied market-based measurement criteria – as in the Netherlands, Norway and Sweden – there was no major impact on the relevant liabilities or technical provisions under the baseline scenario. If the plan adjustments allowed in the Netherlands were factored in, the liabilities in this country actually fell by 20%. By contrast, the average liabilities of the participating German pension funds and retirement funds rose sharply. This is partly because German pension funds can base their measurement of the technical provisions in certain plans on their expected investment yield minus a markdown. Officially prescribed discount rates are applicable to German retirement funds (see also footnote 6). The rates used in both cases may be higher than relevant market-based returns (on low-risk investments). However, the recognition of sponsors' guarantees in the holistic balance sheet offsets this effect.

The participating IORPs had to conduct certain stress tests to ascertain the potential need for risk-based capital. They had to demonstrate to probability levels of 99.5%, 97.5% and 95% that in the following year they could survive the changes in demographic, economic and other parameters deemed 'reasonably feasible' in a one-year period. This revealed that the existing pension protection schemes available in Germany (subsidiary corporate liability and the German Pension Protection Association) were in principle adequate and no additional risk-based capital was required. This process once again illustrated just how much IORPs differ from one EU country to another.



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capital adequacy requirements.²³ Many market participants fear that this regulation would introduce substantial additional capital requirements for IORPs and thus impose a corresponding burden on sponsoring undertakings. Given that almost half of all EU citizens still have no access to any sort of occupational pension scheme, many actors feel that placing such additional burdens on sponsors would be counterproductive.²⁴

Although these objections cannot simply be dismissed, it is worth remembering that IORPs are becoming increasingly important in financial markets. Consequently, appropriate and effective regulatory rules are also gaining significance. The general principle must be that a comprehensive view on the risks posed by occupational pension plans and a professional approach to managing these risks – which should include suitable risk mitigation strategies – can make a valuable contribution to strengthening occupational retirement schemes over the long term.

In view of the ongoing debate around more extensive (quantitative) solvency rules for pension funds, Michel Barnier, the European Commissioner for Internal Market and Services, announced in May 2013 that he intended to shelve this question for the time being and to submit a draft directive that concentrated solely on improving IORPs' governance, transparency and reporting, i.e. pillars 2 and 3 of Solvency II. This draft, which was originally scheduled to appear in the autumn of 2013, was eventually presented on March 27, 2014.²⁵ The European Commission hopes that this directive will make it easier for people to save in the form of occupational pension schemes. The Commission believes that safe and more efficient occupational retirement schemes will improve the adequacy and sustainability of pensions. The directive is also designed to strengthen IORPs' role as investors in the real economy.

Key aspects of the draft directive

As announced, the key aspects of the Commission's proposal are as follows:

1. Governance and risk-management provisions for IORPs,
2. Duties to inform plan members, beneficiaries and regulatory authorities,
3. Powers for regulatory authorities, which enable them to supervise IORPs efficiently or make it easier for them to do so,
4. Additional requirements for cross-border activities of IORPs.

The requirements for IORPs that carry out cross-border activities can be found in the first section of the draft (Title I), which contains general provisions such as definitions. The directive first defines cross-border activities and processes and requires member states to permit sponsoring undertakings and IORPs to carry out such activities. Its aim of facilitating IORPs' activities in other member states is served by provisions for removing regulatory obstacles as well as clarifications of terminology. The way in which cross-border transfers of pension plans within the EU are to be made possible is by placing responsibility solely on

²³ German Association of Company Pension Funds (Aba) (2012). Aba Response to 2nd EIOPA Consultation.

²⁴ The quantitative impact study (QIS) conducted by EIOPA has also come under fire in this context. In Germany, for example, the Association of Company Pension Funds (Aba) has criticised the fact that the impact assessment data needed to evaluate the level of employer support provided specifically in the case of multi-employer IORPs, industry-wide IORPs and employers that fund several IORPs is either partly or wholly unavailable. See Aba (2012). Aba Antwort zur EIOPA Konsultation „Arbeitgeberunterstützung“ (Frist: 31. Oktober 2013). The problem of assessing sponsors' guarantees has also been criticised by IORPs from other countries. In addition, the necessary calculations are seen as costly and time-consuming.

²⁵ See on the internet at http://ec.europa.eu/internal_market/pensions/directive/index_en.htm#maincontentSec1



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the regulatory authority of the IORP's home state to which the pension plan is transferred. (It must authorise the transfer in advance.) However, such transfers will require the prior consent of the plan members and beneficiaries concerned, or of their representatives. Furthermore, member states will no longer be permitted to impose additional investment rules on IORPs that carry out cross-border activities (e.g. by restricting their investments). Nor will host member states where IORPs from other countries are operating be allowed to impose additional disclosure requirements on them, other than those set out in the directive (see below). However, cross-border activities remain subject to the requirement for all obligations (technical provisions) to be fully funded at all times.

Title II of the draft directive is given over entirely to quantitative requirements, although the requirements in this section largely cover the additions already made to the IORP Directive in 2009 as a result of the Solvency II Directive (2009/138EC). Consequently, among other things and contrary to the fears of representatives of IORPs before the draft directive was published, the Commission has not specified that obligations (technical provisions) must be funded in full at all times. In fact – with the exception of IORPs that carry out cross-border activities – temporary funding shortfalls are still permitted. In such cases, however, regulatory authorities will request that IORPs provide a recovery plan for a return to full funding in due time. Nevertheless, the EU authorities involved a plan to re-visit the issue of quantitative requirements when more information or data is available (probably as a result of further impact assessments).

Governance requirements

23

– *General requirements*: IORPs must have an effective governance system, which ensures that its activities are managed prudently and soundly. The system must be transparent and proportionate to the nature, characteristics and complexity of its activities. It must include accounting procedures, internal controls and appropriate reporting.

– *Fit and proper criteria*: Persons in key roles must have the necessary professional qualifications, skills and knowledge, as well as a good reputation.

– *Remuneration policy*: This must be proportionate (e.g. in relation to the size and business of the IORP). Relevant information about the remuneration policy must be published. Among other things, remuneration must be in line with the activities and risk management of the IORP and with its risk profile, objectives and long-term interests. It should not encourage risks to be taken that exceed an institution's tolerance limits.

– *Functions*: IORPs must have risk-management and internal-audit functions and – where necessary (for DB and hybrid plans) – an actuarial function. Individuals or individual organisational units are permitted to perform more than one of these tasks, but risk management and internal audit must always be segregated. The same people may not perform these functions at an IORP and at its sponsoring undertaking.

The extensive governance rules in Title III are based on the qualitative standards of Solvency II but, according to the Commission, are tailored to IORPs. The new rules are intended to ensure that IORPs have better governance and effective risk-management and control systems. According to an accompanying working paper, there are three supplementary, self-propagating operational objectives intended for this purpose.²⁶ The following requirements in the draft directive reflect these subsidiary objectives:

— *Professional management of IORPs*: The requirement for institutions with DB or hybrid plans to have both risk-management functions and internal-audit and control functions in addition to the actuarial function, which is already required, is intended to ensure that they are managed professionally. Institutions with DC plans, which in principle do not entail any actuarial tasks, must also establish these two functions. Key functions may not be performed at an IORP by the same people who carry out corresponding activities at its sponsoring undertaking.

Details include requirements regarding the qualifications and reputation of managerial staff and persons in key functions at an IORP (fit and proper criteria) which are intended to ensure that IORPs are well run and that risks are avoided. The same applies to the remuneration policy, which must be in line with the objectives and risk profile of an institution (it must not encourage high-risk behaviour when investing funds, for example) and must prevent conflicts of interest. Institutions will also have to ensure that key functions can be performed without any unrelated or detrimental influences.

— A Risk Evaluation for Pensions (REP) report is to be introduced for the purpose of *documenting risk management*. The risk evaluation will have to be carried out periodically and as soon as there is any significant change in the risk profile of the IORP. Among other things, the REP report to the regulatory authorities will record how a pension fund assesses and ranks

²⁶ European Commission (2014). Commission staff working document. Executive summary of the impact. Assessment accompanying the document "Proposal for ... IORP II".



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Information for plan members

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IORPs will have to provide all plan members, including inactive members with vested pension rights, with a document containing key information about the features, risks and costs that are relevant to the pension plan. Among others, this standard document (pension benefit statement or PBS) will have to meet the following requirements:

- The PBS must be sent to each member free of charge at least every twelve months (including hard copies on request).
- Information must be provided in comprehensible language.
- The document may not be longer than two pages (A4).
- It shall specify the personal details of the member, including the statutory retirement age, if relevant.
- Details identifying the IORP, such as its name and address and the name of the sponsoring undertaking, must be included.
- If the pension plan provides for guarantees, the PBS shall briefly explain the nature of the guarantee, the current level of financing of the member's accrued individual entitlements, the mechanisms for protecting vested rights and – if applicable – benefit reduction mechanisms.
- It must include details of the level of vested rights accrued, the level of capital accumulated on behalf of members of DC plans, contributions and costs.
- For plans with a target level of benefits, projections of anticipated pensions must be provided (taking into account future pay rises) showing monthly benefits at retirement age and two years before and after retirement age under best estimate assumptions, respectively.
- For DC plans, projections of the pension capital anticipated to be available on the three dates mentioned above must be undertaken.
- For plans in which members are exposed to investment risk and can choose between different types of investments, a short description of the individual options must be provided to illustrate the investment profiles of the plans. The member's current investment option shall be marked prominently.
- If available, a chart showing the performance over the past ten years of the pension plan or, if applicable, the investment option selected by the member must be provided.

the risks associated with its activities. For this purpose, the report will have to include a qualitative description of the following four key elements which, according to the Commission's working paper, determine the funding position of a pension scheme:

1. An explicit valuation of margin for adverse deviation from best estimate as a risk buffer in calculation of technical provisions,
2. A qualitative evaluation of the support from sponsoring undertakings on which the IORP can rely if there is a (substantial) funding shortfall,
3. A description of the safety mechanisms and/or recovery measures, e.g. retrospective cuts in benefits, available to the IORP if there is a funding shortfall,
4. A qualitative evaluation of operational risks.

The REP must also include a qualitative evaluation of new or emerging risks arising from climate change and the consumption of natural resources.

- Measures to *protect assets from operational risk* should include the prudent use of financial instruments, compliance with various documentary requirements and action to prevent conflicts of interest. Pure DC systems are also required to appoint a custodian or depository. In the case of funds with DB or hybrid plans, national authorities can demand this.

In addition to the rules for the governance of IORPs, the obligations of IORPs to provide information to prospective plan members, plan members and those drawing pensions constitute the second major area in which the Commission intends to make changes. It centres around the requirement for IORPs to provide plan members with a pension benefit statement (PBS) every twelve months. The directive devotes an entire chapter consisting of 15 articles (from a total of 81) to the relatively detailed rules for the PBS information system (see notes on left). This also reflects the importance the Commission attaches to this project.

The section on supervision (Title V) clearly defines the protection of plan members and beneficiaries as the authorities' prime objective. Regardless of this objective, member states must ensure that the activities carried out by regulatory authorities take into account any impact their decisions may have on the stability of the financial system. Supervisory powers must also be used promptly and according to the principle of proportionality. For the avoidance of doubt, the directive points out that IORPs will be subject to supervision, particularly with regard to ten specific areas.²⁷ Further rules require member states to give regulatory bodies the powers required for their activities. For example, they must ensure that authorities have access to instruments such as stress tests. Several articles in the directive also require regulatory authorities to handle the information that they obtain professionally, and to treat it as confidential. Title V also includes specifications for sharing information with other authorities, particularly those responsible for financial stability, and mutual information sharing among the various national supervisory authorities and with EU bodies such as EIOPA. Information sharing is intended to help to strengthen the financial system.

²⁷ Requirements for operating an IORP, technical provisions, funding of technical provisions, regulatory own funds, solvency margin available, solvency margin required, investment rules, investment management, conditions governing activities and information to be provided to competent authorities (Article 60 of the draft).



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Costs and benefits need to be weighed up

This document is not an appropriate place to assess the draft directive's many provisions in detail, particularly as important questions still need to be clarified, such as the exact format of the risk evaluation (REP) and the methods to be used for it. However, it is clear that the European Commission's intention is to lay down ambitious requirements, particularly with regard to risk management and duties to provide documentation and information. This reflects the experiences of the financial and economic crises of recent years, but also focuses on the growing importance of occupational retirement provision in Europe's ageing societies.

Of course, new standards may not always meet with the approval of the IORPs and sponsoring undertakings, particularly if they are introduced alongside existing national guidelines. The implementation of new standards generally gives rise to significant costs. Many IORPs are likely to find it difficult to fund such things as additional costs for enhanced control mechanisms and/or additional documents, even though many are now in a better financial situation.

A prime example is the debate about additional requirements for providing plan members with information. The current plan to introduce the PBS has long been the subject of debate. While the European Commission believes plan members are provided with too little information, which should be remedied by the requirement for a PBS, organisations such as PensionsEurope, the European (umbrella) organisation for IORPs, are concerned about the associated expenses.²⁸ According to European Commission data quoted by PensionsEurope, the introduction of the PBS itself will incur one-off introductory costs of around EUR 22 per plan member and annual follow-up costs of EUR 0.27 to EUR 0.80 per member.

It should, of course, be borne in mind that higher costs are offset by more transparency and a better level of information for those involved. At a time when, benefits such as state pensions are increasingly being cut back, it is important for plan members to know how much their occupational pension is likely to be when they retire. Without this knowledge, it is difficult for members to estimate accurately the additional self-funded occupational or private pension benefits they may need. Given that investment returns for many of the IORPs potentially affected will be relatively low due to market conditions, any requirements that increase costs, however, should be closely scrutinised to determine whether they are necessary. Nothing would be gained if sponsoring undertakings were to (further) restrict the scope of benefits for new members offered by pension plans, or even close plans altogether, for reasons of cost.

Rising administrative expenses are also likely to fuel the trend we are already seeing for IORPs to merge and/or for the administration of plans to be outsourced to external providers.

Before it can come into force, the directive still has to be adopted by the next European Parliament and the Council of Ministers and enacted in national law. This process will take some time, particularly as the EP elections are scheduled for May 22 to 25 after which the European Parliament will then have to be convened. Nonetheless, the directive is scheduled to be enacted in national law by December 31, 2016.

²⁸ PensionsEurope (2014). Reaction Pensions Europe on revised IORP Directive. Press release, March 27, 2014.



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Core elements of the EU mobility directive 25

– *Scope of application:* The directive only applies to cross-border matters and not to changes of employer within one member state. The directive will only affect service periods from the date on which it is enacted in national law (in 2018 at the latest) and does not apply to pension funds that are currently closed to new members.

– *Vesting period:* This may not exceed three years (currently five years in Germany).

– *Minimum age:* The minimum age at which vested rights can be accrued may not be more than 21 years (currently 25 in Germany).

– *Equal treatment/indexation of vested rights:* The vested rights of inactive members must be treated in the same way as the vested rights of active members or brought in line with current pensions, or otherwise treated fairly.

(According to German law, vested rights held by inactive (former) members arising from pension entitlements must not be adjusted until the respective member retires.)

– *Cash settlements:* Vested rights held by an outgoing worker can – with his/her consent – be settled by means of a cash payment.

– *Duty to provide information:* Employees are entitled to receive information about how their occupational pension rights are affected by the termination of their contract of employment. Inactive members can request information about the value of their (deferred) vested pension rights or most recent valuation (not more than twelve months old).

EU labour mobility directive mitigated

In December 2013, after long debate, the European decision-making bodies involved (Commission, Parliament and Council members) agreed on a draft EU labour mobility directive, which was finally approved in April 2014 (Directive 2014/50/EU). The objective of the directive is to simplify the transferability of occupational pensions throughout the EU and therefore to increase the cross-border mobility of workers. Contrary to the Commission's original plan, the draft does not relate to issues arising when workers change employers (the earlier 'portability directive'), it only focuses on cross-border mobility between EU member states.

The draft addresses objections, particularly those on the part of German IORPs and their sponsoring undertakings. If it were applied to people changing employers within Germany, employer-funded pension plans would be exposed to substantial additional risks and costs. The general reduction of the vesting period applicable in Germany (for employer-funded pension plans), from five years to three years, would increase costs for pension plans with low reserves as they would have to pay cash settlements. Of course, employers in Germany are not obliged to preserve vested pension rights accrued after the minimum period when an employee moves to another company, they have the right to settle them in cash. Consequently, one of the main criticisms of the directive, raised in particular by German IORPs but also by Dutch and British institutions, is that the draft directive specifies that the employee's consent is required for relatively low-value pension rights to be settled in cash when an employee migrates to another country.

The member states will have to enact the draft directives in national law within four years, i.e. by April 2018 at the latest. The impact of the new rules is likely to remain limited, because just 0.2% of workers in the EU relocate across national borders every year. When enacting the directive, however, it remains to be seen to what extent member states also make individual rules binding on workers who change employer within the same country, as encouraged by the directive. At all events, it raises the question of whether different vesting periods would violate the principle of equal treatment.

All in all the latest changes in the regulatory environment initiated by EU institutions are likely to impact IORPs less than originally expected. However, final assessments would be premature. The IORP II directive might still be subject to fundamental amendments in the course of the debates in the Council of Ministers and/or the EP in the next legislative period. And in major countries like Germany the impact of the new directive on labour mobility very much depends on its detailed implementation in national law.

Dieter Bräuninger (+49 69 910-31708, dieter.braeuninger@db.com)



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