The Purple Book

DB PENSIONS UNIVERSE RISK PROFILE | 2011

Pension Protection Fund

The Pensions Regulator

The Purple Books give the most comprehensive picture of the risks faced by PPF-eligible defined benefit pension schemes.

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This is the sixth edition of the Pensions Universe Risk Profile (The Purple Book), a joint annual publication by the Pension Protection Fund (the PPF) and the Pensions Regulator (the regulator) which focuses on the risks faced by defined benefit (DB) pension schemes, predominantly in the private sector.

1.1 Introduction

The main focus in each year's Purple Book is the position at the end of March for the year in question, and a comparison of how risks have changed over the previous year. The economic and financial market environment improved a little over the 12 months to March 2011, although since then there has been a marked deterioration:

- UK GDP growth picked up to 1.6 per cent year-on-year by the first quarter of 2011.
- The FTSE all-share index rose by 5 per cent after a 47 per cent increase between March 2009 and March 2010.
- Insolvency Service statistics showed that the number of company liquidations rose a little in the year to Q1 2011 but other company insolvencies (receiverships, administrations, and company voluntary arrangements) fell a little.
- Meanwhile, 10-year gilt yields declined to 3.7 per cent from 3.9 per cent while 10-year AA corporate bond yields were unchanged at 4.9 per cent.
- The Bank of England kept its policy rate and Quantitative Easing unchanged at 0.5 per cent and £200 billion respectively.

Table 1.1 | Economic and financial environment

	End of March 2006	End of March 2007	End of March 2008	End of March 2009	End of March 2010	End of March 2011	End of December 2011
GDP growth year-on-year	3.2%	2.4%	2.2%	-5.4%	-0.2%	1.6%	0.5%*
Company liquidation rate – 12 months to	0.7%	0.6%	0.6%	0.8%	0.8%	0.7%	0.7%*
Company liquidations	3,505	3,190	3,217	4,915	4,036	4,121	4,242*
Other corporate insolvencies		868	1,158	1,783	1,343	1,314	1253*
Company insolvency rate – 12 months to		0.7%	0.7%	1.1%	0.9%	0.9%	0.9%*
FTSE all-share	3,047	3,283	2,927	1,984	2,910	3,068	2,858
10-year gilt yield	4.4%	5.0%	4.4%	3.2%	3.9%	3.7%	2.0%
10-year AA corporate bond yield	4.9%	5.5%	5.6%	4.8%	4.9%	4.9%	3.5%
Bank of England policy rate	4.50%	5.25%	5.25%	0.50%	0.50%	0.50%	0.50%
Quantitative Easing	-	-	-	£15bn	£200bn	£200bn	£275bn

Source: Office for National Statistics, the Insolvency Service, Bank of England, Bloomberg
*These relate to Q3

However, year-on-year growth slowed in a number of industrialised countries, including the US and the UK, in the second and third quarters of 2011. Furthermore, sovereign debt and bank concerns in some euro-area countries led to fears of credit crunch. As a result of these developments, equity markets fell, with the FTSE all-share index at end-December down by almost 7 per cent from its end-March level. Yields on “core” government bonds, such as US Treasuries, bunds and gilts, dropped sharply, 10-year gilt yields falling to 2.0 per cent by end-December. As a result, scheme funding for the PPF-eligible universe of DB pension schemes deteriorated markedly between end-March and end-December.

Much of the analysis of the 2011 Purple Book (‘Purple 2011’) is based on new information from scheme returns issued in December 2010 and January 2011 and returned to the regulator by the end of March 2011. As in 2010, schemes in the PPF assessment period (369 in total representing around one per cent of total liabilities)[1] have been removed so as to capture accurately the risk presented by DB schemes whose employers had not experienced an insolvency event by 31 March 2011.

The dataset covers 6,432 PPF-eligible DB schemes. This represents some 98 per cent of the estimated total number of schemes and 99.6 per cent of estimated total liabilities. The 2011 dataset is similar in size (after adjusting for schemes in assessment) to that used for the last three Purple Books and is significantly larger than the datasets used in the first two Purple Books.

1 This recognises all segregated parts of schemes as separate schemes. For analytical purposes, in Chapter 10, Schemes in Assessment, scheme sections and segregated parts have both been amalgamated into one scheme.

The government has introduced new rules to move to the use of the Consumer Prices Index (CPI) rather than the Retail Prices Index (RPI) for the purpose of the indexation and revaluation of PPF compensation. These changes affect pension revaluation from April 2011 and indexation from January 2012. This move to CPI will improve the chances of the PPF achieving its aim of self sufficiency in 20 years given that CPI inflation is expected to be below RPI inflation in the long term. The switch to CPI inflation for indexation and revaluation does not, however, affect the funding estimates for 31 March 2011 in the Purple Book. This is because the assumptions underlying the estimates have to be in line with estimated pricing in the bulk annuity market and discussions with active participants in the market in early 2011 indicated that insurers would then have quoted the same prices for CPI and RPI-linked annuities.

The Purple Books have been based on the most comprehensive datasets extracted from the DB pensions' universe to date, representing a step change in available information, particularly for small and medium-sized schemes. The publications have focused on the risk of scheme members not receiving promised benefits and of claims on the PPF. These in turn depend on two key elements, namely the risk of the sponsoring employer becoming insolvent and the extent of scheme underfunding. The main focus of this publication is risk at 31 March 2011.

1.2 The data

- The main body of the analysis in Purple 2011 is based on new scheme returns for a dataset of 6,432 DB schemes, covering around 12 million memberships.[2] This represents around 98 per cent of PPF-eligible schemes and 99.6 per cent of universe liabilities. Complete information is not available for the remaining schemes and, hence, these have been excluded from the sample.
- As at end-March 2011, there were 369[3] schemes in assessment with total assets of £9.5 billion and total s179 liabilities of £10.9 billion. These represent around one per cent of total assets, similar to 2010, and up from around 0.5 per cent in 2007. Given their relatively small size, the implications of their removal for year-on-year comparisons are limited.
- It is estimated that the eligible universe of schemes, excluding those in assessment at end-March 2011, was around 6,550, a reduction from 6,620 in March 2010.
- The dataset represents a similar proportion of total PPF-eligible schemes to those used in the Purple Books for 2008, 2009 and 2010 (and much higher than that used in the earlier Purple Books).
- The fact that the dataset accounts for such a large proportion of the universe means that results for the universe would be only slightly different from the results presented in Purple 2011.[4]

1.3 Scheme Demographics

- The proportion of open schemes continues to fall, moving from 18 per cent in 2010 to 16 per cent in 2011. There was a rise in the proportion of schemes closed to future accrual to 24 per cent from 21 per cent in 2010.
- The proportion of schemes closed to new members was unchanged at 58 per cent. Closed to new members were in the majority in all size bands.
- Whilst 24 per cent of schemes are closed to future accrual, six per cent of memberships fall into this category.
- The proportion of memberships in open schemes fell from 34 per cent to 31 per cent in 2011 while the proportions closed to new members and new accruals rose from 60 to 62 per cent and from five per cent to six per cent respectively.
- In 2011, there were around 11.96 million memberships. Of these, 5.29 million (44 per cent) were deferred, 4.36 million (36 per cent) were pensioners, and 2.31 million (20 per cent) were active memberships.
- The proportion of schemes whose principal sponsor is in the manufacturing sector continues to fall whilst the the proportion of schemes whose principal sponsor is in the services sector continues to increase.

2 A 'membership' is one individual's participation in one scheme. One individual can have multiple memberships. Hence the number of memberships exceeds the number of individuals.

3 Treating all segregated parts of schemes as separate schemes

4 This point is illustrated by an examination of Annex A of Purple 2009. The summary statistics differed little between the sample and extended 2008 datasets. The very wide coverage suggests a similar outcome in relation to the 2011 sample.

1.4 Scheme Funding

- Dataset assets total £968.5 billion as at 31 March 2011.
- The aggregate s179 funding position of the schemes in the Purple 2011 dataset as at 31 March 2011 was a deficit of £1.2 billion.
- The s179 funding ratio fell from 104.3 per cent to 99.9 per cent between 2010 and 2011. However, this represents a small shift compared to the historical volatility of the funding ratio as shown by the PPF 7800 index during a year.
- The full buy-out funding ratio is 67.5 per cent.
- 2011 s179 liabilities total £969.7 billion while estimated full buy-out liabilities total £1435.5 billion.
- The total deficit on a s179 basis, for all those schemes in deficit, is £78.3 billion.
- The total deficit on an estimated full buy-out basis, for all of those schemes in deficit is £470.7 billion.
- On average, schemes with a greater proportion of pensioner liability have higher s179 funding levels.
- 27.9 per cent of s179 liabilities relate to active members.
- Two sectors - finance, insurance and real estate, and manufacturing - hold the most assets and liabilities.

1.5 Funding Sensitivities

- Changes in estimated market conditions and financial and demographic assumptions since January 2003 have caused the monthly aggregate funding ratio of pension schemes to vary by around 41 percentage points (with the highest funding ratio in June 2007 at 120 per cent and the lowest ratio of 79 per cent in December 2011)[5].
- The aggregate balance has varied by around £410 billion (with the greatest surplus in June 2007 at £142 billion and the greatest deficit in December 2011 at £271 billion).
- The assumptions were changed on 31 March 2008, 31 October 2009 and 1 April 2011. These first two changes improved scheme funding by around £45 billion and £75 billion respectively, while the third worsened scheme funding by around £35 billion[6].
- The estimated number of schemes in deficit on a s179 basis was at its lowest point in June 2007 at around 2,060 schemes (32 per cent of the dataset) and peaked in March 2009 at around 5,450 (85 per cent).
- Since end-March 2011, the date for the funding estimates in Chapter 4, falls in equity markets and bond yields have resulted in a worsening in aggregate scheme funding of around £275 billion by the end of December.

5 The estimates presented here are a little different from those shown in the PPF 7800 release for end-December:
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_January_12.pdf
For example, for December 2011 the deficit in Purple 2011 is estimated to be £271 billion compared with a £255 billion in the PPF7800. This difference comes about because Purple 2011 is based on a more up-to-date data set.

6 For more information see PPF7800 January 2009, November 2009 and May 2011
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF%207800%20January%2009.pdf
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_November_09.pdf
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_May_11.pdf

- A 0.1 percentage point (10 basis point) reduction in gilt yields raises scheme liabilities by 1.8 per cent and raises scheme assets by 0.4 per cent. A 2.5 per cent rise in equity markets raises scheme assets by 1.1 per cent.
- A 0.1 percentage point (10 basis point) rise in gilt yields increases the end-March 2011 s179 aggregated funding position by £13.3 billion from -£1.2 billion to £12.1 billion while a 2.5 per cent rise in equity prices increases the aggregated funding position by £10.4 billion.
- If the assumed rate of inflation increases by 0.1 per cent, with nominal interest rates unchanged, then the s179 liabilities for schemes increases by approximately 0.9 per cent or £8 billion.
- An increase in longevity such that the experienced mortality is now equivalent to that of an individual two years younger would increase schemes' liabilities by 4.5 per cent, or £44 billion.

1.6 Insolvency risk

- During the 2008/09 recession, the estimated number of schemes (or sections of schemes) entering a PPF assessment period peaked in the first quarter of 2009 at 50 and had fallen to 28 by the second quarter of 2011, a drop of 44 per cent. The level of schemes entering PPF assessment in the year to the first half of 2011 was, however, still higher than in the two years leading up to the recession.
- The number of schemes entering assessment and thought to be in s179 deficit at the time of the insolvency event fell 46 per cent between the second quarters of 2010 and 2011.
- Over the first six months of 2011, the average insolvency probability of the 500 schemes to which the PPF has the largest exposure (in terms of scheme underfunding adjusted for the volatility of its assets) increased from 0.70 per cent to 0.75 per cent. When weighted by liabilities, the insolvency probability increased only slightly, from 0.53 to 0.55 per cent.
- Schemes with sponsoring employers in the communications industry have the highest average insolvency probability (3.9 per cent), followed by transportation and retail trade (both 1.9 per cent).
- The UK economy came out of recession in the third quarter of 2009. GDP rose strongly until the third quarter 2010, since when growth has been modest.
- The 2008/09 recession resulted in a large rise in the total level of corporate liquidations in England and Wales – from 3,241 in the first quarter of 2008 to a peak of 5,041 in the second quarter of 2009, an increase of 56 per cent. In the third quarter of 2011, a total of 4,242 liquidations were recorded. (There are around 2.3 million companies in the UK, compared to around 19.000 in the PPF universe.)
- Company liquidations have been rising gently since the fourth quarter of 2010. In Q3 2011 they were 6.5 per cent higher than a year earlier and other[7] insolvency events were up 10 per cent over the same period. Nonetheless, since the second quarter of 2009, company liquidations have dropped by 16 per cent.
- In the 12 months ending Q3 2011, approximately 0.7 per cent of companies went into liquidation, compared with a recession peak of 0.9 per cent and a pre-recession trough of 0.6 per cent. In the latest recession, the liquidation rate rose by 50 per cent while in the early-1990s recession it more than doubled.

7 Receiverships, administrations and company voluntary arrangements.

1.7 Asset Allocation

- Purple 2011 data showed much smaller changes in asset allocation than seen in recent years. Furthermore, the share of bonds fell slightly, the first decline since the start of the Purple Books in 2006. Otherwise there has been a continuation, albeit less marked, of most of the trends seen in recent years: a falling equity share and a rising share in hedge funds and "other investment"; within equities a rising overseas share and falling UK share; and within bonds a rising corporate bond share and falling government share.
- The equity share fell to 41.1 per cent from 42.0 per cent in 2010 while the share of gilts and fixed interest fell to 40.1 per cent from 40.4 per cent in 2010. The share of 'other investments' rose from 5.4 per cent to 6.3 per cent.
- The overseas share of total equities rose from 55.3 per cent in 2010 to 57.2 per cent in 2011, the UK share falling from 40.1 per cent to 38.0 per cent. The share of unquoted equities increased from 4.4 per cent in 2010 to 4.8 per cent in 2011.[8]
- Within total gilts and fixed interest, the corporate fixed interest securities share rose from 42.2 per cent in 2010 to 44.3 per cent in 2011. Meanwhile, the share of government fixed interest fell from 24.6 per cent to 19.6 per cent. The index-linked share rose to 36.1 per cent from 33.1 per cent in 2010.
- Looking at simple averages[9], the allocation to UK equities is still bigger (52.7 per cent) than that for overseas equities (46.1 per cent), although this gap has continued to narrow.
- Within gilts and fixed interest on a simple average basis, the allocation to government fixed interest fell sharply from 37.3 per cent to 31.2 per cent while the allocation to corporate fixed interest securities rose from 43.0 per cent to 47.1 per cent. The average allocation to index-linked securities rose from 19.8 per cent to 21.7 per cent.
- Smaller schemes tend to have a higher allocation of equities to UK equities and a smaller allocation to overseas equities. Within fixed interest, smaller schemes tend to have a higher allocation to government fixed interest and a smaller allocation to index-linked securities.
- As in the earlier Purple Books, more mature schemes tend to invest more heavily in gilts and fixed interest and less in equities.

8 These do not sum to 100 per cent in 2010 and 2011 due to rounding.
9 Simple averages are defined as the mean without weighting for scheme size.

1.8 Overall Risk Developments

- The Long-Term Risk Model (LTRM) is the key tool that the Board of the Pension Protection Fund (PPF) uses to understand and quantify the risks it faces over the long term. It helps the Board of the PPF assess the level of resources required to meet potential future claims.
- There was a clear decrease in long-term risk to the PPF between end-March 2010 and end-March 2011. The decrease in long-term risk was largely attributable to the decrease in the long-term credit risk of sponsoring employers over the period, and a reassessment of the risk posed to the PPF by a handful of the largest schemes also had a positive impact. However, since then there has been a slowdown in the global and UK economies and this could have a negative impact on the PPF.
- The PPF published its long-term funding strategy in August 2010. As part of this strategy, the PPF aims to be self-sufficient (i.e. fully funded, with zero exposure to market, inflation and interest-rate risk and protection against claims and longevity risk) by 2030. The funding strategy was reviewed in November 2011 and in the review it was concluded that the PPF's ultimate target was unchanged.
- LTRM projections with a reference date of March 2011, suggest that the PPF has an 87 per cent probability of meeting this funding objective compared with 83 per cent one year earlier.
- Looking at shorter-term risk measures, total weighted deficit (scheme sponsor one-year-ahead insolvency probability multiplied by scheme deficit) for deficit schemes stood at £332 million at end-March 2011.
- The proportion of weighted deficit attributable to schemes with the worst insolvency probabilities is 48.1 per cent, down from 55.3 per cent in 2010.
- Schemes with sponsors in the manufacturing sector have the largest weighted deficit at around 43 per cent of the total.
- The PPF's risk-based levy for individual schemes has so far been based on 12-month-ahead insolvency probabilities for scheme sponsors provided by D&B and a measure of scheme funding at a single point in time (though not necessarily the same point).
- PPF will introduce a new levy framework from 2012/13. In this framework funding will be calculated so that market movements will be averaged over five years. Allowance for investment risk is built into this new funding measure. New insolvency probabilities will be used and there will be a narrower range of insolvency probabilities and fewer insolvency bands, with measurement averaged over one year.

1.9 Levy Payments

- The PPF has been collecting a levy determined mainly by the risk schemes pose to the Fund for five years. Over this period it has collected a total of £2.8 billion. It is expected to collect £663 million for the 2010/11 levy year from 6,610 schemes. This compares with £592 million in 2009/10, £651 million in 2008/09, £585 million in 2007/08, and £271 million in 2006/07.
- The cap for the insolvency probability of schemes changed to 3 per cent in 2010/11 from 15 per cent in 2009/10. This makes the levies paid by insolvency group 10, the worst insolvency group, proportionally lower than in previous years.
- The expected collection for 2010/11 is £57 million less than the £720 million estimate, owing to such factors as: schemes appealing the insolvency probability upon which their levy is based; and schemes entering the PPF assessment period and, therefore, not paying a levy.
- For 2010/11 total levies amounted to 0.09[10] per cent of total s179 assets, a slight increase on the 0.07 per cent in the previous year.[11]
- In 2010/11, 679 schemes had their risk-based levy capped at 1 per cent of liabilities. This is 10.6 per cent of the total number of schemes. The liabilities of capped schemes equalled £8.8 billion or one per cent of total liabilities.[12]
- The top 100 levy payers accounted for £249 million, 38.6 per cent of the total levy, but 46.0 per cent of liabilities.[13]
- The number of schemes paying no risk-based levy in 2010/11 was 195, down from 363 in the previous year. The economic climate resulted in lower scheme funding levels and, therefore, fewer schemes achieved the 140 per cent funding level on a s179 basis required to avoid paying a risk-based levy.
- In 2010/11 the number of schemes paying no risk-based levy represented three per cent of total schemes and one per cent of total liabilities, compared to six and five per cent respectively for 2009/10.
- The distribution of levy by industry was broadly similar in 2010/11 to that in 2009/10 levy year. Manufacturing, services, and finance, insurance and real estate services account for approximately 71 per cent of the eligible DB universe, and also pay the same proportion of the total PPF levy.

10 These numbers are based on a 6,397 schemes who have paid £645 million in total. This is somewhat smaller than the £663 million expected to be collected because full information is not yet available on the remainder.
11 These figures are based on the 2010/11 dataset of 6,397 schemes.
12 These figures are based on the 2010/11 dataset of 6,397 schemes.
13 These figures are based on the 2010/11 dataset of 6,397 schemes.

1.10 Schemes in assessment

- The PPF's Annual Report and Accounts 2010/11 shows that there were 369 schemes in assessment at 31 March 2011 compared with 376 at 31 March 2010. Of these 314 were recognised in provisions, down from 317 at 31 March 2010. In these figures, all segregated parts of schemes have been counted as separate schemes.
- In this chapter, for analytical purposes scheme sections and segregated parts are amalgamated at a scheme level and schemes in surplus excluded; after this amalgamation there were 268 schemes (225,000 members) in a PPF assessment period as at 31 March 2011, compared with 271 (209,000 members) a year earlier. As a result, the number of schemes in assessment in this chapter is less than reported in the 2010/11 Annual Report and Accounts.
- The small fall over the year reflects 110 new schemes entering and remaining in assessment, 100 schemes transferring into the PPF and 13 being rescued, rejected or withdrawn.
- On a s179 basis, as at 31 March 2011, the aggregate assets of schemes in assessment totalled £9.5 billion and their liabilities £10.9 billion. Liabilities averaged £40.7 million per scheme and assets averaged £35.4 million.
- Schemes with liabilities below £5 million account for 38.4 per cent of schemes in assessment but only 26.5 per cent of the Purple 2011 dataset, while schemes with liabilities of over £100 million account for 8.2 per cent of schemes in assessment but 17.0 per cent of the Purple 2011 dataset.
- The aggregate funding level (total assets divided by total liabilities) of the schemes in assessment as at 31 March 2011 was 86.8 per cent, below the aggregate funding levels of the schemes in the Purple 2011 dataset (99.9 per cent) and also slightly below the aggregate funding level of the schemes in assessment a year earlier (88.4 per cent).
- According to the latest scheme return data prior to their entering assessment, schemes invested most heavily in gilts and fixed interest (38.5 per cent of total assets) and equities (34.9 per cent). In the Purple 2011 dataset equities account for 43.7 per cent and gilts and fixed interest account for 32.6 per cent.
- Where the industry is known, 46.2 per cent of the companies sponsoring schemes in assessment operated within the manufacturing sector. The service sector accounts for 17.3 per cent of sponsors of schemes in assessment and the finance, insurance and real estate sector, 11.5 per cent.
- The representation of manufacturing in schemes in assessment is much greater than the sector's share of scheme sponsors in the PPF universe (30.7 per cent), which in turn is greater than the share of manufacturing in the UK economy (12 per cent).

1.11 PPF Compensation

- The PPF made its first compensation payments in the 2006/07 financial year following the first scheme transfer in November 2006. A total of £1.4 million was paid out in 2006/07, rising to £17.3 million in 2007/08, £37.6 million in 2008/09, £81.6 million in 2009/10 and £119.5 million in 2010/11.
- At 31 March 2011, 33,069 members were in receipt of PPF compensation, up from 20,775 the previous year. Average compensation in payment stood at £3,889[14] a year. The number of members with compensation not yet in payment (deferred members) as at 31 March 2011 totalled 42,063. For these members, the average accrued periodic compensation (before any prospective application of the compensation cap at NRA) was £3,295 a year.[15]
- As of 31 March 2011, males constituted 72 per cent of pensioner and deferred members, down from 76 per cent the previous year.
- Spouses and dependants account for 15 per cent of those currently in receipt of compensation, receiving 10 per cent of compensation in payment.
- Around 68 per cent of pensioner compensation is attributable to former employees of the manufacturing sector, down from 77 per cent a year before.
- The West-Midlands is the region in largest receipt of compensation, currently receiving 23 per cent of total pensioner compensation.
- As of 31 March 2011, only 100 pensioners were affected by the compensation cap (£29,748.68 a year for those aged 65 in 2010/11 after the 90 per cent scaling).
- The vast majority of members are in receipt of (or have accrued) compensation of less than 25 per cent of the cap.

14 The annualised average rate of compensation is calculated by scaling up compensation over one month to reflect one year. This measure, which excludes lump sum payments, is used in order to accurately represent periodic compensation in payment at 31 March 2011.

15 Unless otherwise stated, totals and averages relating to pensioners include dependants.

1.12 Risk Reduction

- The total number of recognised contingent assets (CAs) in place has risen by 20 per cent, from approximately 750 for the 2010/11 levy year to 900 for 2011/12.
- Schemes in the Purple 2011 dataset (excluding those schemes which were in a PPF assessment period as at 31 March 2011) had by 7 April 2011 certified approximately £28.0 billion of deficit reduction contributions (DRCs) to reduce deficits for the 2011/12 levy year. This was similar to the £29.1 billion certified for the previous levy year.
- The DRCs were not only paid by companies sponsoring the largest schemes; around 44.1 per cent of the £28.0 billion was paid by employers sponsoring schemes with fewer than 10,000 members.
- MQ5 data from the Office for National Statistics (ONS), covering 350 large pension schemes, including 100 local authorities, show that employers' special contributions (i.e. those in excess of regular annual contributions) increased markedly in 2010 to £16.1 billion, a record level, up 60 per cent on that in 2009. In the first quarter of 2011 they were running at an annual rate of £14.8 billion.
- Analysis of the Pension Regulator's latest technical provisions and recovery plan data shows that in Tranche 4, the average recovery plan length widened to 9.5 years, the average funding ratio as measured by assets divided by technical provisions fell to 71 per cent, and technical provisions as a percentage of s179 liabilities fell to 102 per cent. Tranche 4 covers schemes with valuation dates between 22 September 2008 and 21 September 2009 when equity markets were very weak and bond yields low.
- Changes in asset allocation were much less marked between Purple 2010 and Purple 2011 after a period of large falls in the equities share and large increases in the bond share (see chapter 7 Asset Allocation for more detail).
- Quarterly F&C surveys of volumes traded by investment banks suggest that £16.8 billion of liabilities were hedged using interest rate derivatives in the first half of 2011, the same as in the second half of 2010 and significantly above that in the first half of 2010 and second half of 2009.
- £13.7 billion of liabilities were hedged using inflation derivatives in the first half of 2011. Inflation hedging activity peaked in the second and third quarters of 2009.
- Industry sources suggest that the total amount of hedging done using derivatives is around £200-250 billion, around 15-18 per cent of total liabilities (on a full buy-out basis).
- Total risk transfer business covering buy-outs, buy-ins and longevity hedges amounted to £31 billion between the end of 2006 and the third quarter of 2011. Just under half of the total reflected buy-in activity, just over 30 per cent reflected buy-outs and just over 20 per cent longevity hedges (which started in 2009).

2 The data

2.1 Summary

- The main body of the analysis in Purple 2011 is based on new scheme returns for a dataset of 6,432 defined benefit (DB) schemes, covering around 12 million memberships.[16] This represents around 98 per cent of PPF-eligible schemes and 99.6 per cent of universe liabilities. Complete information is not available for the remaining schemes and, hence, these have been excluded from the sample.
- From Purple 2010, schemes in assessment have been excluded from the dataset so as to capture accurately the risk presented by DB schemes whose employers had not experienced an insolvency event. Before Purple Book 2010, schemes were excluded only when they transferred into the PPF.
- As at end-March 2011, there were 369[17] schemes in assessment with total assets of £9.5 billion and total s179 liabilities of £10.9 billion. These represent around one per cent of total assets, similar to 2010, and up from around 0.5 per cent in 2007. Given their relatively small size, the implications of their removal for year-on-year comparisons are limited.
- It is estimated that the eligible universe of schemes, excluding those in assessment at end-March 2011, was around 6,550, a reduction from 6,620 in March 2010.
- The dataset represents a similar proportion of total PPF-eligible schemes to those used in the Purple Books for 2008, 2009 and 2010 (and much higher than that used in the earlier Purple Books).
- The fact that the dataset accounts for such a large proportion of the universe means that results for the universe would be only slightly different from the results presented in Purple 2011.[18]
- As in previous Purple Books, the bulk of the analysis uses funding on a s179 basis. This is broadly speaking what would have to be paid to an insurance company to take on the payment of PPF levels of compensation. The analysis in Chapter 4, Scheme funding, uses data that, as far as possible, reflects the position at 31 March 2011 with the s179 assumptions that came into effect on 1 April 2011.
- The government has introduced new rules to move to the use of the Consumer Prices Index (CPI) for the purpose of the indexation and revaluation of PPF compensation (subject to the appropriate caps and floors). These changes affect pension revaluation from April 2011 and indexation from January 2012. All funding figures presented in the Purple Book are, where relevant, based on RPI-inflation indexation and revaluation.

16 A 'membership' is one individual's participation in one scheme. One individual can have multiple memberships. Hence the number of memberships exceeds the number of individuals.

17 Treating all segregated parts of schemes as separate schemes

18 This point is illustrated in Annex A of Purple 2009. The summary statistics differed little between the sample and extended 2008 datasets. The high coverage suggests a similar outcome in relation to the 2011 sample.

2.2 Introduction

The PPF covers certain DB occupational schemes and DB elements of hybrid schemes. Some DB schemes will be exempt from the PPF, including:

- unfunded public sector schemes;
- some funded public sector schemes, for example, those providing pensions to local government employees;
- schemes to which a Minister of the Crown has given a guarantee; and
- schemes which began to wind up, or were completely wound up, prior to 6 April 2005.

For a more comprehensive list see 'eligible schemes' on the PPF's website at: http://www.pensionprotectionfund.org.uk/About-Us/eligibility/Pages/Eligibility.aspx

The information used in Chapters 3 to 8 of this publication comes from three primary sources, as described below.

Scheme returns provided to the Pensions Regulator

Most of the analysis in this year's publication is based on new scheme returns issued in December 2010 and January 2011 and returned by 31 March 2011.

Voluntary form reporting

Electronic forms are available on the Pensions Regulator's website for pension schemes to provide data regarding contingent assets (CAs), valuation results on a s179 basis, deficit reduction contributions (DRCs) and the s179 valuation results following block transfers. More information on DRCs and CAs is given in Chapter 12, Risk Reduction.

Sponsor failure scores supplied by Dun & Bradstreet (D&B)

The D&B failure scores (ranging from 1 to 100), which cover all the scheme sponsors of PPF-eligible DB schemes, are designed to predict the likelihood that a sponsor will cease operations without paying all creditors over the next 12 months. Each score corresponds to a probability of insolvency, which is used in the PPF's risk-based levy calculations. A score of 1 represents the businesses with the highest probability of insolvency and 100 the lowest.

The data used in Chapters 9 Levy Payments, 10 Schemes in Assessment and 11 PPF Compensation are derived from the PPF's business operations.

The Purple 2011 sample covers over 98 per cent of the estimated number of PPF-eligible schemes; over 60 per cent of the missing schemes have fewer than 100 members.

2.3 The PPF-eligible DB universe[19]

Table 2.1 | Distribution of schemes excluding those in assessment by number of members, 31 March 2011

Number of members	Fewer than 100	100 – 999	1,000 – 4,999	5,000 – 9,999	10,000+	Total Schemes (final estimates)
Estimated Purple 2011 universe	2,352	2,940	847	191	220	6,550
Purple 2011 dataset	2,276	2,911	834	191	220	6,432
Purple 2011 dataset as % of 2011 PPF-eligible DB universe	96.8%	99.0%	98.5%	100.0%	100.0%	98.2%

Source: PPF / The Pensions Regulator

The Purple 2011 sample covers almost all scheme liabilities.

Table 2.2 | Distribution of s179 liabilities (£ billion) excluding those of schemes in the assessment process by number of members, 31 March 2011

Number of members	Fewer than 100	100 – 999	1,000 – 4,999	5,000 – 9,999	10,000+	Total Liabilities
Estimated Purple 2011 universe	10.7	89.8	151.6	112.1	609.0	973.2
Purple 2011 dataset	10.4	88.9	149.3	112.1	609.0	969.7
Purple 2011 dataset as a % of 2011 PPF-eligible universe	97.1%	99%	98.4%	100%	100%	99.6%

Source: PPF / The Pensions Regulator

The declining universe reflects schemes winding up, scheme mergers, schemes transferring into the PPF and block transfers.

Table 2.3 | Purple datasets and universe estimates, including schemes in the PPF assessment process

	2006	2007	2008	2009	2010	2011
Estimated eligible DB universe	7,800	7,500	7,300	7,200	7,000	6,920
Purple dataset (as a percentage of final universe)	5,772 (74.0%)	5,892 (78.6%)	6,898 (94.5%)	6,885 (95.6%)	6,972 (99.6%)	6,801 (98.3%)

Source: PPF / The Pensions Regulator

19 The universe estimates are based on an assessment of the number of additional schemes for which full data will become available.

2.4 Funding estimates

As in previous Purple Books, the bulk of the analysis uses funding estimates on a section 179 (s179) basis. This is, broadly speaking, what would have to be paid to an insurance company to take on the payment of PPF levels of compensation. The PPF uses estimates of scheme funding on a s179 basis in the calculation of scheme-based levies. The analysis in Chapter 4, Scheme Funding, uses data that, as far as possible, reflects the position at 31 March 2011 with the s179 assumptions that came into effect on 1 April 2011.

The government has introduced new rules to move to the use of the Consumer Prices Index (CPI) rather than the Retail Prices Index (RPI) for the purpose of the indexation and revaluation of PPF compensation (subject to the appropriate caps and floors). These changes affect pension revaluation from April 2011 and indexation from January 2012.

The Board of the Pension Protection Fund is responsible for keeping the assumptions used for valuations under the various sections of the Pensions Act 2004, including s179, in line with estimated pricing in the bulk annuity market. During January 2011 structured discussions about pricing assumptions were held with seven currently active participants in the bulk annuities market. The fairly unanimous response from insurers was that no bulk annuity deals with CPI linkage had yet been entered into and insurers were quoting the same prices for CPI- and RPI-linked annuities. However, there was the expectation that the CPI market might develop quite rapidly in the next couple of years.

As the assumptions for s179 valuations are required to reflect the buy-out market at a particular time, the PPF set the net discount rates from 1 April 2011 on the assumptions that there is no difference in the pricing of CPI and RPI in the current market. However, if the CPI market does become more established and a gap opens up between CPI and RPI pricing, then the PPF will reflect the gap at the time it is discovered[20].

As in previous years, actuaries at the PPF and the Pensions Regulator have also produced full buy-out estimates of the funding position for the Purple 2011 dataset.

20 See "2011 Consultation on assumptions to be used for valuations under section 143 and 179 of the Pensions Act 2004", February 2011 and "The response to the February 2011 consultation", April 2011:
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/assumptions_consultation_Feb_2011.pdf
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/Response_to_assumptions_consultation_Apr11.pdf

3 Scheme Demographics

3.1 Summary

- The proportion of open schemes continues to fall, from 18 per cent in 2010 to 16 per cent in 2011.
- Schemes closed to new members were in the majority in all size bands.
- 31 per cent of the memberships are in schemes which are open.
- Whilst 24 per cent of schemes are closed to future accrual, six per cent of memberships fall into that category.
- The proportion of schemes whose principal sponsor is in the manufacturing sector continues to fall whilst the proportion of schemes whose principal sponsor is in the services sector continues to increase.

3.2 Introduction

In this chapter the composition of the dataset used for this year's Purple Book is described. Figures for the total numbers of schemes and total scheme membership are included, with breakdowns by size, maturity, scheme status, and industrial classification.

For each edition of the Purple Book, a dataset has been collated including all appropriate schemes where scheme return information has been processed and cleaned. In subsequent months, more scheme returns are processed and cleaned and these are incorporated into the existing dataset to produce an 'extended' dataset. For 2006 and 2007, the increased coverage produced significantly different results to the original datasets. However for 2008 and 2009 the original Purple datasets were much larger and the increased coverage made only a small difference. The dataset for 2010 was a little larger than that for 2009 and 2008. Accordingly, comparisons are made with previous publications as follows:

- **Purple 2006** - extended dataset;
- **Purple 2007** - extended dataset;
- **Purple 2008** - original dataset;
- **Purple 2009** - original dataset, and;
- **Purple 2010** - original dataset.

Where figures are not available in charts please refer to the Chapter 3 Appendix (page 107)

3.3 Scheme Status

Scheme status in this Purple Book is split between:

- open schemes, where new members can join the DB section of the scheme and accrue benefits;
- schemes closed to new members, in which existing members continue to accrue benefits;
- schemes closed to future accruals, where existing members can no longer accrue new years of service; and
- schemes that are winding up.

Because many larger employers have adopted the strategy of migrating their pension provision towards defined contribution (DC) by opening a DC section in an existing DB scheme, many hybrid schemes may accept new members but no longer allow new (or existing) members to accrue defined benefits.

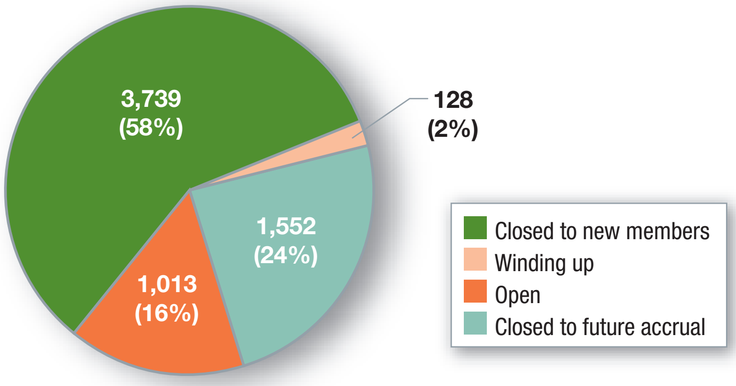
This has been handled differently across different editions of the Purple Book. In Purple 2006, 40 per cent of memberships were in the open category and 25 per cent were categorised as ‘part open’. It was noted that the ‘part open’ category included a significant number of hybrids for which the DB element was closed. In Purple 2007, the ‘part open’ category was removed and the percentage of schemes classified as open increased in comparison with Purple 2006. Many hybrid schemes which had previously identified themselves as ‘part open’ now identified themselves as ‘open’. In Purple 2008 and Purple 2009, we analysed the largest 100 schemes (by membership) in the hybrid category separately so as to adjust the information provided in the scheme return and remove potential misinterpretation caused by hybrid schemes with closed DB sections declaring themselves as open.

Improved levels of information on hybrid schemes are now available from the scheme return and since Purple 2010 we are able to adjust hybrid statuses to ‘closed’ where DB provision is not available to new members. A total of 527 open hybrids had their status adjusted to ‘closed’ covering approximately 1.7 million members.

The changes to the information available and consequent developing approach across the various editions of the Purple Book should be taken into account when comparing figures from different editions.

The population of open schemes continues to fall.

Chart 3.1 | Distribution of schemes by status



Source: PPF / The Pensions Regulator

Table 3.1 | Distribution of schemes by status*

Percentage of schemes	Extended Purple 2006	Extended Purple 2007	Purple 2008	Purple 2009	Purple 2010	Purple 2011
Open (plus part open in 2006)	43%	36%	31%	27%	18%	16%
Closed to new members	44%	45%	50%	52%	58%	58%
Closed to future accruals	12%	16%	17%	19%	21%	24%
Winding up	1%	2%	2%	2%	2%	2%
Total	100%	100%	100%	100%	100%	100%

Source: PPF / The Pensions Regulator
*Note that the handling of "part-open" and hybrid schemes as detailed above should be taken into account when comparing figures.

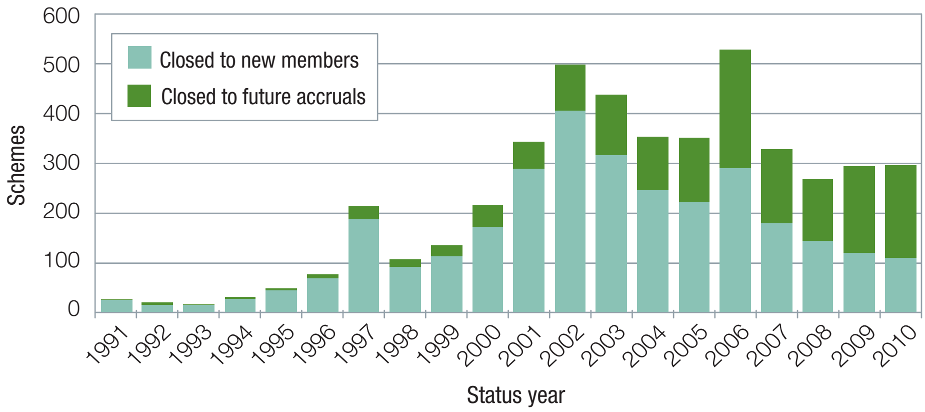
Exclusion of hybrids does not alter the direction of trends in the proportion of schemes by status.

Table 3.2 | Distribution of schemes by status (excluding hybrid schemes)

Percentage of schemes	Extended Purple 2006	Extended Purple 2007	Purple 2008	Purple 2009	Purple 2010	Purple 2011
Open (plus part open in 2006)	35%	33%	26%	22%	21%	18%
Closed to new members	49%	49%	52%	55%	54%	54%
Closed to future accruals	15%	17%	19%	20%	23%	26%
Winding up	1%	1%	3%	3%	2%	2%
Total	100%	100%	100%	100%	100%	100%

Source: PPF / The Pensions Regulator

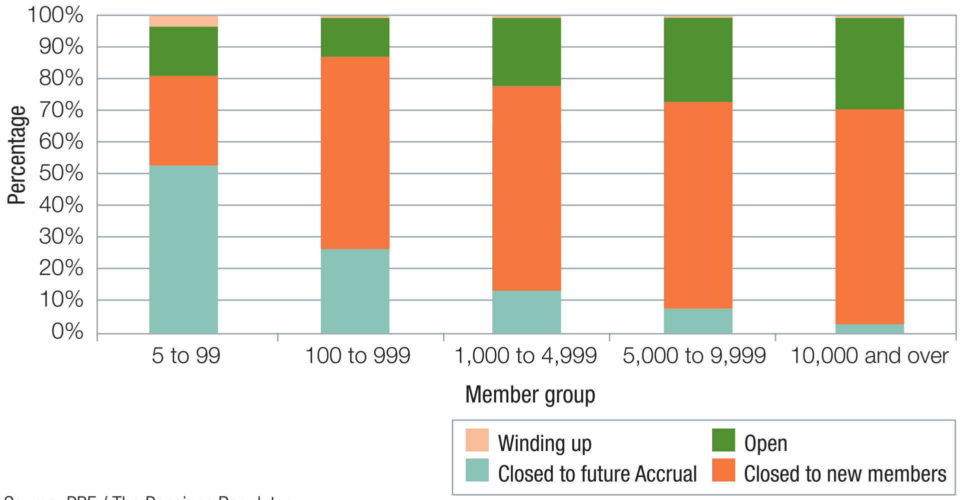
Chart 3.2 | Number of schemes entering closed status by year*



Source: PPF / The Pensions Regulator
*Hybrid schemes where the status has been amended to closed as described in Section 3.3 have been excluded from this chart since the year of the status change is not available. Figures show the years in which closed and closed to future accrual schemes in this year's data set entered that status

This chart shows the number of schemes in the 2011 dataset with closed to new member and closed to future accrual status broken down by the year in which they entered that status

Chart 3.3 | Scheme status by member group*



Source: PPF / The Pensions Regulator
* A small number of schemes with fewer than five members are in the dataset (77). These are mostly independently registered sections or schemes which appeared in previous Purple datasets.

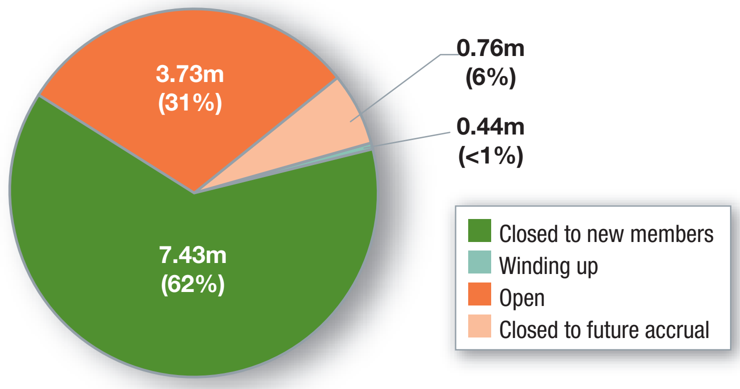
Schemes closed to new members were in the majority in all size bands.

31% of the memberships are in schemes which are open.

Whilst 24 per cent of schemes are closed to future accrual, 6% of memberships fall into that category

3.4 Scheme status and scheme membership

Chart 3.4 | Percentage distribution of memberships by scheme status



Source: PPF / The Pensions Regulator

Table 3.3 | Distribution of membership by status

Percentage of schemes	Extended Purple 2006	Extended Purple 2007	Purple 2008	Purple 2009	Purple 2010	Purple 2011
Open (plus part open in 2006)	66%	50%	44%	37%	34%	31%
Closed to new members	32%	46%	52%	59%	60%	62%
Closed to future accruals	2%	3%	4%	4%	5%	6%
Winding up	1%	0%	0%	0%	1%	0%
Total	100%	100%	100%	100%	100%	100%

Source: PPF / The Pensions Regulator

Table 3.4 | Distribution of membership by status (excluding hybrid schemes)

Percentage of schemes	Extended Purple 2006	Extended Purple 2007	Purple 2008	Purple 2009	Purple 2010	Purple 2011
Open (plus part open in 2006)	64%	55%	46%	38%	38%	34%
Closed to new members	34%	41%	49%	57%	56%	58%
Closed to future accruals	2%	3%	4%	5%	6%	8%
Winding up	0%	0%	0%	0%	1%	0%
Total	100%	100%	100%	100%	100%	100%

Source: PPF / The Pensions Regulator

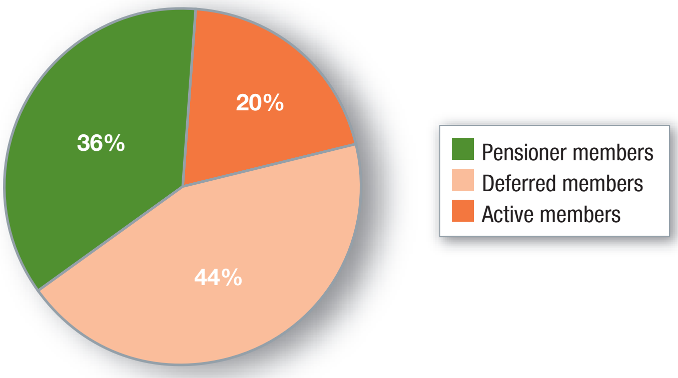
3.4 Scheme membership

Table 3.5 | Membership by membership type and status, 31 March 2011*

	Open	Closed	Closed to future accrual	Winding Up	Total
Active members (millions)	1.08	1.23	n/a	n/a	2.31
Deferred members (millions)	1.40	3.39	0.48	0.02	5.29
Pensioner members (millions)	1.25	2.81	0.28	0.02	4.36
Total	3.73	7.43	0.76	0.04	11.96

Source: PPF / The Pensions Regulator
* Note that for various reasons a small number of schemes have breakdowns of membership by active, deferred and pensioner types which do not match the total figure for membership. Totals may not, therefore, match figures calculated from the figure given for total members. Where members are listed as active in the information provided by closed schemes they are assumed to be deferred members.

Chart 3.5 | Distribution of member types in the Purple 2011 dataset

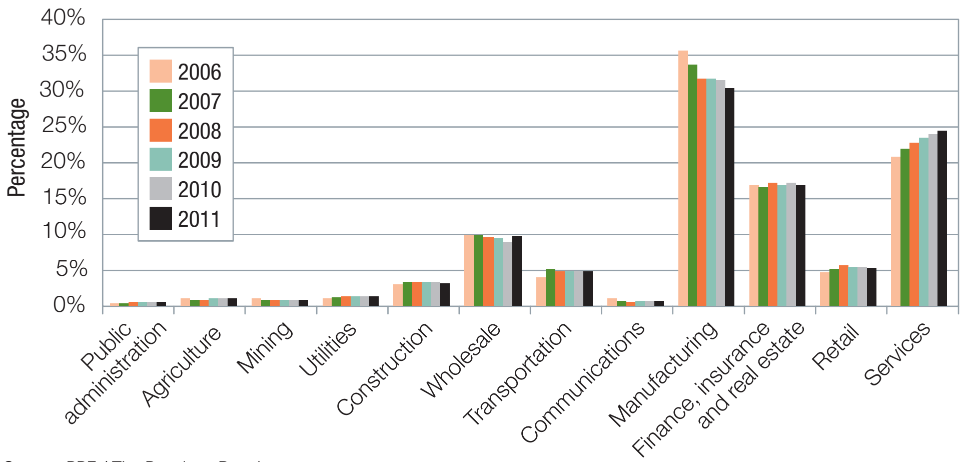


Source: PPF / The Pensions Regulator

The chart shows the proportions of members by type of membership in the 2011 dataset. An individual is likely to have only one active membership whilst several deferred memberships may belong to one individual.

The proportion of schemes whose principal sponsor is in the manufacturing sector continues to fall whilst the proportion of schemes whose principal sponsor is in the services sector continues to increase.

Chart 3.6 | Proportion of schemes by industry classification



Source: PPF / The Pensions Regulator

Chart 3.7 | Distribution of member types by member group in the Purple 2011 dataset

Source: PPF / The Pensions Regulator

4 Scheme Funding

4.1 Summary

- Dataset assets total £968.5 billion at 31 March 2011.
- The aggregate s179 funding position of the schemes in the Purple 2011 dataset as at 31 March 2011 was a deficit of £1.2 billion.
- The s179 funding ratio fell from 104.3 per cent to 99.9 per cent between 2010 and 2011. However, this represents a small shift compared to the historical volatility of the funding ratio as shown by the PPF 7800 index during a year.
- The full buy-out funding ratio is 67.5 per cent.
- 2011 s179 liabilities total £969.7 billion while estimated full buy-out liabilities total £1435.5 billion.
- The total deficit on a s179 basis, for all those schemes in deficit, is £78.3 billion.
- The total deficit on an estimated full buy-out basis, for all of those schemes in deficit is £470.7 billion.
- Schemes with estimated full buy-out funding between 50 per cent and 75 per cent form the largest group across all size categories.
- On average, schemes with a greater proportion of pensioner liability have higher s179 funding levels.
- Both assets and liabilities are concentrated in the 25% to 50% maturity band.
- Assets and liabilities are concentrated in the closed to new members status.
- 27.9 per cent of s179 liabilities relate to active members.
- Two sectors - finance, insurance and real estate, and manufacturing - hold the most assets and liabilities.

4.2 Introduction

This chapter primarily deals with scheme funding on a s179 basis as at 31 March 2011. Funding information supplied via scheme returns is processed so that scheme funding can be estimated at a common date, allowing comparison between schemes valued at different dates. Funding is primarily presented on the s179 basis. This is, broadly speaking, what would have to be paid to an insurance company for it to take on the payment of PPF levels of compensation. In addition, full buy-out funding information is estimated from scheme return data. This uses a similar gilts-based discount rate as the s179 basis but covers full scheme benefits.

In presenting analysis as at 31 March 2011, the figures in this Chapter use data that, as far as possible, reflect the position at that date although it should be noted that the s179 actuarial assumptions[21] used are those which came into effect on 1 April 2011. The processing of s179 results allows for the different assumptions used for s179 valuations at earlier effective dates. s179 figures form the basis for PPF levy calculations, subject to subsequent adjustments in defined circumstances. Estimates of liabilities on the full buy-out basis have used the same valuation assumptions but allow for the difference between the PPF level of compensation and full scheme benefits. In the case of full buy-out, the calculation is hypothetical, as only small numbers of buy outs actually occur and the terms achieved are confidential and not necessarily obtainable for other schemes.

4.3 Overall Funding

Table 4.1 | Key funding statistics, 31 March 2011

	s179	Full buy out
Total number of schemes	6,432	6,432
Total assets (£ billion)	968.5	968.5
Total liabilities (£ billion)	969.7	1,435.5
Aggregate funding position (£ billion)	-1.2	-467.0
Total balance for schemes in deficit (£ billion)	-78.3	-470.7
Total balance for schemes in suplus (£ billions)	77.1	3.7
Funding Level	99.9%	67.5%

Source: PPF / The Pensions Regulator

The total deficit for schemes in deficit was £78.3 billion on a s179 basis and £470.7 billion on a full buy out basis.

21 For more information see: http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/Section_179_Assumptions_Guidance_vA5_Oct09.pdf

Table 4.2 | Historical funding figures*

	No. of schemes **	Total assets (£ billion)	s179 liabilities				
			Liabilities (£ billion)	Aggregate funding (s179) (£ billion)	Deficit of schemes in deficit (£ billion)	Surplus of schemes in surplus (£ billion)	Funding ratio
2006	7,751	769.5	792.2	-22.7	-76.3	53.5	97%
2007	7,542	837.7	769.9	67.8	-46.8	96.5	109%
2008	6,897	837.2	842.3	-5.1	-67.7	62.6	99%
2009	6,885	780.4	981.0	-200.6	-216.7	16.0	80%
2010	6,596	926.2	887.9	38.3	-49.1	87.4	104%
2011	6,432	968.5	969.7	-1.2	-78.3	77.1	100%

	Full buy-out				
	Liabilities (£ billion)	Aggregate funding (£ billion)	Deficit of schemes in deficit (£ billion)	Surplus of schemes in surplus (£ billion)	Funding ratio
2006	1,273.5	-504.0	n/a	n/a	60%
2007	1,289.3	-451.6	n/a	n/a	65%
2008	1,356.0	-518.6	-520.4	1.6	62%
2009	1,351.6	-571.2	-572.3	1.1	58%
2010	1,359.2	-433.0	-436.5	3.5	68%
2011	1,435.5	-467.0	-470.7	3.7	67%

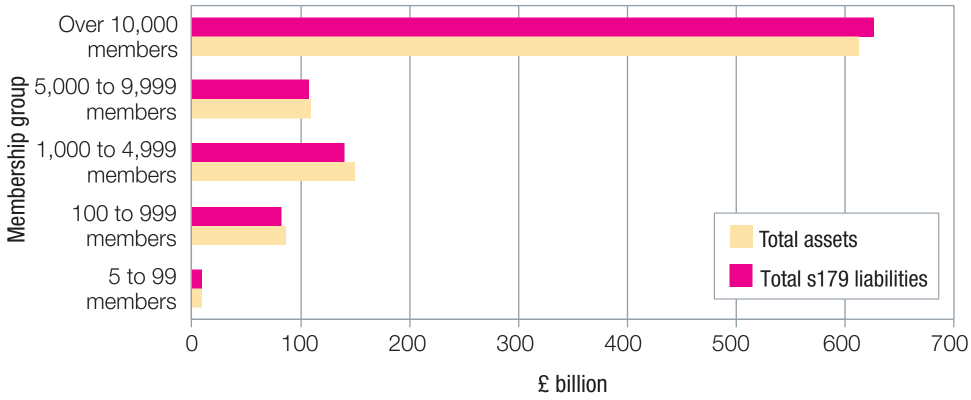
Source: PPF / Pensions Regulator
*The figures shown above are the headline figures presented in the Purple Books 2008, 2009 and 2010. For 2006 and 2007 the figures are based on the extended Purple datasets published in the Annexes to Purple 2007 and 2008.
**Figures before 2010 include schemes in assessment

Table 4.3 | s179 funding levels by scheme size, 31 March 2011

Scheme size measured by number of members	Number of schemes in sample	Market value of Assets (£ billion)	Liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level
5 to 99 members	2,276	11.1	10.4	0.6	106%	104%
100 to 999 members	2,911	84.9	88.9	-4.0	95%	93%
1,000 to 4,999 members	834	139.5	149.3	-9.8	93%	91%
5,000 to 9,999 members	191	110.9	112.1	-1.1	99%	96%
Over 10,000 members	220	622.1	609.0	13.1	102%	100%
Total	**6,432**	**968.5**	**969.7**	**-1.2**	**100%**	**97%**

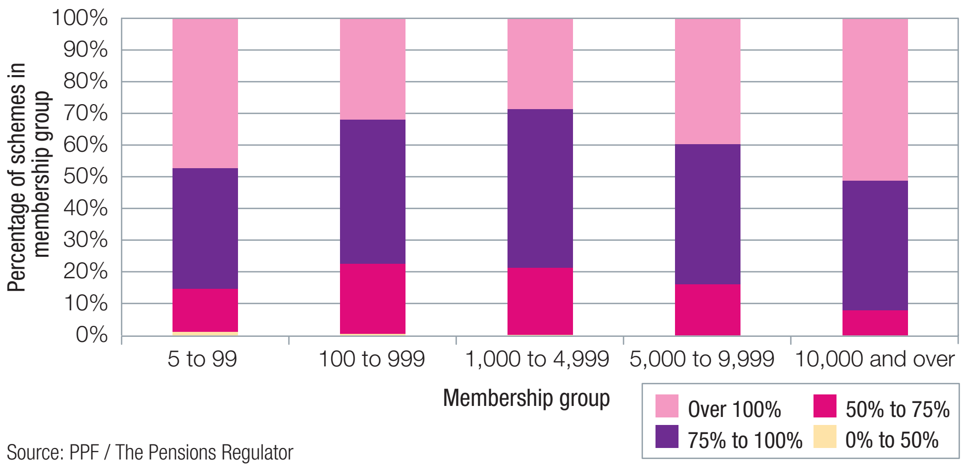
Source: PPF / The Pensions Regulator
*note that schemes with unusual funding arrangements were excluded from simple averages in this table so as to avoid distortions. 25 schemes were removed on the basis that their buy-out funding level was equal to or greater than 200 per cent.

Chart 4.1 | Distribution of s179 funding levels by size of scheme membership, 31 March 2011



Source: PPF / The Pensions Regulator

Chart 4.2 | Distribution of s179 funding levels by size of scheme membership, 31 March 2011



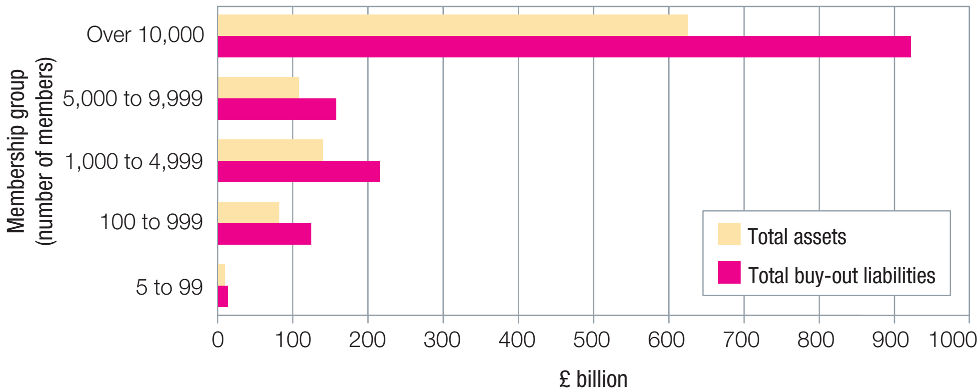
Source: PPF / The Pensions Regulator

Table 4.4 | Estimated full buy-out levels by size of scheme members, 31 March 2011

Members	Number of schemes in sample	Market value of Assets (£ billion)	Liabilities (£billion)	Balance (£billion)	Weighted average funding level	Simple average funding level
5 to 99 members	2,276	11.1	15.2	-4.1	73%	74%
100 to 999 members	2,911	84.9	128.3	-43.4	66%	65%
1,000 to 4,999 members	834	139.5	214.2	-74.7	65%	64%
5,000 to 9,999 members	191	110.9	160.9	-50.0	69%	68%
Over 10,000 members	220	622.1	916.9	-294.8	68%	69%
Total	6,432	968.5	1,435.5	-467.0	67%	68%

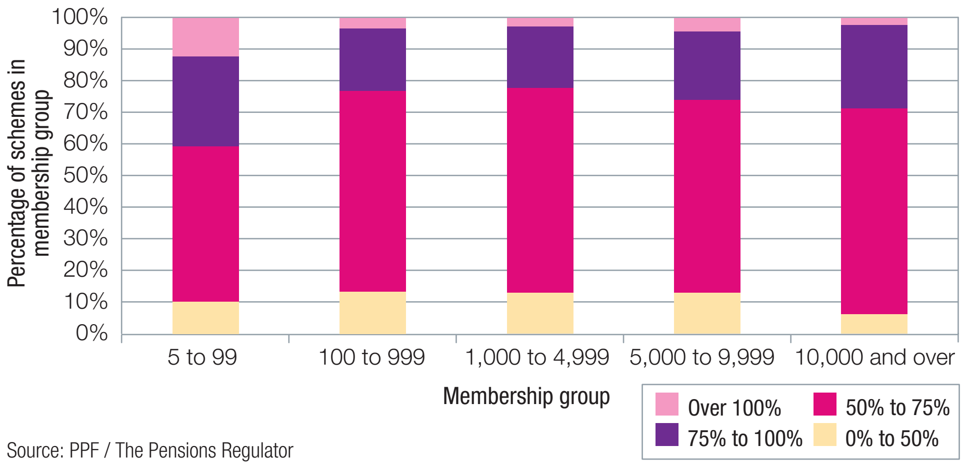
Source: PPF / The Pensions Regulator

Chart 4.3 | Total assets and liabilities by size of scheme membership on an estimated full buy-out basis, 31 March 2011



Source: PPF / The Pensions Regulator

Chart 4.4 | Distribution of buy-out funding levels by size of scheme membership, 31 March 2011



Source: PPF / The Pensions Regulator

4.5 Analysis of funding by scheme maturity

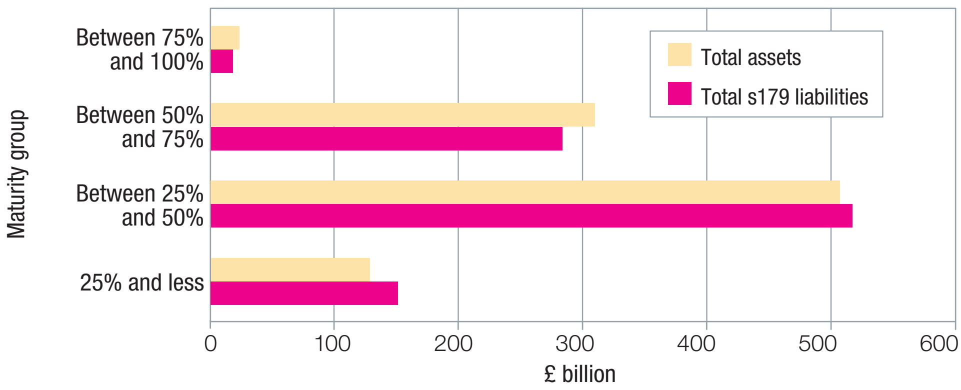
Table 4.5 | Analysis of s179 funding levels by scheme maturity, 31 March 2011

Proportion of s179 liabilities relating to pensioners	Number of schemes in sample	Market value of assets (£ billion)	Liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level
25% and less	2,511	128.5	151.3	-22.8	85%	89%
Between 25% and 50%	2,813	507	516.6	-9.6	98%	96%
Between 50% and 75%	945	309.6	283.5	26.2	109%	111%
Between 75% and 100%	163	23.4	18.4	5	127%	132%
Total	6,432	968.5	969.7	-1.2	100%	97%

Source: PPF / The Pensions Regulator
*note that schemes with unusual funding arrangements were excluded from simple averages in this table so as to avoid distortions. 25 schemes were removed on the basis that their buy-out funding level was equal to or greater than 200 per cent.

On average, schemes with a greater proportion of pensioner liability have higher s179 funding levels.

Chart 4.5 | Distribution of s179 assets and liabilities by scheme maturity, 31 March 2011



Source: PPF / The Pensions Regulator

Chart 4.6 | Distribution of funding levels on a s179 basis by scheme maturity, 31 March 2011

Source: PPF / The Pensions Regulator

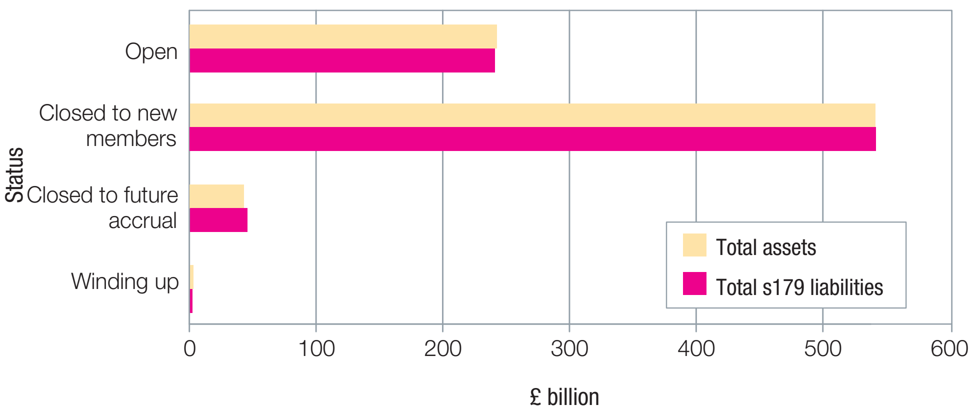
4.5 Analysis of funding by scheme status

Table 4.6 | Analysis of s179 funding levels by scheme status, 31 March 2011

Status	Number of schemes in sample	Market value of assets (£ billion)	Liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level
Open	1,013	283.2	281.1	2.1	101%	95%
Closed to new members	3,739	630.6	631.4	-0.9	100%	97%
Closed to future accruals	1,552	50.6	53.9	-3.3	94%	94%
Winding Up	128	4.1	3.3	0.8	124%	117%
Total	6,432	968.5	969.7	-1.2	100%	97%

Source: PPF / The Pensions Regulator

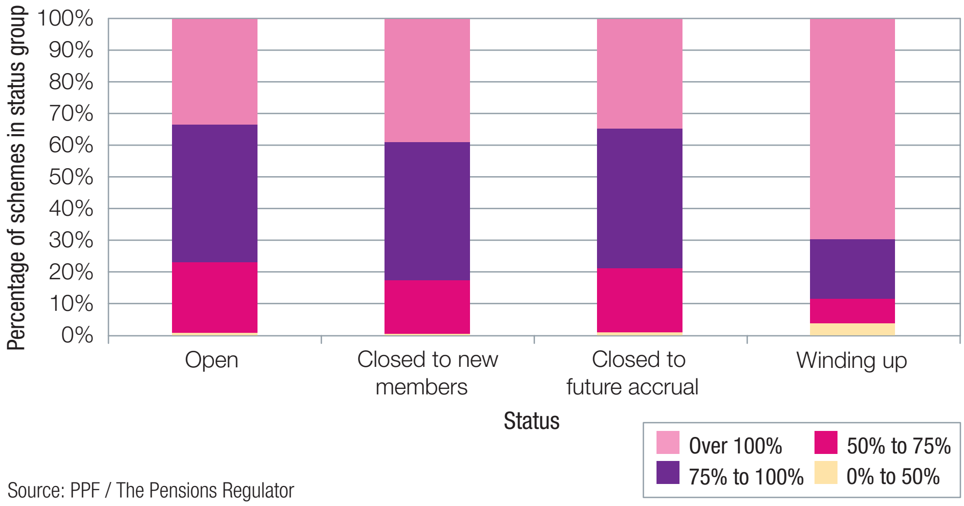
Chart 4.7 | Distribution of s179 assets and liabilities by scheme status, 31 March 2011



Source: PPF / The Pensions Regulator

Assets and liabilities are concentrated in the closed to new members status.

Chart 4.8 | Distribution of schemes by s179 funding levels within scheme status groups, 31 March 2011



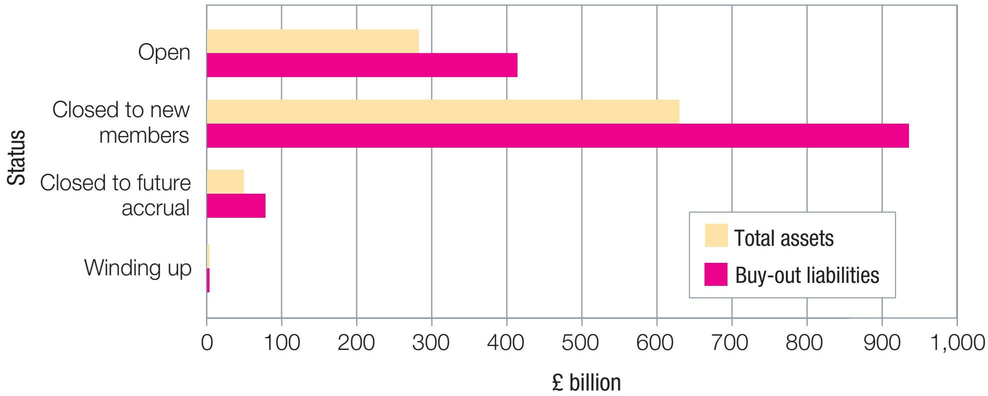
Source: PPF / The Pensions Regulator

Table 4.7 | Analysis of estimated full buy-out funding levels by scheme status, 31 March 2011

Status	Market value of assets (£ billion)	Liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level	Number of schemes in sample
Open	1,013	283.2	415.1	-129.3	69%	70%
Closed to new members	3,739	630.6	936.9	-295.7	68%	70%
Closed to future accruals	1,552	50.6	78.6	-26.9	66%	68%
WindingUp	128	4.1	4.9	-0.8	84%	84%
Total	6,432	968.5	1,435.50	-452.6	68%	69%

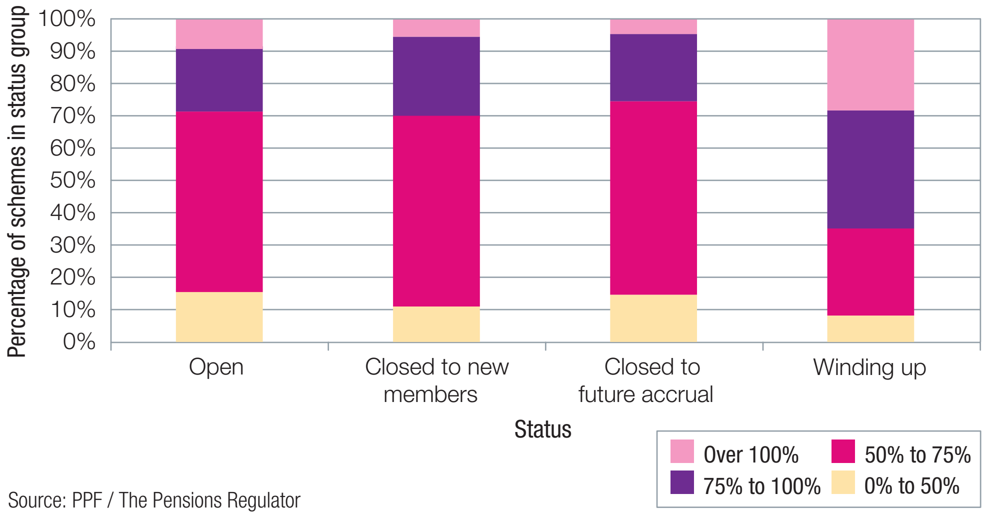
Source: PPF / The Pensions Regulator

Chart 4.9 | Distribution of estimated full buy-out assets and liabilities by status, 31 March 2011



Source: PPF / The Pensions Regulator

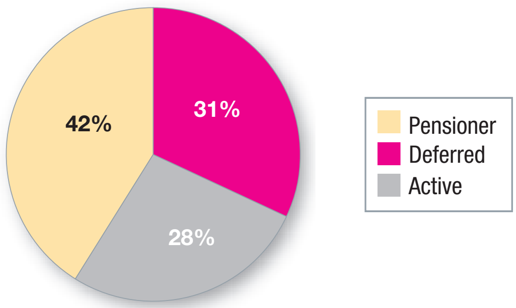
Chart 4.10 | Distribution of estimated full buy-out funding level by status, 31 March 2011



Source: PPF / The Pensions Regulator

28 per cent of s179 liabilities relate to active members.

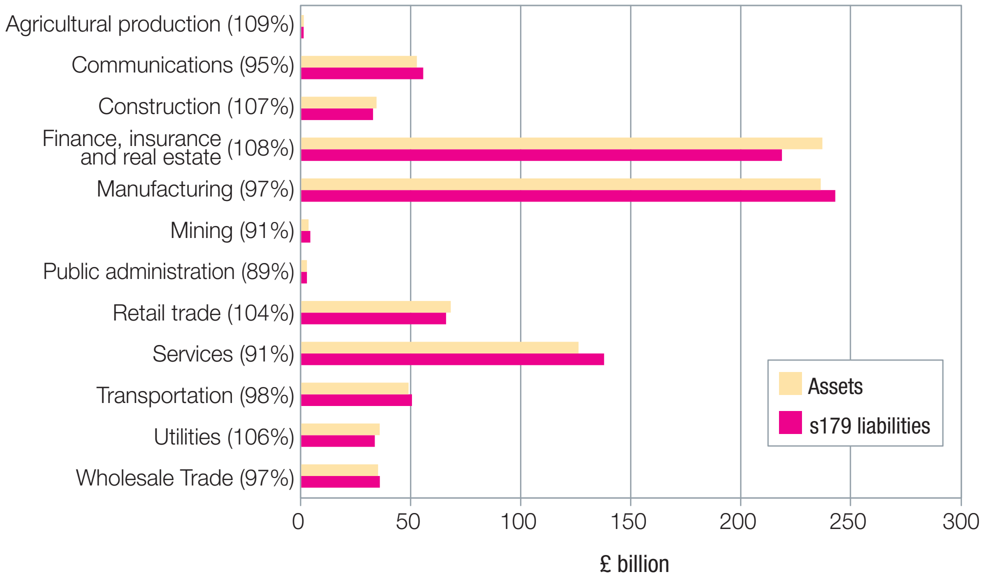
Chart 4.11 | s179 liabilities by active, deferred and pensioner members



Source: PPF / The Pensions Regulator

Two sectors - finance, insurance and real estate, and manufacturing - hold the most assets and liabilities

Chart 4.12 | s179 assets and liabilities by industry with overall funding level, 31 March 2011



Source: PPF / The Pensions Regulator

5 Funding Sensitivities

Summary

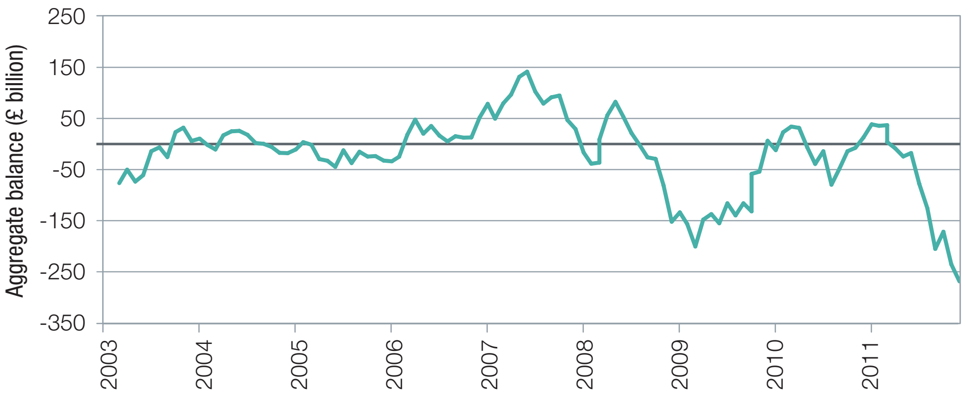
- All the model-based funding sensitivities in this chapter are on a s179 basis, taking the funding position at 31 March 2011[22] as the base and using the Purple 2011 dataset. The sensitivities do not take into account the use of derivative instruments to hedge changes in interest rates, inflation, equities or longevity.
- Changes in estimated market conditions and financial and demographic assumptions since January 2003 have caused the monthly aggregate funding ratio of pension schemes to vary by around 41 percentage points (with the highest funding ratio in June 2007 at 120 per cent and the lowest ratio of 79 per cent in December 2011)[23].
- The aggregate balance has varied by around £410 billion (with the greatest surplus in June 2007 at £142 billion and the greatest deficit in December 2011 at £271 billion).
- The assumptions were changed in 31 March 2008, 31 October 2009 and 1 April 2011. These first two changes improved scheme funding by around £45 billion and £75 billion respectively, while the third worsened scheme funding by around £35 billion[24].
- The estimated number of schemes in deficit on a s179 basis was at its lowest point in June 2007 at around 2,060 schemes (32 per cent of the dataset) and peaked in March 2009 at around 5,450 (85 per cent).
- Since end-March 2011, the date for the funding estimates in Chapter 4, falls in equity markets and bond yields have resulted in a worsening in aggregate scheme funding of around £275 billion by the end of December.
- A 0.1 percentage point (10 basis point) reduction in gilt yields raises scheme liabilities by 1.8 per cent and raises scheme assets by 0.4 per cent. A 2.5 per cent rise in equity markets raises scheme assets by 1.1 per cent.
- A 0.1 percentage point (10 basis point) rise in gilt yields increases the end-March 2011 s179 aggregated funding position by £13.3 billion from -£1.2 billion to £12.1 billion while a 2.5 per cent rise in equity prices increases the aggregated funding position by £10.4 billion.
- If the assumed rate of inflation increases by 0.1 per cent, with nominal interest rates unchanged, then the s179 liabilities for schemes increases by approximately 0.9 per cent or £8 billion.
- An increase in longevity such that the experienced mortality is now equivalent to that of an individual two years younger would increase schemes' liabilities by 4.5 per cent, or £44 billion.

22 Using the A6 assumptions as in Chapter 4

23 The estimates presented here are a little different from those shown in the PPF 7800 release for end-December:
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_January_11.pdf
For example, for December 2011 the deficit in Purple 2011 is estimated to be £277 billion compared with a £255 billion in the PPF7800. This is because Purple 2011 is based on a more up-to-date data set.

24 For more information see PPF7800 January 2009, November 2009 and May 2011
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF%207800%20January%2009.pdf
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_November_09.pdf
http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_May_11.pdf

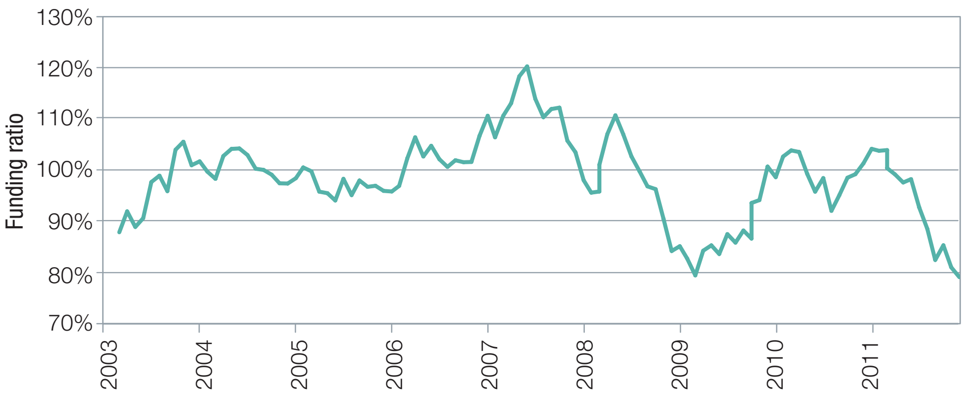
Chart 5.1 | Estimated s179 aggregate balance (assets less liabilities) of pension schemes in the Purple 2011 dataset



Source: PPF / The Pensions Regulator

Market movements have resulted in a variation in the s179 aggregate balance of around £410 billion with the greatest surplus of £142 billion in June 2007 and the greatest deficit of £271 billion in December 2011.

Chart 5.2 | Estimated s179 funding ratio (assets as a percentage of liabilities) of pension schemes in the Purple 2011 dataset



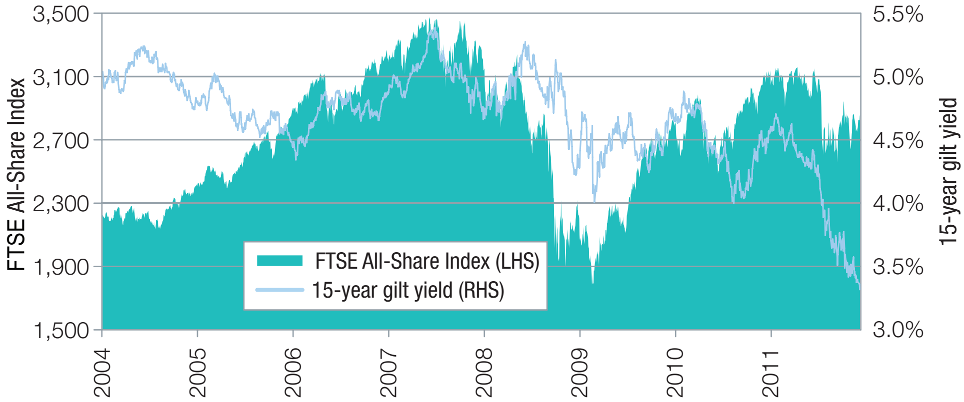
Source: PPF / The Pensions Regulator

Market movements have resulted in a variation in the funding ratio of around 41 percentage points with the highest ratio of 120 per cent in June 2007 and the lowest ratio of 79 per cent in December 2011.

The highest funding ratio in June 2007 reflected high levels for both gilt yields and equity markets, while the lowest funding ratio in December 2011 mainly reflected very low levels for gilt yields.

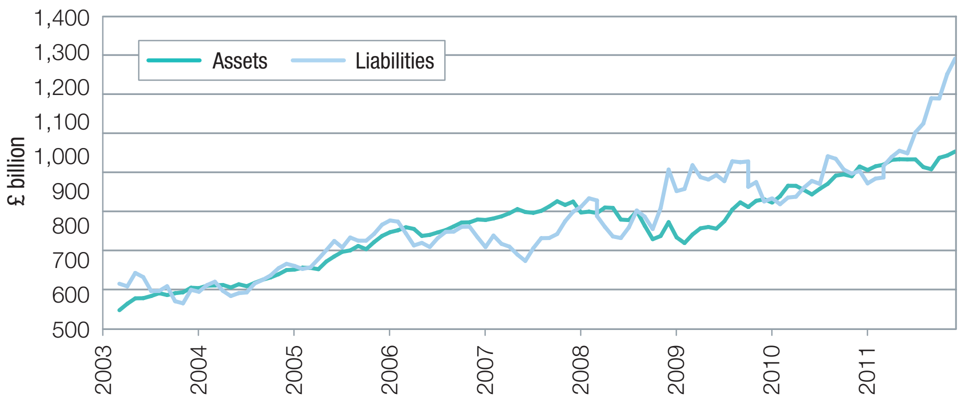
Total scheme liabilities are estimated to have risen by £314 billion (32 per cent) between March and December 2011 while total assets are estimated to have risen by £40 billion (4 per cent).

Chart 5.3 | Movements in stock markets and gilts yields



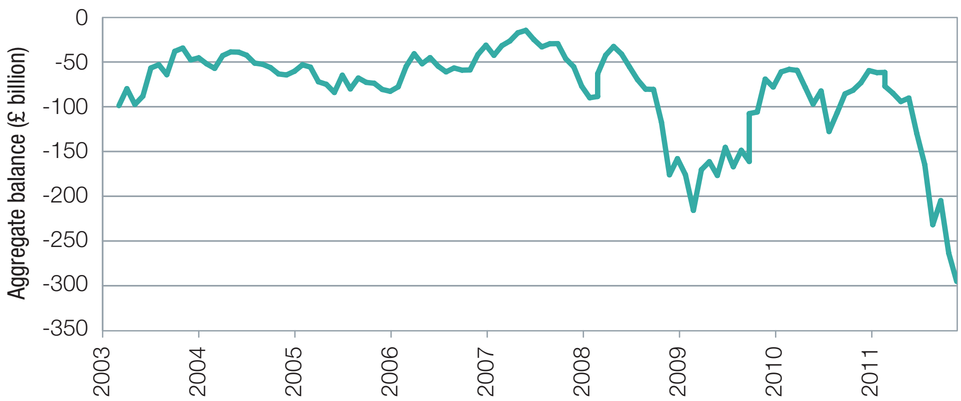
Source: Bloomberg

Chart 5.4 | Estimated movements in assets and s179 liabilities of schemes in the Purple 2011 dataset



Source: PPF / The Pensions Regulator

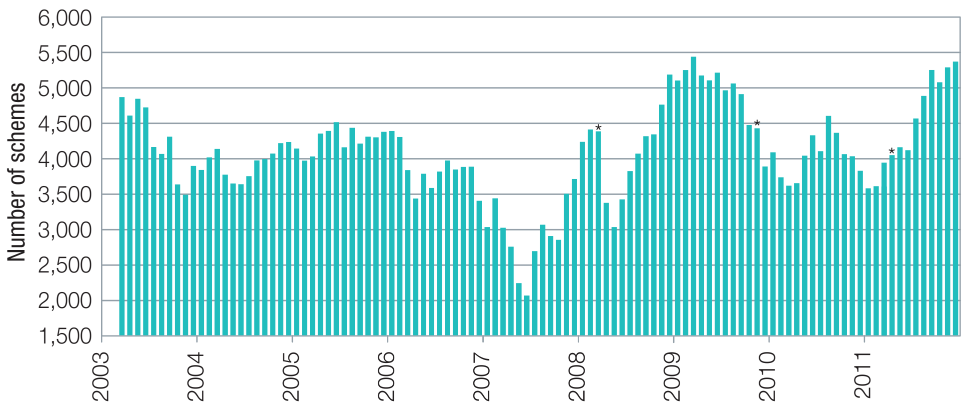
Chart 5.5 | Estimated aggregate assets less aggregate s179 liabilities for schemes in deficit



Source: PPF / The Pensions Regulator

When scheme funding was at its highest in June 2007, the aggregate deficit of the schemes in deficit was just £14 billion.

Chart 5.6 | Estimated number of schemes in deficit each month in the Purple 2011 dataset*



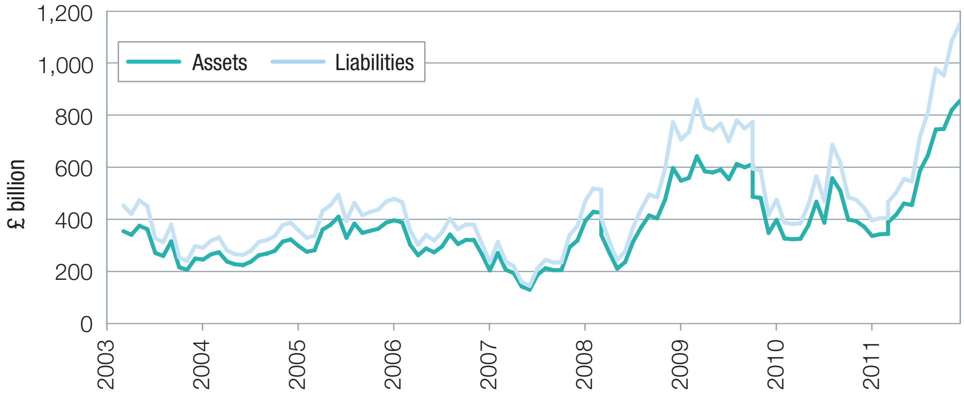
Source: PPF / The Pensions Regulator

* Note: the changes to assumptions in March 2008 and October 2009 reduced the number of schemes in deficit by 479 and 539 respectively, while the change in assumptions in April 2011 raised the number of schemes in deficit by 348.

In December 2011, there were estimated to have been around 5,450 schemes in deficit (85 per cent of the total) similar to the level in March 2009.

Total assets of schemes in deficit rose between March and December 2011 despite falling equity markets mainly because of the large rise in the number of schemes in deficit.

Chart 5.7 | Estimated movements in assets and s179 liabilities of schemes in the Purple 2011 dataset



Source: PPF / The Pensions Regulator

A 0.1 percentage point (10 basis point) rise in gilt yields would have increased the end March 2011 s179 aggregated funding position by £13.3 billion from -£1.2 billion (bold) to £12.1 billion (shaded), somewhat larger than the impact of 2.5 per cent increase in equity prices which would result in a balance of £9.2 billion (shaded).

Table 5.1 | Impact of changes in gilt yields and equity prices on s179 funding levels from a base aggregate deficit of £1.2 billion, 31 March 2011

Assets less s179 liabilities (£ billion)							
Movement in equity prices	Movement in gilt yields						
	-0.3pp	-0.2pp	-0.1pp	0.0pp	0.1pp	0.2pp	0.3pp
7.5%	-9.8	3.4	16.6	29.9	43.2	56.5	69.9
5.0%	-20.1	-7.0	6.3	19.5	32.8	46.1	59.5
2.5%	-30.5	-17.3	-4.1	9.2	22.4	35.8	49.1
0.0%	-40.9	-27.7	-14.5	**-1.2**	12.1	25.4	38.7
-2.5%	-51.3	-38.1	-24.8	-11.6	1.7	15.0	28.4
-5.0%	-61.6	-48.4	-35.2	-22.0	-8.7	4.6	18.0
-7.5%	-72.0	-58.8	-45.6	-32.3	-19.0	-5.7	7.6

Source: PPF / The Pensions Regulator

Table 5.2 | Impact of changes in gilt yields and equity prices on assets from a base of 100, 31 March 2011

Assets relative to a base of 100							
Movement in equity prices	Movement in gilts yields						
	-0.3pp	-0.2pp	-0.1pp	0.0pp	0.1pp	0.2pp	0.3pp
7.5%	104.4	104.0	103.6	103.2	102.8	102.4	102.0
5.0%	103.3	102.9	102.5	102.1	101.7	101.4	101.0
2.5%	102.3	101.9	101.5	101.1	100.7	100.3	99.9
0.0%	101.2	100.8	100.4	**100.0**	99.6	99.2	98.8
-2.5%	100.1	99.7	99.3	98.9	98.5	98.1	97.8
-5.0%	99.1	98.7	98.3	97.9	97.5	97.1	96.7
-7.5%	98.0	97.6	97.2	96.8	96.4	96.0	95.6

Source: PPF / The Pensions Regulator

A 2.5 per cent increase in equity prices would have raised scheme assets by 1.1 per cent, similar to the impact of a 0.3 per cent fall in gilt yields.

Table 5.3 | Impact of changes in gilt yields on s179 liabilities from a base of 100, 31 March 2011

s179 liabilities relative to a base of 100							
s179 liabilities relative to March level (=100)	Movement in gilts yields						
	-0.3pp	-0.2pp	-0.1pp	0.0pp	0.1pp	0.2pp	0.3pp
	105.3	103.5	101.8	**100.0**	98.2	96.5	94.7

Source: PPF / The Pensions Regulator

A 0.1 percentage point (10 basis points) reduction or increase in gilt yields increases or reduces s179 liabilities by almost 2 per cent.

If the assumed rate of inflation increases by 0.1 percentage point and nominal rates remain unchanged then the s179 liabilities rise by 0.9 per cent or £8.3 billion.

An increase in longevity such that experienced mortality is now equivalent to that of an individual two years younger would cause total scheme s179 liabilities to increase by £44 billion, or 4.5 per cent.

Table 5.4 | Impact of changes in gilt yields and equity prices on the s179 funding position from a base total deficit of £78 billion, excluding schemes in surplus, 31 March 2011

Assets less s179 liabilities (£ billion)							
Movement in equity prices	Movement in gilt yields						
	-0.3pp	-0.2pp	-0.1pp	0.0pp	0.1pp	0.2pp	0.3pp
7.5%	-86.9	-79.4	-71.8	-64.2	-56.6	-49.0	-41.4
5.0%	-91.6	-84.1	-76.5	-68.9	-61.3	-53.7	-46.1
2.5%	-96.3	-88.8	-81.2	-73.6	-66.0	-58.4	-50.7
0.0%	-101.0	-93.4	-85.9	**-78.3**	-70.7	-63.1	-55.4
-2.5%	-105.7	-98.1	-90.6	-83.0	-75.4	-67.8	-60.1
-5.0%	-110.4	-102.8	-95.3	-87.7	-80.1	-72.5	-64.8
-7.5%	-115.1	-107.5	-100.0	-92.4	-84.8	-77.2	-69.5

Source: PPF / The Pensions Regulator

Table 5.5 | Impact of changes in the rate of RPI inflation on s179 liabilities (base = £969.7 billion), 31 March 2011

s179 liabilities (£ billion)				
	Change in nominal yields		Change in real yields	
	-0.1pp	0.1pp	-0.1pp	0.1pp
£ billions	979.1	960.3	978.0	961.4
Percentage change	1.0%	-1.0%	0.9%	-0.9%

Source: PPF / The Pensions Regulator

Table 5.6 | Impact of changes in longevity assumptions on s179 liabilities (base = £969.7 billion), 31 March 2011

	s179 liabilities (£ billion)	% Change from base
Age Rating + 2 years	923.7	-4.7%
Age Rating - 2 years	1013.7	4.5%

Source: PPF / The Pensions Regulator

6 Insolvency Risk

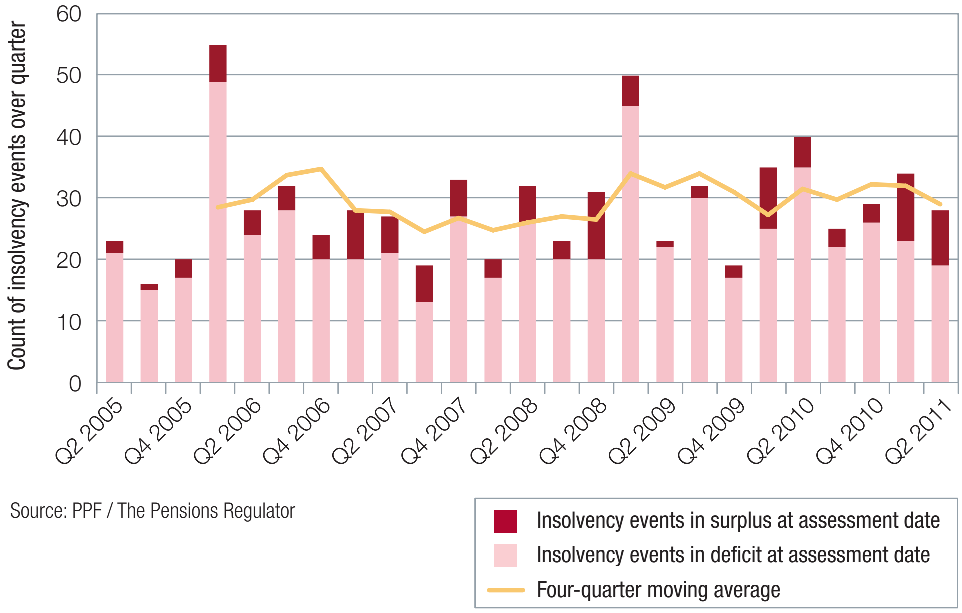
Summary

- During the 2008/09 recession, the estimated number of schemes (or sections of schemes) entering a PPF assessment period peaked in the first quarter of 2009 at 50 and had fallen to 28 by the second quarter of 2011, a drop of 44 per cent. The level of schemes entering PPF assessment in the year to the first half of 2011 was, however, still higher than in the two years leading up to the recession.
- The number of schemes entering assessment and thought to be in s179 deficit at the time of the insolvency event fell 46 per cent between the second quarter of 2010 and 2011.
- Over the first six months of 2011 the average insolvency probability of the 500 schemes to which the PPF has the largest exposure (in terms of scheme underfunding adjusted for the volatility of its assets) increased from 0.70 per cent to 0.75 per cent. When weighted by liabilities, the insolvency probability has increased only slightly, from 0.53 to 0.55 per cent.
- Schemes with sponsoring employers in the communications industry have the highest average insolvency probability (3.9 per cent), followed by transportation and retail trade (both 1.9 per cent).
- In Purple 2011, as in previous years, smaller schemes (as measured by membership or s179 liabilities) tend to have higher insolvency probabilities.
- The UK economy came out of recession in the third quarter of 2009. GDP rose strongly until the third quarter 2010, since when growth has been modest.
- The 2008/09 recession resulted in a large rise in the total level of corporate liquidations in England and Wales – from 3,241 in the first quarter of 2008 to a peak of 5,041 in the second quarter of 2009, an increase of 56 per cent. In the third quarter of 2011, a total of 4,242 liquidations were recorded. (There are around 2.3 million companies[25] in the UK, compared to around 19,000 in the PPF universe.)
- Company liquidations have been rising gently since the fourth quarter of 2010. In Q3 2011 they were 6.5 per cent higher than a year earlier and other[26] insolvency events were up 10 per cent over the same period. Nonetheless, since the second quarter of 2009, company liquidations have dropped by 16 per cent.
- In the 12 months ending Q3 2011, approximately 0.7 per cent of companies went into liquidation, compared with a recession peak of 0.9 per cent and a pre-recession trough of 0.6 per cent. In the latest recession, the liquidation rate rose by 50 per cent while in the early-1990s recession it more than doubled.

25 As registered at companies house.

26 Receiverships, administrations and company voluntary arrangements.

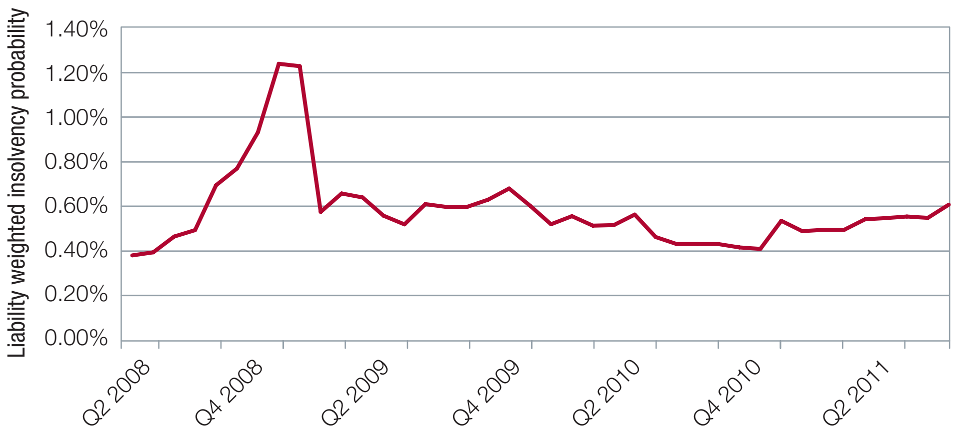
Chart 6.1 | Number of schemes (or parts of schemes) entering PPF assessment



Source: PPF / The Pensions Regulator

The number of schemes entering PPF assessment in the second quarter of 2011 was 30 per cent lower than a year ago. The four quarter moving average has remained largely unchanged since the end of the 2008/09 recession, not returning to pre-crisis levels.

Chart 6.2 | Liability-weighted insolvency probability* of the PPF's 500 largest scheme exposures**



Source: PPF / The Pensions Regulator

*Where available, these insolvency probabilities have been derived from credit ratings, including market-implied ratings supplied by Moody's and Fitch. Market-implied ratings are constructed on the basis of information from the equity, bond and credit default swap (CDS) markets. For pension fund sponsors which do not have publicly quoted equities or bonds and are not rated by ratings agencies, D&B failure scores are used. Around 35 per cent of the insolvency probabilities are derived from D&B failure scores.

**In terms of scheme underfunding adjusted for the volatility of its assets and insolvency probability weighted by scheme liabilities.

The weighted insolvency probability of the PPF's 500 largest exposures increased significantly in the last recession and declined rapidly in Q1 2009. However, it never fully returned to levels seen before the 2008/09 recession and has also been moving up slightly in recent quarters.

The average insolvency probability of the PPF's 500 largest exposures has increased significantly over the last year.

Chart 6.3 | Average insolvency probability* of the PPF's 500 largest scheme exposures**

Source: PPF / The Pensions Regulator

*Where available, these insolvency probabilities have been derived from credit ratings, including market-implied ratings, supplied by Moody's and Fitch. Market-implied ratings are constructed on the basis of information from the equity, bond and credit default swap (CDS) markets. For pension fund sponsors which do not have publicly quoted equities or bonds and are not rated by ratings agencies, D&B failure scores are used. Around 35 per cent of the insolvency probabilities are derived from D&B failure scores.

**In terms of scheme underfunding adjusted for the volatility of its assets.

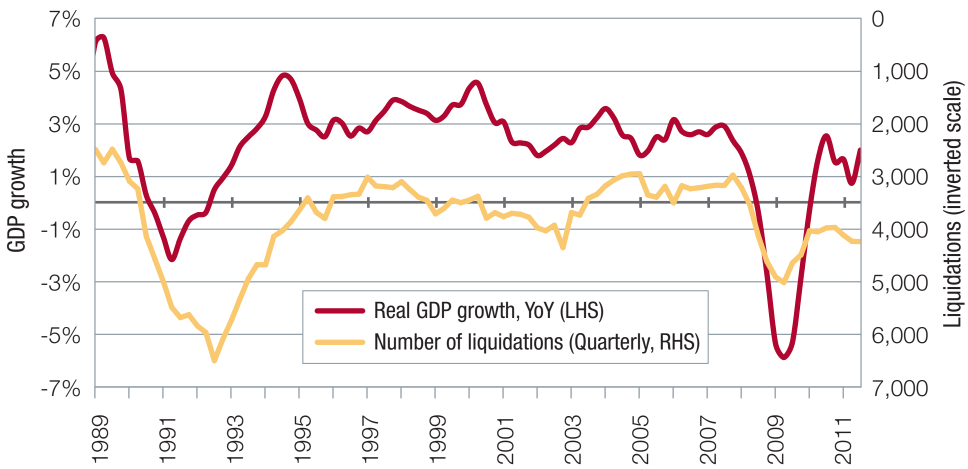
The un-weighted average insolvency probability, based on D&B failure scores, decreased slightly between Purple 2010 and 2011. However, the weighted-average insolvency probability has remained unchanged.

Table 6.1 | Yearly average insolvency probability (using D&B failure scores), covering sponsors of all schemes in the universe, 31 March 2011

	Weighted (by liabilities) average insolvency probability	Average insolvency probability
Purple 2006	0.4%	0.8%
Purple 2007	0.3%	0.7%
Purple 2008	0.2%	0.7%
Purple 2009	0.4%	0.9%
Purple 2010	0.4%	1.3%
Purple 2011	0.4%	1.2%

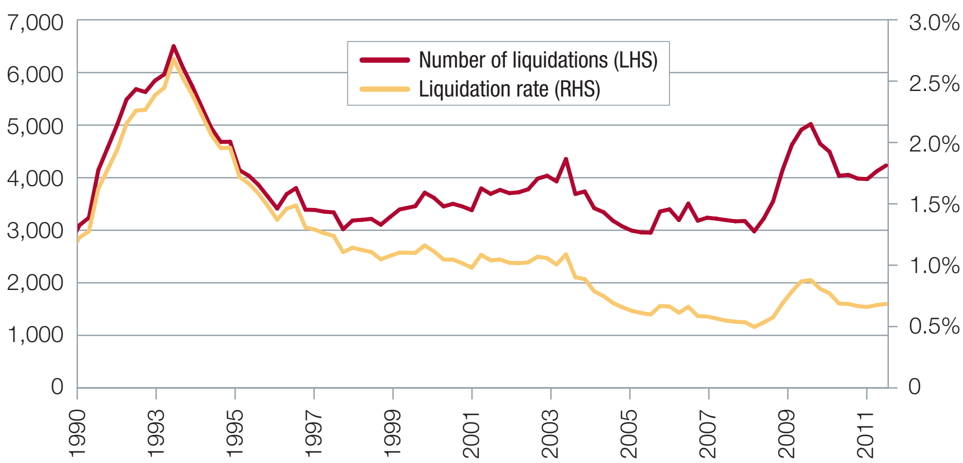
Source: PPF / The Pensions Regulator

Chart 6.4 | UK corporate insolvencies and GDP growth



Source: Insolvency Service/ONS

Chart 6.5 | UK corporate liquidations



Source: Insolvency Service, ONS

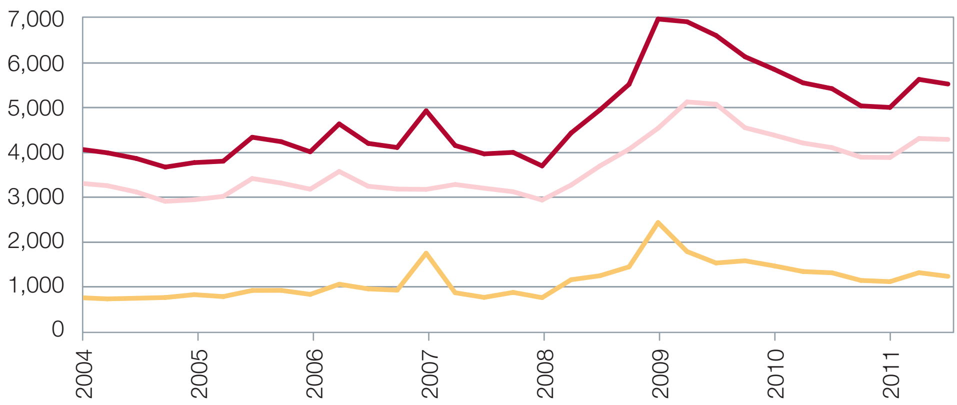
Historically, GDP has been a lead indicator of insolvencies. Recent data suggest that this relationship has changed. The peak in company liquidations occurred during the same quarter as the trough in GDP growth. In the early 1990s recession liquidations peaked around two years after GDP growth hit bottom.

The level of company liquidations in the UK has moved up a little since the fourth quarter of 2010. The liquidation rate is still above 2007/08 pre-recession levels.

The number of insolvencies increased significantly in the last recession, and has not come back down to pre-recession figures. The number of insolvency events other than liquidations shows a similar pattern to company liquidations. Over the last 12 months other insolvency events have constituted 23 per cent of total insolvencies.

GDP started recovering in the third quarter of 2009, but growth has slowed since Q3 2010. Corporate profitability as measured by the net rate of return of private non financial companies (PNFC) has increased over the last year but is not back to its pre-recession levels.

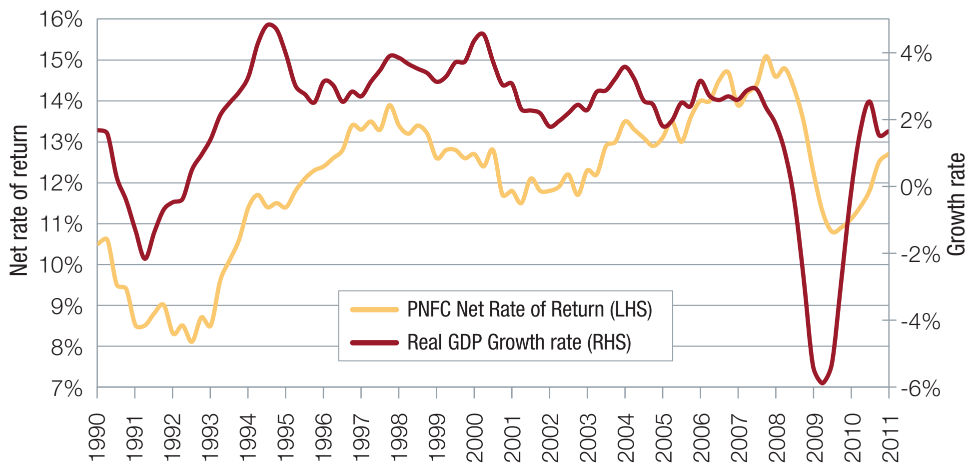
Chart 6.6 | UK total insolvencies, company liquidations and other insolvency events*



Source: PPF / The Pensions Regulator

*Other insolvency events are made up of receivership appointments, administrations and company voluntary arrangements

Chart 6.7 | UK GDP growth and corporate profitability

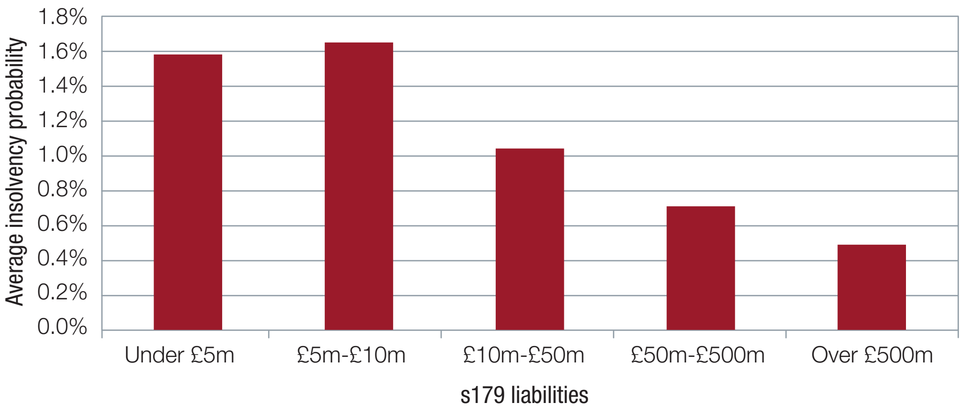


Source: Datastream

Chart 6.8 | Average insolvency probability (using D&B failure scores) by scheme size as measured by number of members, 31 March 2011

Source: PPF / The Pensions Regulator

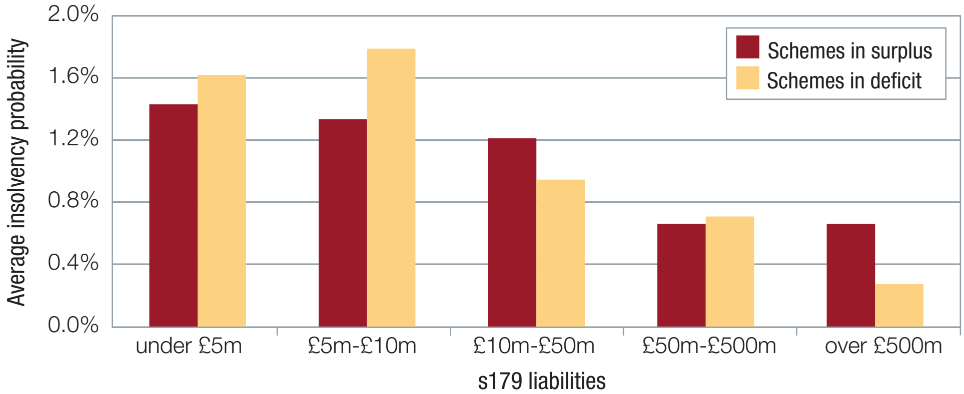
Chart 6.9 | Average insolvency probability (using D&B failure scores) by scheme size as measured by s179 liability level, 31 March 2011



Source: PPF / The Pensions Regulator

Smaller schemes (as measured by membership or s179 liabilities) tend to have higher insolvency probabilities.

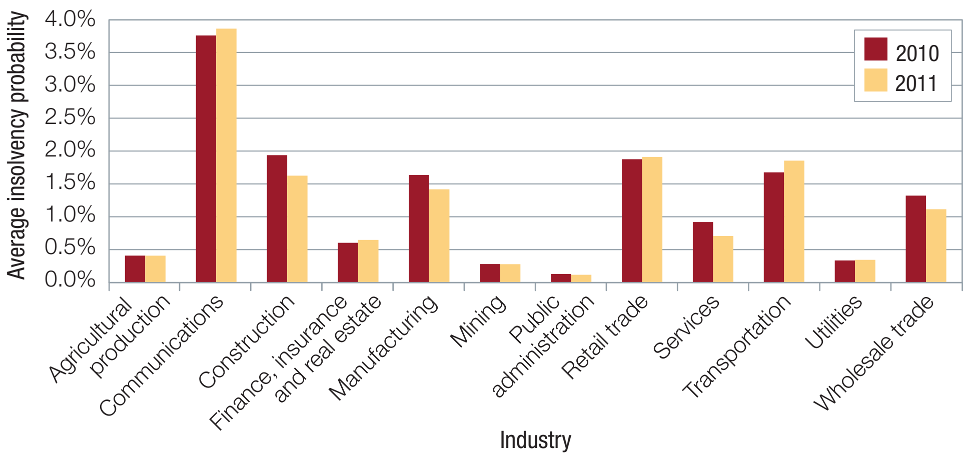
Chart 6.10 | Average insolvency probability (using D&B failure scores) by s179 liability level (schemes in deficit and schemes in surplus), 31 March 2011



Source: PPF / The Pensions Regulator

Schemes with sponsoring employers in the communications industry have the highest average insolvency probability (3.9 per cent).

Chart 6.11 | Average insolvency probability by industry*



Source: PPF / The Pensions Regulator
*Based on US 1972 SIC

7 Asset Allocation

Summary

- Purple 2011 data showed much smaller changes in asset allocation than seen in recent years. Furthermore, the share of bonds fell slightly, the first decline since the start of the Purple Books in 2006. Otherwise there has been a continuation, albeit less marked, of most of the trends seen in recent years: a falling equity share and a rising share in hedge funds and "other investment"; within equities a rising overseas share and falling UK share; and within bonds a rising corporate bond share and falling government share.
- The equity share fell to 41.1 per cent from 42.0 per cent in 2010 while, the share of gilts and fixed interest fell to 40.1 per cent from 40.4 per cent in 2010. The share of 'other investments' rose from 5.4 per cent to 6.3 per cent.
- The overseas share of total equities rose from 55.3 per cent in 2010 to 57.2 per cent in 2011, the UK share falling from 40.1 per cent to 38.0 per cent. The share of unquoted equities increased from 4.4 per cent in 2010 to 4.8 per cent in 2011.[27]
- Within total gilts and fixed interest, the corporate fixed interest securities' share rose from 42.2 per cent in 2010 to 44.3 per cent in 2011. Meanwhile, the share of government fixed interest fell from 24.6 per cent to 19.6 per cent. The index-linked share rose to 36.1 per cent from 33.1 per cent in 2010.[28]
- Looking at simple averages[29], the allocation to UK equities is still bigger (52.7 per cent) than that for overseas equities (46.1 per cent), although this gap has continued to narrow.
- Within gilts and fixed interest on a simple average basis, the allocation to government fixed interest fell sharply from 37.3 per cent to 31.2 per cent while the allocation to corporate fixed interest securities rose from 43.0 per cent to 47.1 per cent. The average allocation to index-linked securities rose from 19.8 per cent to 21.7 per cent.
- Smaller schemes tend to have a higher allocation of equities to UK equities and a smaller allocation to overseas equities. Within fixed interest, smaller schemes tend to have a higher allocation to government fixed interest and a smaller allocation to index-linked securities.
- As in the earlier Purple Books, more mature schemes tend to invest more heavily in gilts and fixed interest and less in equities.

27 These do not sum to 100 per cent in 2010 and 2011 due to rounding.

28 These do not sum to 100 due to rounding.

29 Simple averages are defined as the mean without weighting for scheme size.

7.1 Scheme return data

Table 7.1 | Average asset allocation in total assets[30]

	Extended Purple 2006	Extended Purple 2007	Extended Purple 2008	Purple 2009	Purple 2010	Purple 2011
Equities	61.1%	59.5%	53.6%	46.4%	42.0%	41.1%
Gilts and fixed interest	28.3%	29.6%	32.9%	37.1%	40.4%	40.1%
Insurance policies	0.9%	0.8%	1.1%	1.4%	1.4%	1.6%
Cash and deposits	2.3%	2.3%	3.0%	3.9%	3.9%	4.1%
Property	4.3%	5.2%	5.6%	5.2%	4.6%	4.4%
Other Investments						
- 'Other'	3.1%	2.5%	3.8%	4.5%	5.4%	6.3%
- Hedge funds	N/A	N/A	N/A	1.5%	2.2%	2.4%

Source: PPF / The Pensions Regulator

Some columns do not sum to 100 per cent due to rounding

There was a further fall in the share of equities in total scheme assets in 2011 and a slight fall in the share of gilts and fixed interest.

Table 7.2 | Asset allocation: simple averages

	Simple averages					
	2006	2007	2008	2009	2010	2011
Equities	52.6%	53.5%	50.2%	46.6%	43.1%	43.7%
Gilts and fixed interest	22.6%	24.0%	26.5%	29.2%	32.6%	32.6%
Insurance policies	14.9%	13.7%	13.0%	12.4%	12.3%	11.8%
Cash and deposits	3.9%	3.7%	4.4%	5.6%	5.7%	4.9%
Property	2.1%	2.5%	2.9%	2.8%	2.6%	2.7%
Other Investments						
- 'Other'	3.6%	2.6%	2.9%	2.6%	2.8%	3.3%
- Hedge funds	N/A	N/A	N/A	0.7%	0.9%	1.0%

Source: PPF / The Pensions Regulator

Some columns do not sum to 100 per cent due to rounding

Simple averages of schemes' asset allocations showed a slight increase in the equity share while the share of gilts and fixed interest remained unchanged.

30 There can be a significant gap between the date of the scheme return and the date at which the asset allocation was taken. This means that the date at which asset allocation data is provided differs from scheme to scheme. For 2011 0.3 per cent of schemes have given their asset allocations at a date before 2005, 0.5 per cent at a date in 2005, 1.3 per cent at a date in 2006, 3.1 per cent at a date in 2007, 5.3 per cent at a date in 2008, 30.5 per cent at a date in 2009, 58.5 per cent at a date in 2010 and 0.5 per cent in the first quarter of 2011.

Within gilts and fixed interest, the corporate bonds and index-linked shares continue to rise.

Also, within equities the overseas and unquoted equity shares continue to rise.

The share of assets held in gilts and fixed interest increases with scheme size.

Table 7.3 | Equity and gilts and fixed interest splits

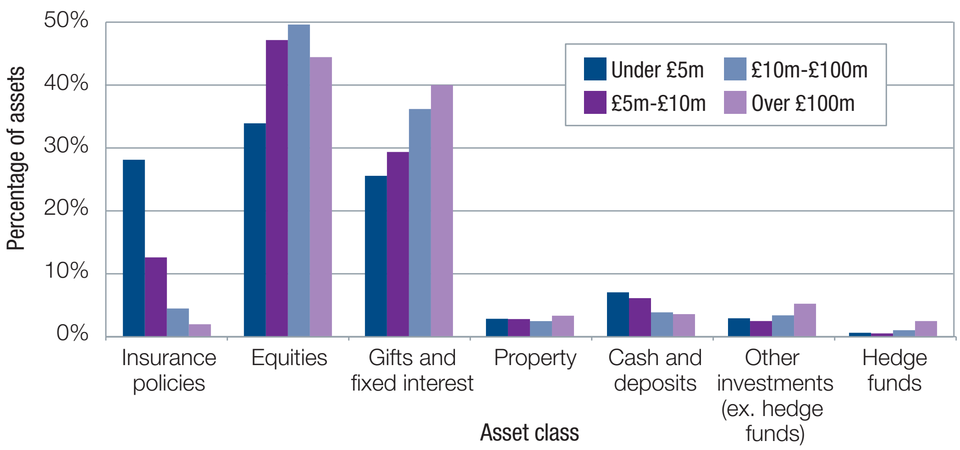
	Gilts and fixed interest											
	Government fixed interest securities				Corporate fixed interest securities				Index linked securities			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Average share	47.2%	45.6%	37.3%	31.2%	33.0%	37.3%	43.0%	47.1%	19.8%	17.1%	19.8%	21.7%
Weighted average share	33.2%	29.0%	24.6%	19.6%	32.6%	38.3%	42.2%	44.3%	33.9%	32.6%	33.1%	36.1%

Source: PPF / The Pensions Regulator

	Equities											
	UK equities				Overseas equities				Unquoted equities			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Average share	60.4%	57.6%	55.3%	52.7%	39.6%	41.7%	43.7%	46.1%	N/A	0.7%	1.0%	1.2%
Weighted average share	48.0%	44.2%	40.1%	38.0%	51.6%	53.8%	55.3%	57.2%	N/A	1.9%	4.4%	4.8%

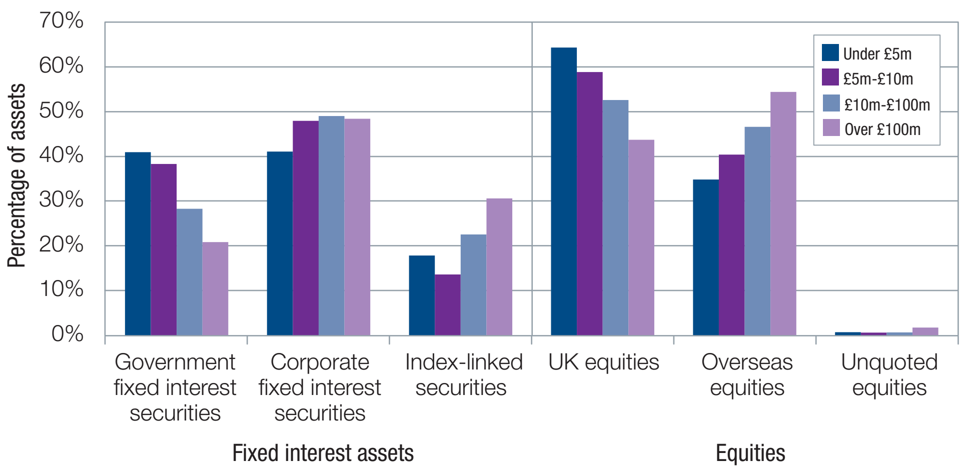
Source: PPF / The Pensions Regulator

Chart 7.1 | Average asset allocation of schemes by asset size



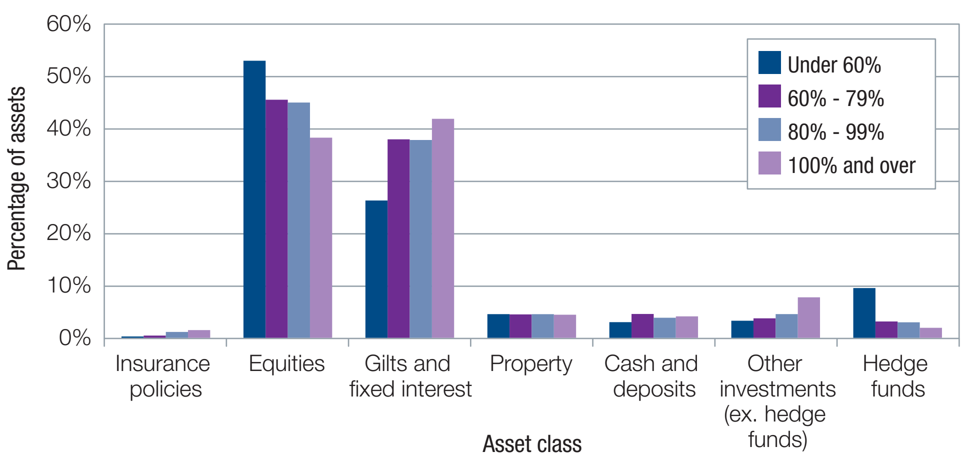
Source: PPF / The Pensions Regulator

Chart 7.2 | Simple average of equities and fixed interest assets split by asset size



Source: PPF / The Pensions Regulator

Chart 7.3 | Weighted-average asset allocation by s179 funding level



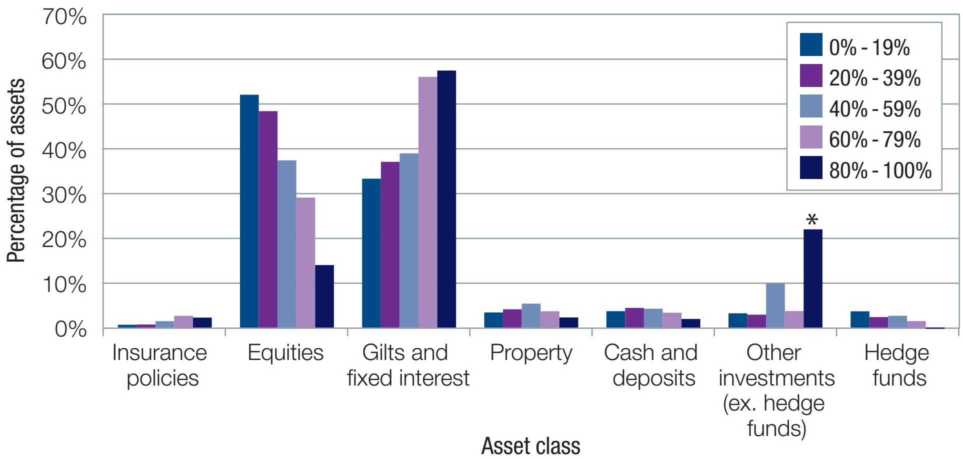
Source: PPF / The Pensions Regulator

Within total gilts and fixed interest, the average allocation to government fixed interest securities declines with scheme size while within equities the allocation to overseas equities increases with scheme size.

The best funded schemes have the greatest share of their assets invested in gilts, and the smallest share invested in equities. The opposite is true for the worst funded.

The share of equities in total assets falls with scheme maturity (as measured by the percentage of pensioner liabilities in total liabilities) while the share of gilts and fixed interest rises.

Chart 7.4 | Weighted-average asset allocation of schemes by current pensioner liabilities as a percentage of total liabilities

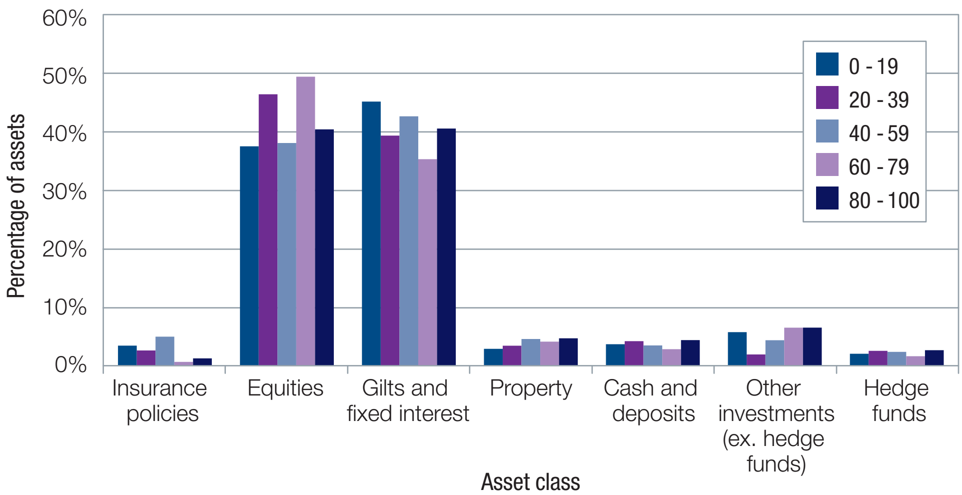


Source: PPF / The Pensions Regulator

*This is heavily affected by one large scheme which has a high share of assets in "Other investments". Excluding this scheme the overall "Other investments" proportion would be 0.6 per cent and equity share 16.7 per cent.

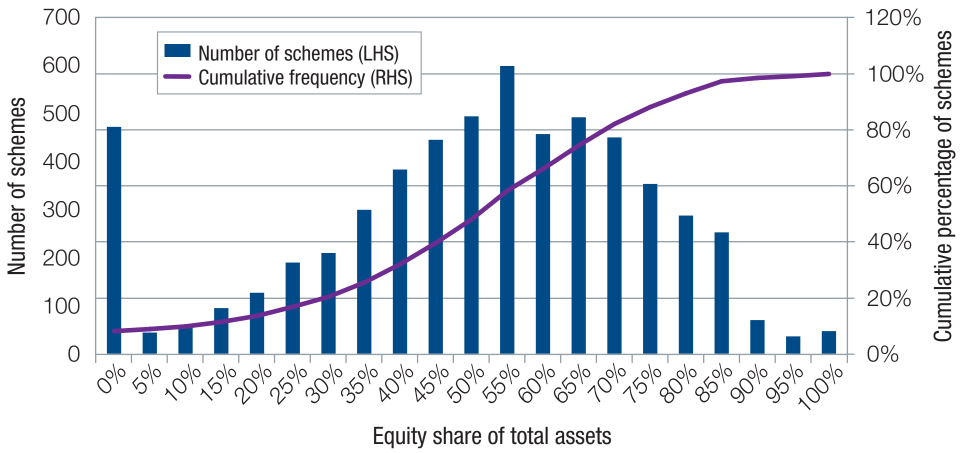
There appears to be no relationship between asset allocation and D&B failure score (the higher the score the higher the probability of insolvency).

Chart 7.5 | Weighted-average asset allocation of schemes by D&B failure score



Source: PPF / The Pensions Regulator

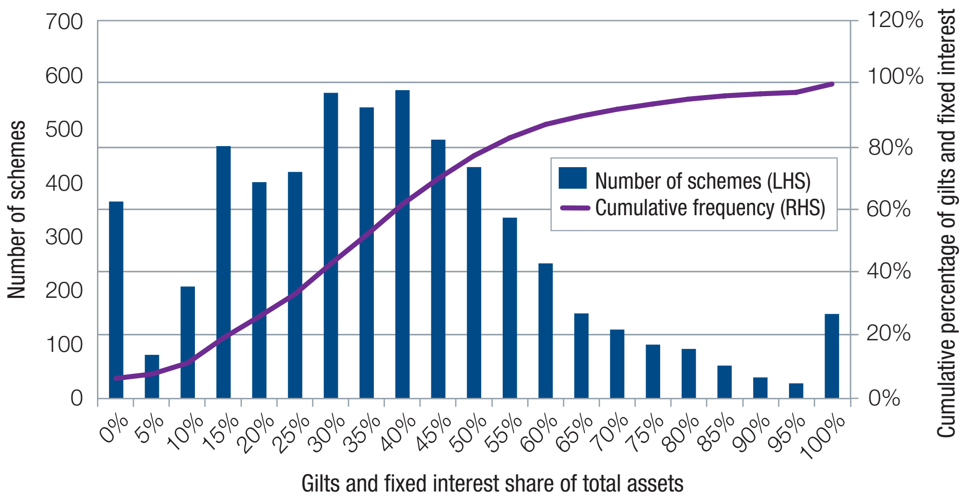
Chart 7.6 | Histogram of equities and cumulative percentage



Source: PPF / The Pensions Regulator

Around 48 per cent of schemes hold at least 50 per cent of assets in equities, down around 2 percentage points from Purple 2010.

Chart 7.7 | Histogram of gilts and fixed interest and cumulative percentage



Source: PPF / The Pensions Regulator

Approximately 25 per cent of schemes hold at least 50 per cent of their assets in gilts and fixed interest assets. There has been no change since 2010.

8 Risk Developments

8.1 Summary

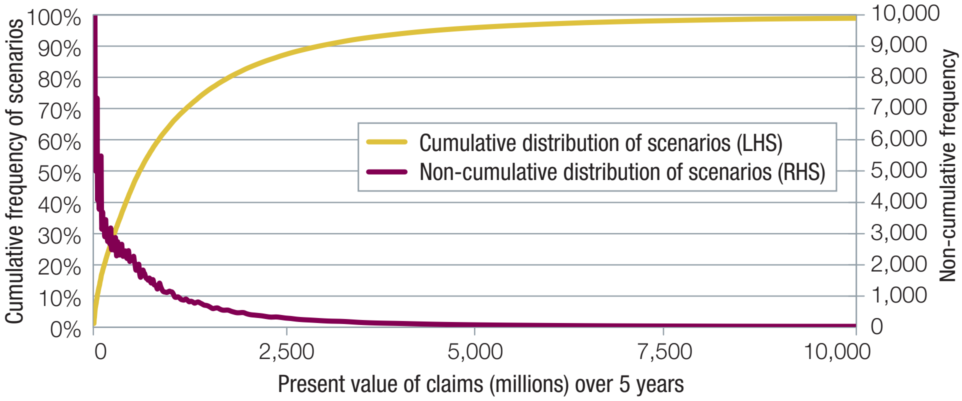
- The Long-Term Risk Model (LTRM) is the key tool that the Board of the Pension Protection Fund (PPF) uses to understand and quantify the risks it faces over the long term. It helps the Board of the PPF assess the level of resources required to meet potential future claims.
- There was a clear decrease in long term risk to the PPF between end-March 2010 and end-March 2011. The decrease was largely attributable to the decrease in the long-term credit risk of sponsoring employers over the period, and a reassessment of the risk posed to the PPF by a handful of the largest schemes also had a positive impact. However, since then there has been a slowdown in the global and UK economies and this could have a negative impact on the PPF.
- The PPF published its long-term funding strategy in August 2010. As part of this strategy, the PPF aims to be self-sufficient (i.e. fully funded, with zero exposure to market, inflation and interest-rate risk and protection against claims and longevity risk) by 2030. The funding strategy was reviewed in November 2011 and in the review it was concluded that the PPF's ultimate target was unchanged.
- LTRM projections with a reference date of March 2011, suggest that the PPF has an 87 per cent probability of meeting this funding objective compared with 83 per cent one year earlier.[31]
- Looking at shorter-term risk measures, total weighted deficit (scheme sponsor one-year-ahead insolvency probability multiplied by scheme deficit) for schemes in deficit stood at £332 million at end-March 2011.
- The proportion of weighted deficit attributable to schemes with the worst insolvency probabilities is 48.1 per cent, down from 55.3 per cent in 2010.
- Schemes with sponsors in the manufacturing sector have the largest weighted deficit at 43 per cent of the total.
- The PPF's risk-based levy for individual schemes has so far been based on 12-month-ahead insolvency probabilities for scheme sponsors provided by D&B and a measure of scheme funding at a point in time (though not necessarily the same point).
- PPF will introduce a new levy framework[32] from 2012/13. In this framework funding will be calculated so that market movements will be averaged over five years. Allowance for investment risk is built into this new funding measure. New insolvency probabilities will be used and there will be a narrower range of insolvency probabilities and fewer insolvency bands, with measurement averaged over one year.

31 As at March 31 2011. This probability is sensitive to a range of modelling assumptions. For a description of the modelling methodology and assumptions employed, see http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_Funding_Strategy_Document.pdf

32 The policy statement for the new levy framework can be found on the following link: http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/levy_policy_statement_May11.pdf

8.2 Long-Term Risk

Chart 8.1 | Central scenario LTRM run over five year, 31 March 2011



Source: PPF / The Pensions Regulator

The PPF faces a significant tail-risk, i.e. high impact, low probability claims.

Table 8.1 | LTRM projections of five-year claims on the PPF (s179 basis) at March 2009, 2010 and 2011

	Present value of total claim over five years (£ billion)				
	Median	Mean	75th percentile	90th percentile	95th percentile
March 2011 LTRM run	0.6	1.2	1.4	2.9	4.4
March 2010 LTRM run	1.2	2.5	3.0	6.3	9.4
March 2009 LTRM run	2.1	3.5	4.5	8.4	11.9

Source: PPF / The Pensions Regulator

The LTRM projection of expected (mean) claims on the PPF over five years has fallen from £2.5 billion at March 2010 to £1.2 billion at March 2011. Two reasons explaining the positive effect are the reassessment of the risk posed by a handful of large schemes and a decrease in the PPF's long-term credit risk.

8.3 The PPF's Long-Term Funding Strategy

The PPF published its long-term funding strategy in August 2010 and updated it in November 2011. The strategy established a long-term funding objective and a framework for monitoring the PPF's progress towards this target.

The PPF's long-term funding objective is to be self-sufficient by 2030. Self-sufficiency requires that the PPF be fully-funded with zero exposure to market, inflation and interest rate risk and protection against the risk of future claims and members living longer than expected. Exposure to market, inflation and interest rate risk can be reduced using conventional hedging arrangements and investment in low-risk securities. Analysis of LTRM output suggests that a funding reserve equivalent to 10 per cent of PPF liabilities at 2030 would be sufficient to cover unexpected claims (over five years) and longevity risk (over the lifetime of the Fund) in nine out of 10 scenarios.

Output from the LTRM is used to model the probability of the PPF meeting the funding objective. The LTRM projects a range of PPF balance sheet outcomes at 2030. The probability of meeting the funding objective is calculated as the percentage of outcomes in which PPF funding exceeds the level required by self-sufficiency. As at 31 March 2011, this probability was 87 per cent. The Board of the PPF has expressed comfort with circumstances in which this probability is greater than 80 per cent.

There is perpetual and non-zero risk of a large PPF deficit occurring as a result of significant claims. In order to measure the dispersion of adverse funding outcomes, the PPF has constructed a 'downside risk' measure. This is calculated by taking the 90th percentile of the largest deficits to develop at any point in each of the 1,000 projected balance sheet scenarios.[33] As at 31 March 2011, the PPF's downside risk to 2030 was £7 billion. Both the probability of meeting the funding objective and the downside risk measure are sensitive to modelling assumptions. Table 8.2 below illustrates the sensitivity to a selection of these.

The long-term funding strategy provides a clear and comprehensive overview of the PPF risk environment, strengthening the basis on which PPF policy is formed and improving communication of the Fund's financial prospects to stakeholders.

The changes to the new levy framework and the switch from using the Retail Prices Index (RPI) to using the Consumer Prices Index (CPI) for the indexation of PPF compensation are two of the main changes being dealt with in greater depth in the funding strategy update. In adjusting our risk modelling to reflect these changes, we have carried out a careful analysis of the implications for the PPF and concluded that, while we have taken into consideration new factors, the PPF's ultimate targets remain the same.

For a full explanation of the PPF's long-term funding strategy, including modelling methodology and assumptions, see: **http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_Funding_Strategy_Document.pdf**

For the November 2011 review of the funding strategy, see: **http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/funding_strategy_review_2011.pdf**

33 In practice, the deficit expressed by the downside risk statistic has a less than 10 per cent chance of occurring, given the PPF's ability to mitigate underfunding through levy and investment strategy.

Table 8.2 | Modelled probability of the PPF meeting its funding objective, 31 March 2011

Scenario	Probability of meeting funding objective (%)	Downside risk (£ billion)
Base case	87	7
1 percentage point reduction in asset returns (excluding cash)	78	13
Scheme Technical Provisions reduced by 10% (relative to S179 basis)	83	9
Initial PPF funding reduced by 10 percentage points	83	9

Source: PPF / The Pensions Regulator

The base-case probability of the PPF meeting its funding objective is 87 per cent, up from 83 per cent a year ago. The probability of meeting the funding objective and the downside risk are subject to modelling assumptions as illustrated in the table.

8.4 Shorter-term risk: insolvency-probability-weighted deficits

In the analysis below:

Weighted deficit for scheme A = deficit in scheme A (in £s) x one-year-ahead insolvency probability of sponsoring company

with each measured at 31 March 2011.

For more information see The Purple Book 2009, Page 84.

Table 8.3 | Insolvency groups (based on insolvency probabilities implied by Dun & Bradstreet failure scores), 31 March 2011

Insolvency group	Range of insolvency probabilities	Percentage of total number of schemes
1	Less than or equal to 0.07%	23.4%
2	0.07% to 0.18%	25.9%
3	0.18% to 0.30%	14.0%
4	0.30% to 0.43%	7.1%
5	0.43% to 0.55%	4.4%
6	0.55% to 0.72%	5.2%
7	0.72% to 0.96%	3.8%
8	0.96% to 1.30%	3.8%
9	1.30% to 3.52%	7.9%
10	More than 3.52%	4.6%

Source: PPF / The Pensions Regulator

To aid analysis, D&B insolvency probabilities and underfunding levels of deficit schemes have been grouped.

Table 8.4 | Underfunding groups, 31 March 2011

Underfunding group	Ratio of s179 assets to liabilities	Percentage of total number of schemes
1	75% to 100%	81.5%
2	50% to 75%	17.2%
3	Less than 50%	1.3%

Source: PPF / The Pensions Regulator

The total weighted deficit for schemes in deficit at end-March 2011 was around £332 million.

Table 8.5 | Weighted deficit (sum of scheme deficits multiplied by the one year insolvency probability of scheme sponsor) by insolvency and underfunding group for schemes in deficit, 31 March 2011

Weighted deficit (£ million)	Underfunding group			
Insolvency group	1	2	3	Total
1	10.0	3.1	0.0	13.1
2	14.6	4.3	0.1	19.0
3	19.6	1.5	0.1	21.2
4	12.9	1.2	0.1	14.2
5	13.8	1.1	0.0	14.9
6	9.4	2.3	0.0	11.7
7	5.7	1.0	0.1	6.8
8	7.5	6.4	0.1	14.0
9	44.1	13.4	0.1	57.6
10	82.1	56.4	21.2	159.7
Total	219.6	90.8	21.8	332.2

Source: PPF / The Pensions Regulator

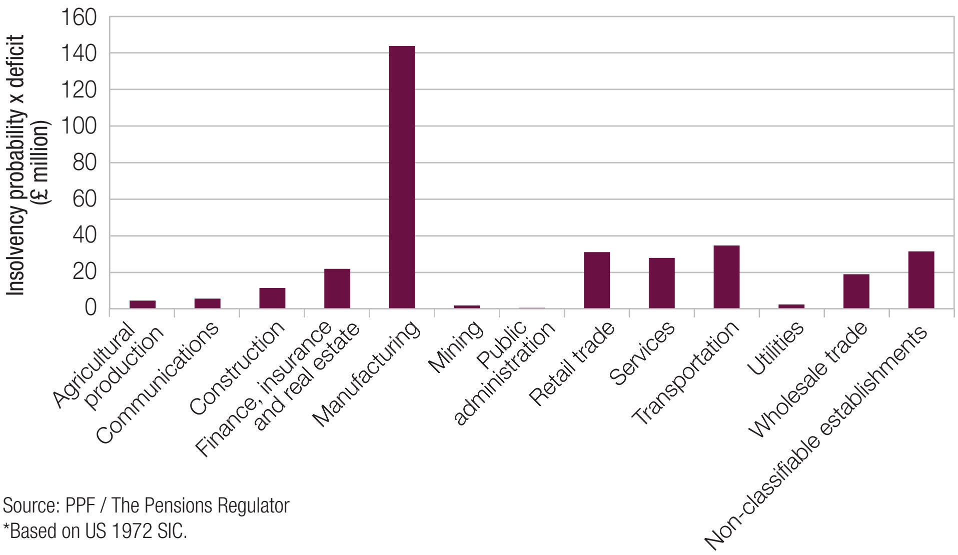
The average weighted deficit per scheme is £0.87 million in insolvency group 10, almost 11 times more than the overall average, and almost five times the average in group 9.

Table 8.6 | Average weighted deficit per scheme for schemes in deficit, 31 March 2011

Insolvency group	Average insolvency probability	Average funding position	Weighted deficit (£millions)	Number of schemes	Average weighted deficit per scheme (£millions)
1	0.0%	81.36%	13.1	927	0.01
2	0.1%	81.41%	19.0	1014	0.02
3	0.2%	81.35%	21.2	517	0.04
4	0.4%	81.13%	14.2	286	0.05
5	0.5%	81.90%	14.9	179	0.08
6	0.6%	80.19%	11.7	199	0.06
7	0.8%	80.86%	6.8	155	0.04
8	1.1%	78.57%	14.0	150	0.09
9	2.1%	78.60%	57.6	322	0.18
10	16.7%	77.74%	159.7	183	0.87
Total			332.2	3932	0.08

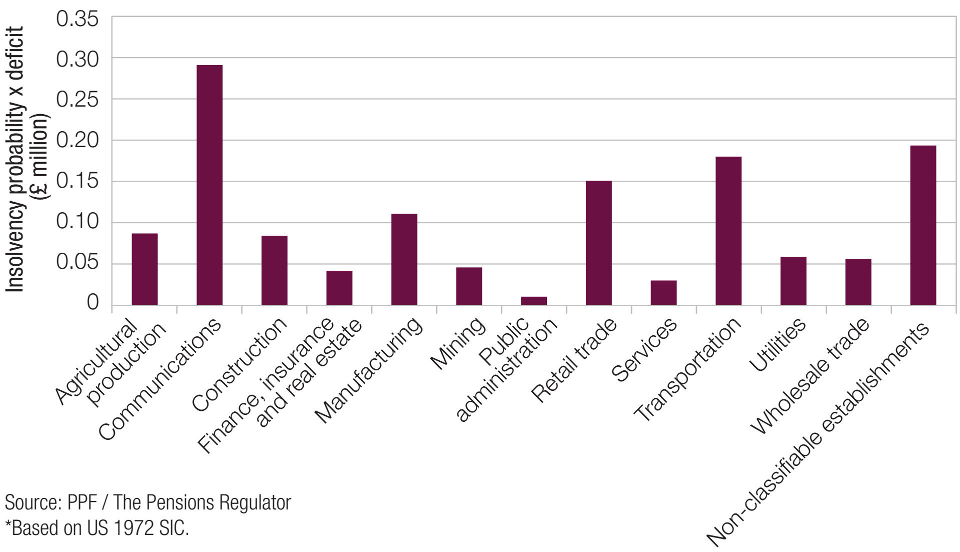
Source: PPF / The Pensions Regulator

Chart 8.2 | Weighted deficit by industry* for schemes in deficit, 31 March 2011



Source: PPF / The Pensions Regulator
*Based on US 1972 SIC.

Chart 8.3 | Average weighted deficit per scheme by industry* for schemes in deficit, 31 March 2011



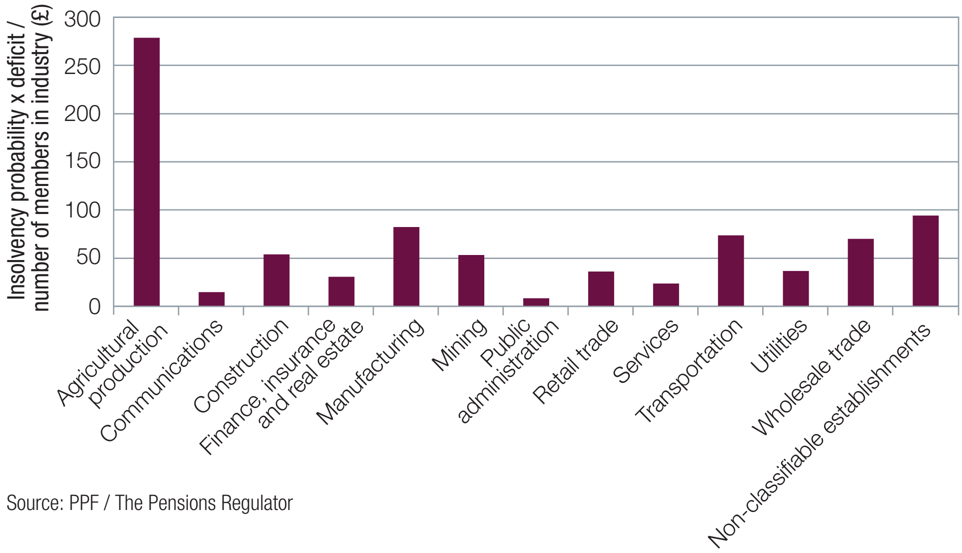
Source: PPF / The Pensions Regulator
*Based on US 1972 SIC.

Schemes with sponsors in the manufacturing sector have the largest weighted deficit at £144 million, around 43 per cent of the total. Manufacturing is the largest sector in the PPF universe. However its average deficit per scheme is only the fifth highest in the universe.

The communications sector has the highest average weighted deficit by scheme. However, the total deficit of the communications sector is low compared to other sectors.

Agricultural production has by far the highest weighted deficit per member.

Chart 8.4 | Average weighted deficit per member by industry for underfunded schemes, 31 March 2011



Source: PPF / The Pensions Regulator

Schemes in underfunding group 1 (100 per cent to 75 per cent funded) account for 90 per cent of the liabilities for deficit schemes.

Chart 8.5 | Liabilities of schemes in deficit by insolvency and underfunding group, 31 March 2011

Source: PPF / The Pensions Regulator

9 Levy Payments

Summary

- The PPF has been collecting a levy determined mainly by the risk schemes pose to the Fund for five years. Over this period it has collected a total of £2.8 billion. It is expected to collect £663 million for the 2010/11 levy year from 6,610 schemes. This compares with £592 million in 2009/10, £651 million in 2008/09, £585 million in 2007/08 and £271 million in 2006/07.
- The cap for the insolvency probability of schemes changed to 3 per cent in 2010/11 from 15 per cent in 2009/10. This makes the levies paid by insolvency group 10, the worst insolvency group, proportionally lower than in previous years.
- The expected collection for 2010/11 is £57 million less than the £720 million estimate, owing to such factors as: schemes appealing the insolvency probability upon which their levy is based; and schemes entering the PPF assessment period and, therefore, not paying a levy.
- For 2010/11 total levies amounted to 0.09[34] per cent of total s179 assets, a slight increase on the 0.07 per cent in the previous year.[35]
- In 2010/11, 679 schemes had their risk-based levy capped at 1 per cent of liabilities. This is 10.6 per cent of the total number of schemes. The liabilities of capped schemes equalled £8.8 billion or one per cent of total liabilities.[36]
- The top 100 levy payers accounted for £249 million, 38.6 per cent of the total levy, but 46.0 per cent of liabilities.[37]
- The number of schemes paying no risk-based levy in 2010/11 was 195, down from 363 in the previous year. The economic climate resulted in lower scheme funding levels and, therefore, fewer schemes achieved the 140 per cent funding level on a s179 basis required to avoid paying a risk-based levy.
- In 2010/11 the number of schemes paying no risk-based levy represented three per cent of total schemes and one per cent of total liabilities, compared to six and five per cent respectively for 2009/10.
- This chapter also looks at the trends in levy payments by various scheme characteristics over the five-year period from 2006/07 to 2010/11 for a set of 6,019 schemes so as to abstract from changes resulting from different composition of the sample.
- The distribution of levy by industry was broadly similar in 2010/11 as for 2009/10 levy year. Manufacturing, services, and finance, insurance and real estate services account for approximately 71 per cent of the eligible DB universe, but also pay an equal amount of the total PPF levy.
- The manufacturing industry represents the largest portion of the DB universe and thus pays the largest proportion of the total levy. However, on a per member basis the mining industries are the leading levy payers.

34 These numbers are based on a 6,397 schemes who have paid £645 million in total. This is somewhat smaller than the £663 million expected to be collected because full information is not yet available on the remainder.

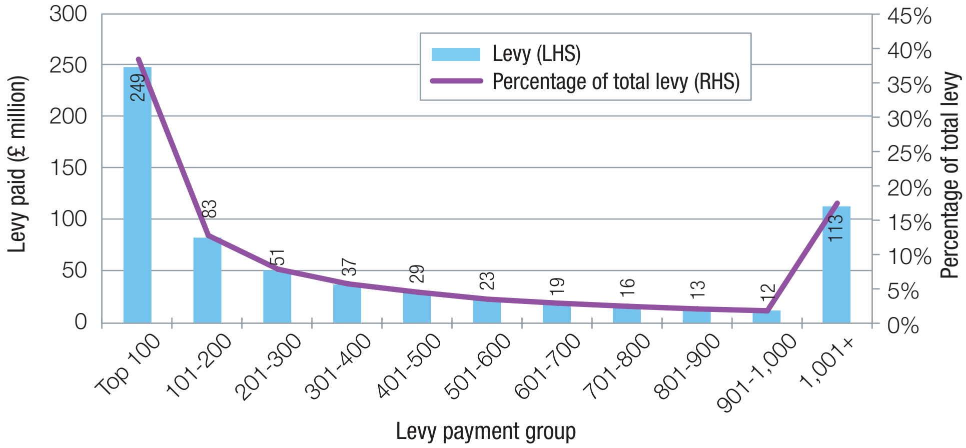
35,36,37 These figures are based on the 2010/11 dataset of 6,397 schemes.

Table 9.1 | Levy payments*

	2006/07	2007/08	2008/09	2009/10	2010/11
Total levy payments (£ m)	271	585	651	592	663
Estimated collection (£ m)[38]	575	675	675	700	720
Levy as percentage of assets	0.03%	0.07%	0.08%	0.07%	0.09%
Number of capped schemes	310	411	564	340	679

Source: PPF / The Pensions Regulator
*Information in this table is calculated from the dataset of 6,397 for 2010/11 or from prior year's Purple Books where relevant.

Chart 9.1 | Distribution of levy payments by largest levy payers*



Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for 2010/11 levy year

The top 100 levy payers accounted for £249 million or 38.6 per cent of the total levy, but 46.0 per cent of total liabilities.

Table 9.2 | Schemes paying no risk-based levy in each levy year*

	Number of schemes	Percentage of total schemes	s179 liabilities (£ billion)	s179 liabilities as percentage of total
2006/07	345	5%	44.1	6%
2007/08	570	9%	83.0	12%
2008/09	473	7%	71.8	10%
2009/10	363	6%	32.7	5%
2010/11	195	3%	8.8	1%

Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for the 2010/11 levy year

Around three per cent of schemes paid no risk-based levy, down from six per cent in 2010/11.

38 The estimated collection represents the original expectation of levy to be collected as opposed to expectations formed during the collection process.

In 2010/11, 679 schemes had their risk-based levy capped, with 364 of those schemes in the worst insolvency groups 9 and 10.

Table 9.3 | Number of schemes with capped risk-based levies by insolvency group*

Insolvency Group	Number of capped schemes	Percentage of capped schemes in insolvency group
1	0	0.0%
2	0	0.0%
3	0	0.0%
4	0	0.0%
5	8	1.2%
6	57	8.4%
7	133	19.6%
8	117	17.2%
9	353	52.0%
10	11	1.6%

Source: PPF / The Pensions Regulator

*Based on a sample of 6,397 schemes for 2010/11 levy year

In 2010/11, 481 (70.8 per cent) of the schemes that had their risk-based levy capped were under 75 per cent funded, up from 202 (59 per cent in 2009/10).

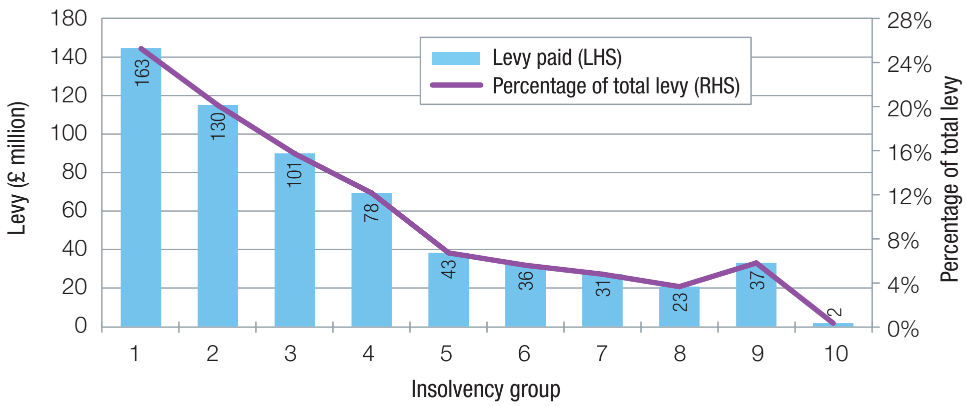
Table 9.4 | Number of Schemes with capped risk-based levies by funding level*

Funding level	Number of capped schemes	Percentage of capped schemes in funding band
Less than 50%	123	18.1%
50%-75%	358	52.7%
75%-100%	169	24.9%
100%-125%	23	3.4%
Greater than 125%	6	0.9%

Source: PPF / The Pensions Regulator

*Based on a sample of 6,397 schemes for 2010/11 levy year

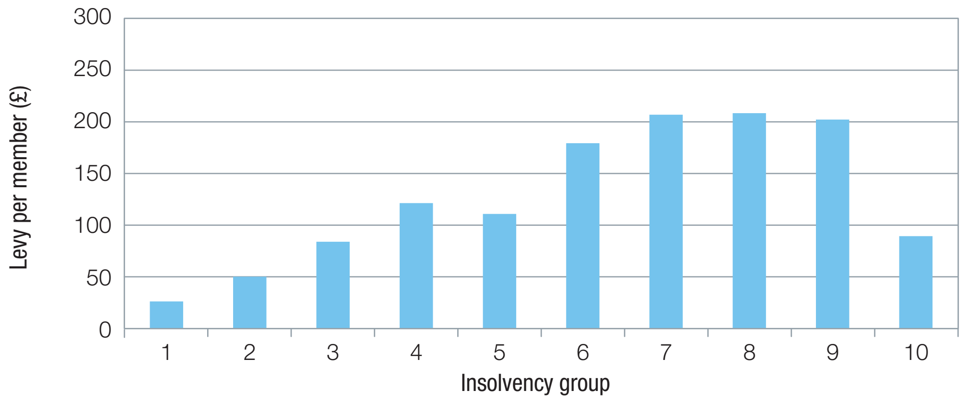
Chart 9.2 | Levy distribution by insolvency group*



Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for the 2010/11 levy year.

Insolvency group 1 made the largest contribution to total levy receipts, paying £163m or 25.3 per cent of total levy collected (see Chapter 8, Risk developments for description of the insolvency groups).

Chart 9.3 | Levy per member by insolvency group*[39]



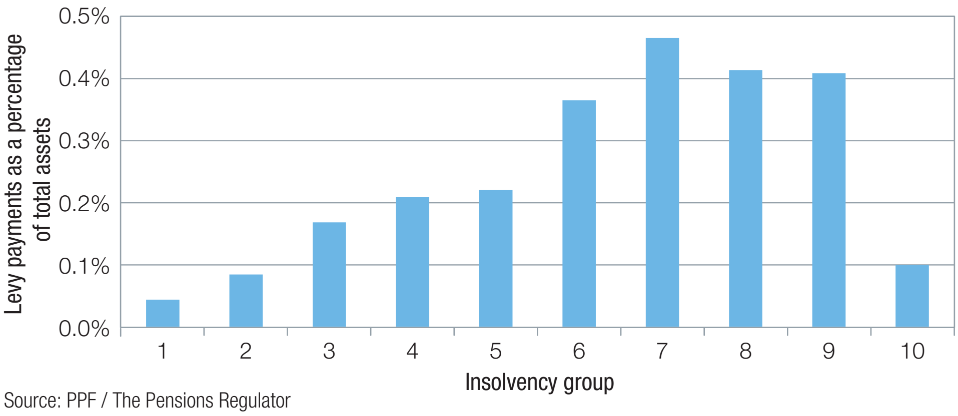
Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for the 2010/11 levy year.

Levy per member is the highest in insolvency groups 7,8 and 9 and generally lower in the low insolvency groups. A change in the cap for insolvency probabilities from 15 per cent to 3 per cent has made the levy paid by insolvency group 10 lower than in previous years.

39 For more information on the insolvency groups see chapter 8 "Risk Development". Scheme sponsors in group 1 have the lowest insolvency probabilities while those in group 10 have the highest

The PPF levy is very small compared with the value of total s179 assets. The average over the sample was 0.09 per cent in 2010/11.

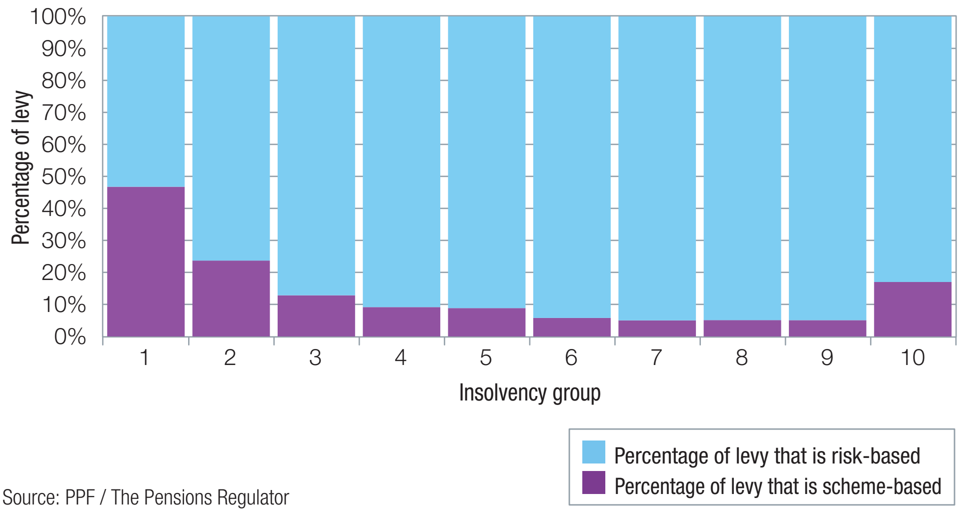
Chart 9.4 | Levy payments as a proportion of assets by insolvency group*



Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for 2010/11 levy year

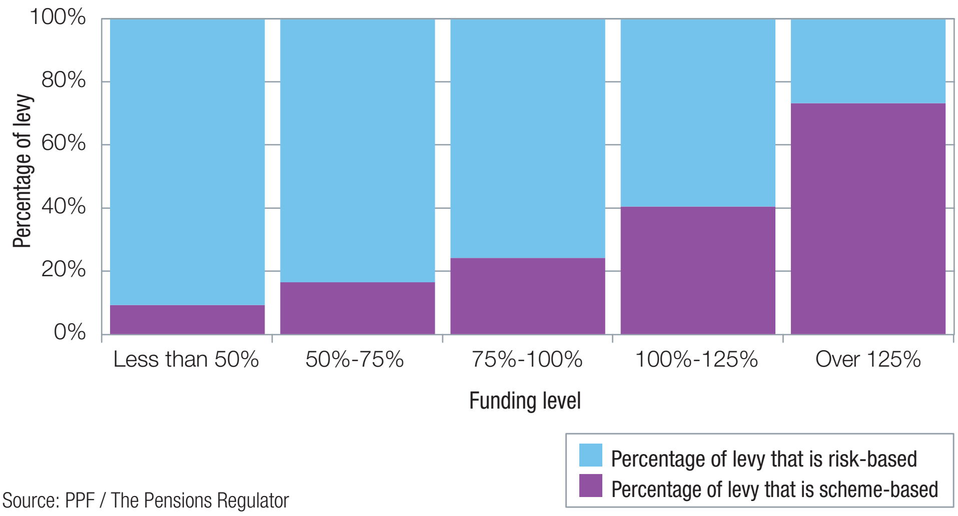
With the exception of insolvency group 10, the share of risk-based levy rises and the share of scheme-based levy falls, as insolvency risk increases.

Chart 9.5 | Percentage of total levy that is scheme- and risk-based by insolvency group*



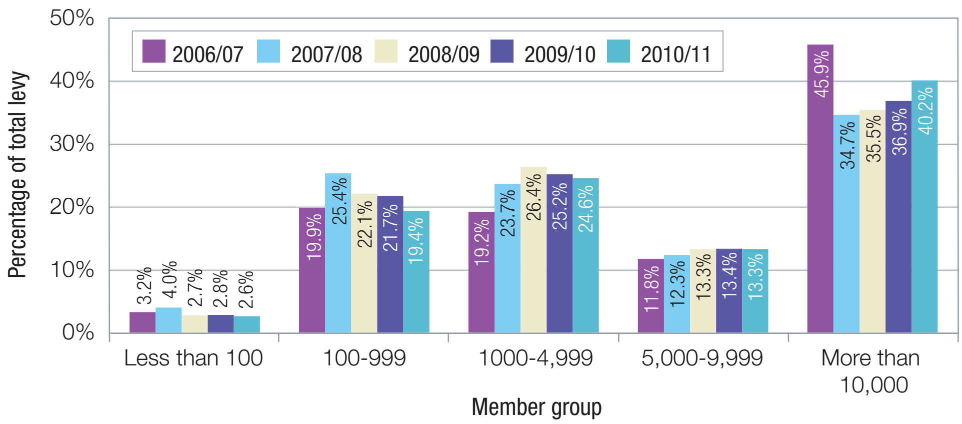
Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for the 2010/11 levy year.

Chart 9.6 | Percentage of total levy that is scheme- and risk-based by funding level*



Source: PPF / The Pensions Regulator
*Based on a sample of 6,397 schemes for 2010/11 levy year

Chart 9.7 | Levy distribution by scheme size*



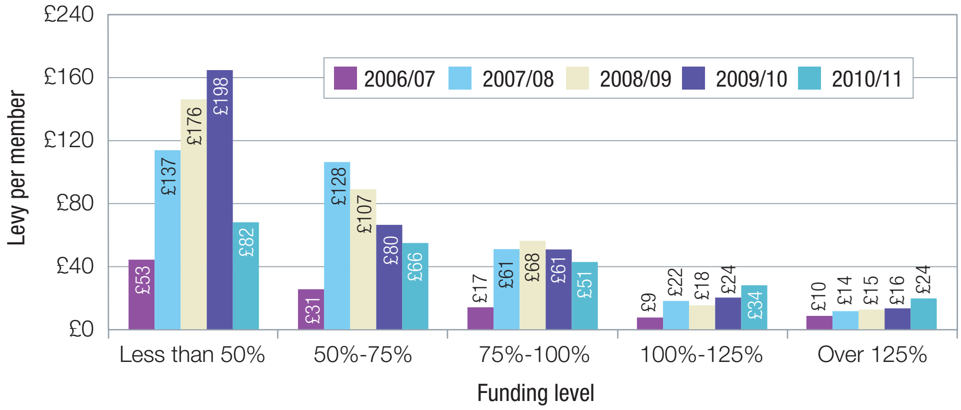
Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years

The proportion of risk-based levy declines as scheme funding improves.

Large schemes (over 5,000 members) paid 53.5 per cent of total levy in 2010/11, a slight increase on 2009/10.

Levy per member has decreased significantly in percentage terms within the less than 50% funding group between 2009/10 and 2010/11. This is related to the lower cap on insolvency probabilities.

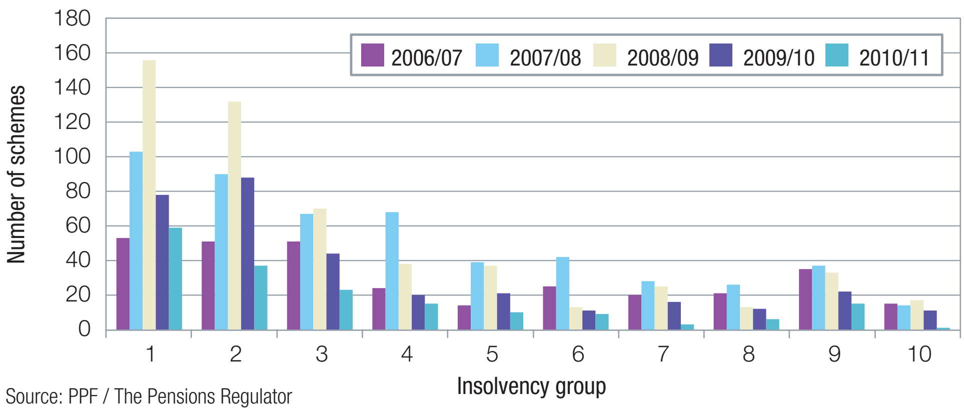
Chart 9.8 | Levy per member by funding level*



Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years

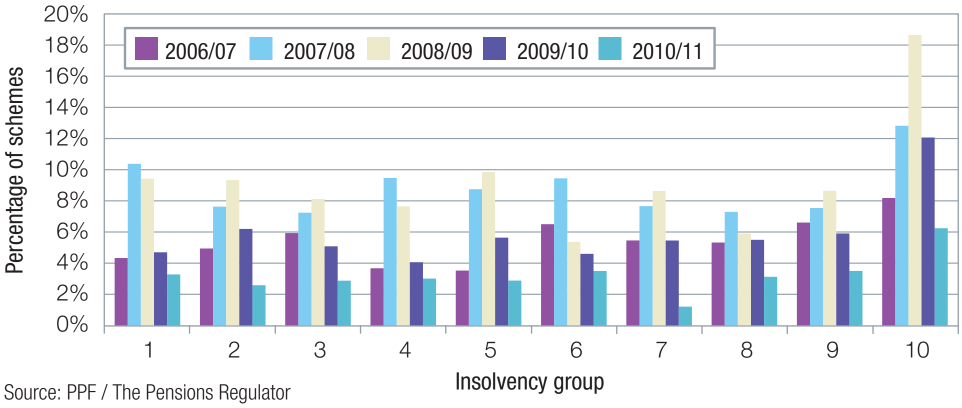
The number of schemes which did not pay a risk-based levy fell across all insolvency groups in 2010/11 as scheme funding deteriorated.

Chart 9.9 | Number of schemes paying no risk-based levy*



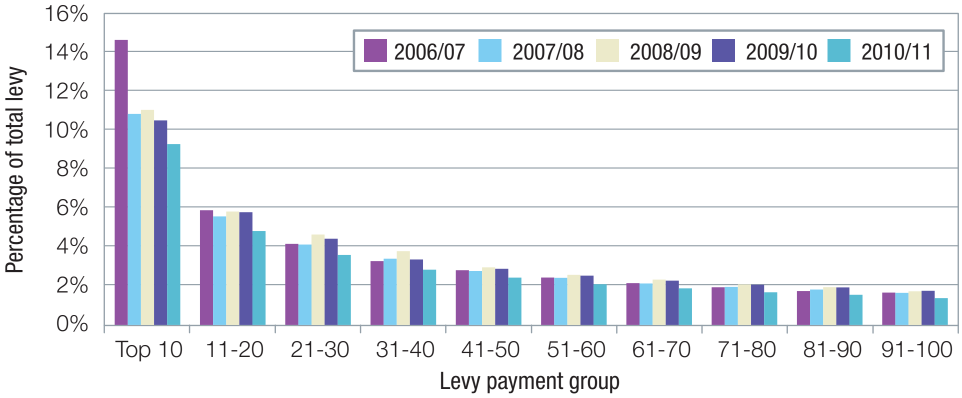
Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years

Chart 9.10 | Percentage of schemes in each insolvency group paying no risk-based levy *



Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years

Chart 9.11 | Percentage of total levy paid by largest 100 levy-paying schemes*

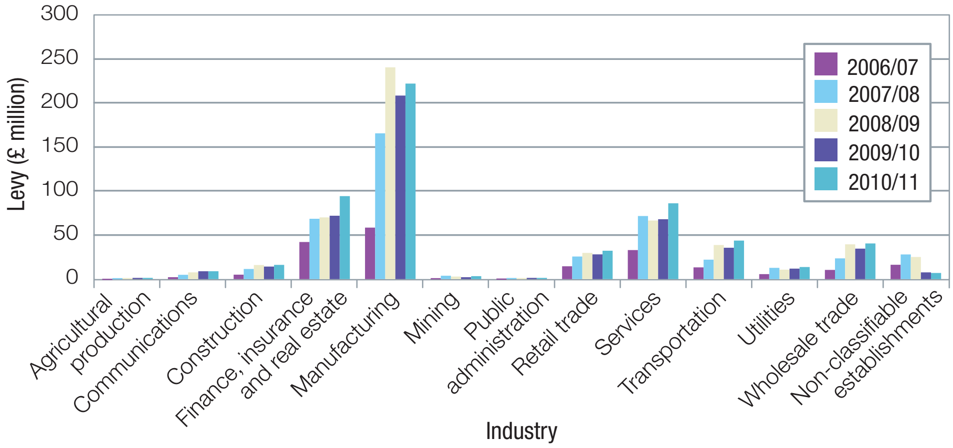


Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years

The top 10 levy payers accounted for 9.3 per cent of the total levy and 9.7 of the total liabilities in 2010/11.

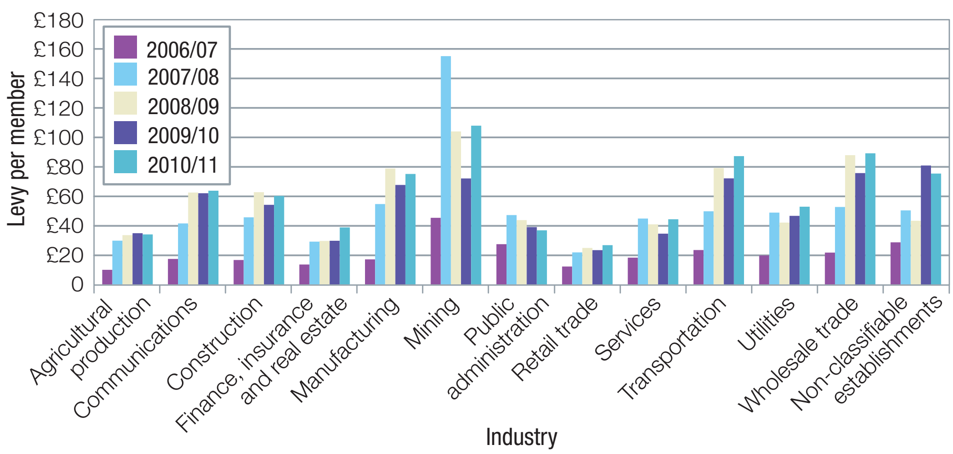
Manufacturing, finance, insurance and real estate, and services are the highest levy paying industries, in line with their proportion of the eligible DB universe.

Chart 9.12 | Total levy by industry (based on 1972 US SIC)*



Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years
**Based on 1972 US SIC

Chart 9.13 | Levy per member by industry*



Source: PPF / The Pensions Regulator
*Based on dataset of the same 6,019 schemes across all years

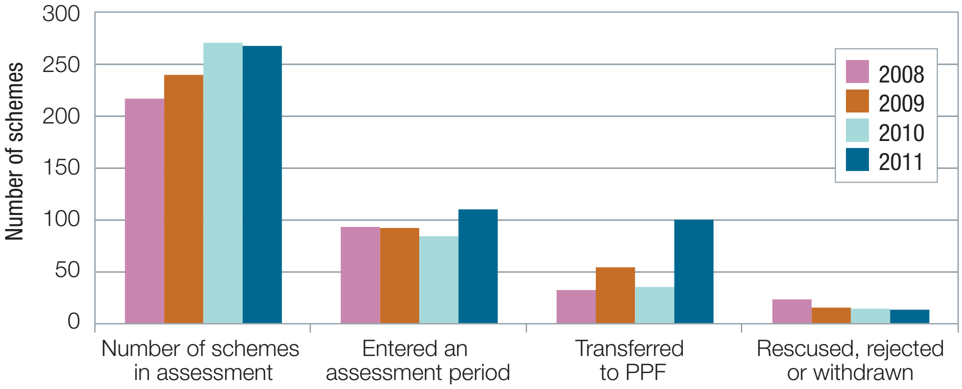
10 Schemes in Assessment

10.1 Summary

- Before entering the PPF all schemes go through an assessment period to test their eligibility. The PPF aims to complete the assessment period for most schemes within two years.
- The PPF's Annual Report and Accounts 2010/11 shows that there were 369 schemes in assessment at 31 March 2011 compared with 376 at 31 March 2010. Of these 314 were recognised in provisions, down from 317 at 31 March 2010. In these figures, all segregated parts of schemes have been counted as separate schemes.
- In this chapter, for analytical purposes scheme sections and segregated parts are amalgamated at a scheme level and schemes in surplus excluded; after this amalgamation there were 268 schemes (225,000 members) in a PPF assessment period as at 31 March 2011, compared with 271 (209,000 members) a year earlier. As a result, the number of schemes in assessment in this chapter is less than reported in the 2010/11 Annual Report and Accounts.
- The small fall over the year reflects 110 new schemes entering and remaining in assessment, 100 schemes transferring into the PPF and 13 being rescued, rejected or withdrawn.
- On a s179 basis, as at 31 March 2011, the aggregate assets of schemes in assessment totalled £9.5 billion and their liabilities £10.9 billion. Liabilities averaged £40.7 million per scheme and assets averaged £35.4 million.
- Schemes with liabilities below £5 million account for 38.4 per cent of schemes in assessment but only 26.5 per cent of the Purple 2011 dataset, while schemes with liabilities of over £100 million account for 8.2 per cent of schemes in assessment but 17.0 per cent of the Purple 2011 dataset.
- The aggregate funding level (total assets divided by total liabilities) of the schemes in assessment as at 31 March 2011 was 86.8 per cent, below the aggregate funding levels of the schemes in the Purple 2011 dataset (99.9 per cent) and also slightly below the aggregate funding level of the schemes in assessment a year earlier (88.4 per cent).
- The larger schemes in assessment are, on average, better funded than the smaller schemes. Schemes with over £50 million in assets have an average funding level of 89.6 per cent. Those with less than £50 million in assets have an average funding level of 79.0 per cent.
- According to the latest scheme-return data prior to their entering assessment, schemes invested most heavily in gilts and fixed interest (38.5 per cent of total assets) and equities (34.9 per cent). In the Purple 2011 dataset equities account for 43.7 per cent and gilts and fixed interest account for 32.6 per cent.
- Where the industry is known, 46.2 per cent of the companies sponsoring schemes in assessment operated within the manufacturing sector. The service sector accounts for 17.3 per cent of sponsors of schemes in assessment and the finance, insurance and real estate sector, 11.5 per cent.
- The representation of manufacturing in schemes in assessment is much greater than the sector's share of scheme sponsors in the PPF universe (30.7 per cent), which in turn is greater than the share of manufacturing in the UK economy (12 per cent).

10.2 Schemes entering assessment

Chart 10.1 | Number of schemes in assessment each year, 31 March 2011



Source: PPF / The Pensions Regulator

Table 10.1 | Funding statistics for schemes in assessment each year, 31 March 2011

	Assets (£ billion)	Liabilities (£ billion)	Deficit (£ billion)	Funding ratio
2007	4.0	4.7	-0.7	85.1%
2008	4.2	5.4	-1.2	77.8%
2009	6.6	9.4	-2.8	70.2%
2010	8.4	9.5	-1.1	88.4%
2011	9.5	10.9	-1.4	86.8%

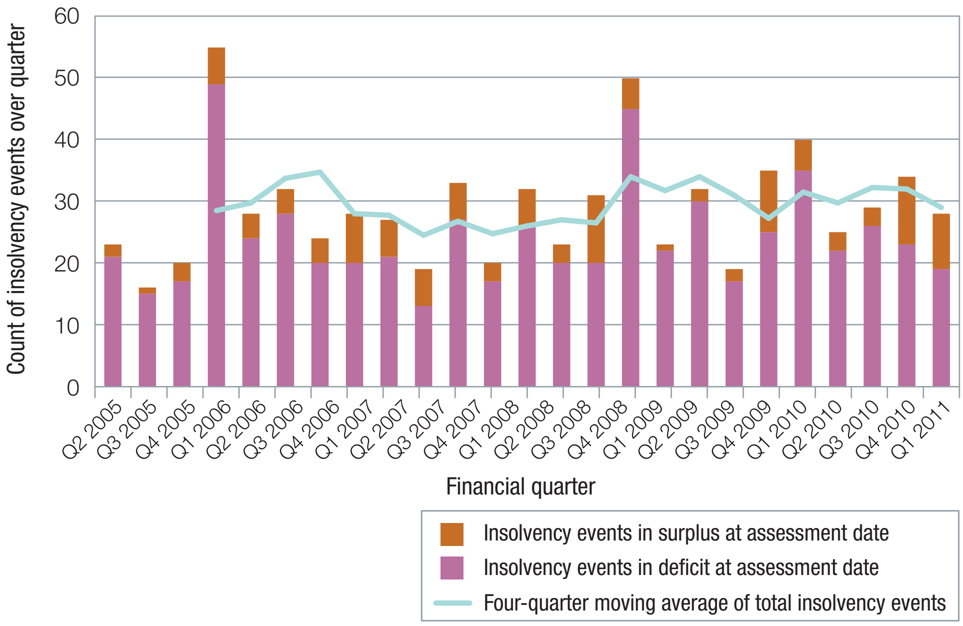
Source: PPF / The Pensions Regulator

The number of schemes in assessment has declined slightly in the latest year as more schemes have transferred to the PPF than during previous years. This increase outweighs the increase in the number of schemes entering assessment.

At 31 March 2011, scheme funding for schemes in assessment had deteriorated a little since the year before.

The number of qualifying insolvency events is broadly unchanged over the last year.

Chart 10.2 | Number of qualifying insolvency events by date of insolvency*

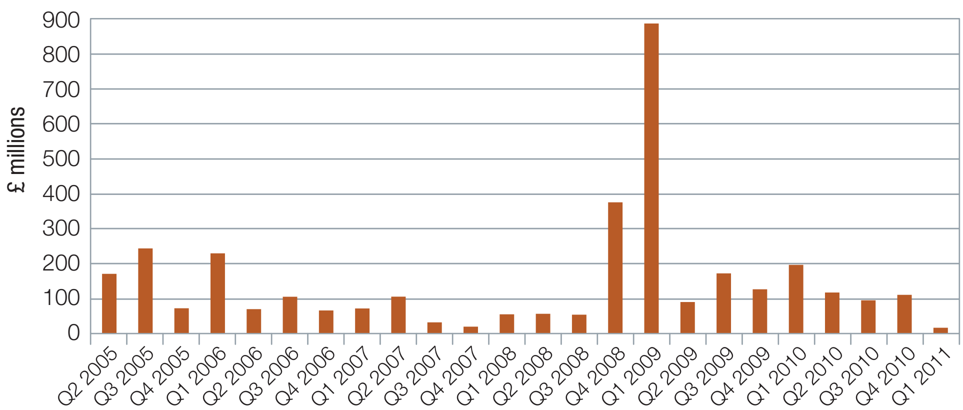


Source: PPF / The Pensions Regulator

* Sections and segregated schemes not amalgamated

The average quarterly deficit of schemes entering assessment in the year to Q1 2011 was £84 million, down from £107 million in the year to Q1 2010. The value of claims in Q1 2011 was only £15 million.

Chart 10.3 | Total s179 deficits for schemes entering an assessment period*

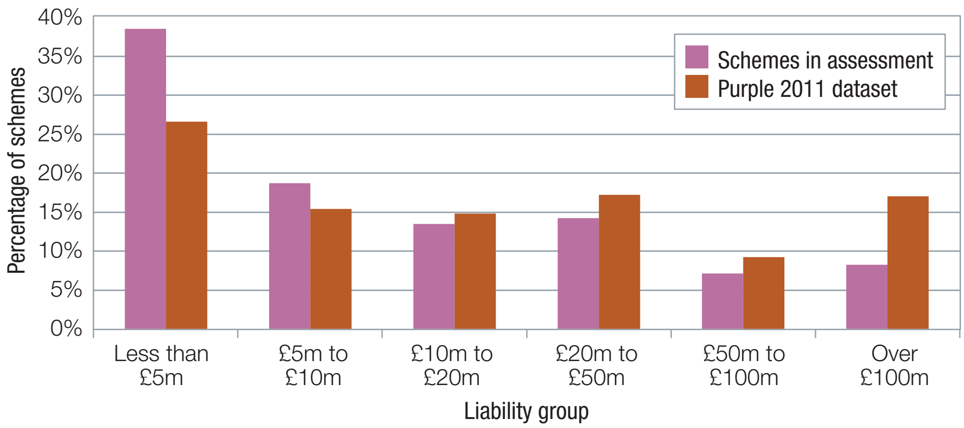


Source: PPF / The Pensions Regulator

*In this chart, the value of each claim has been estimated as at the beginning of each respective assessment period. The actual amount of the claim will change over time as estimates of the sums that schemes are able to recover from the debt owed by the employer to the pension scheme (e.g., by way of insolvency realisations or other assets) are updated.

10.3 Scheme demographics

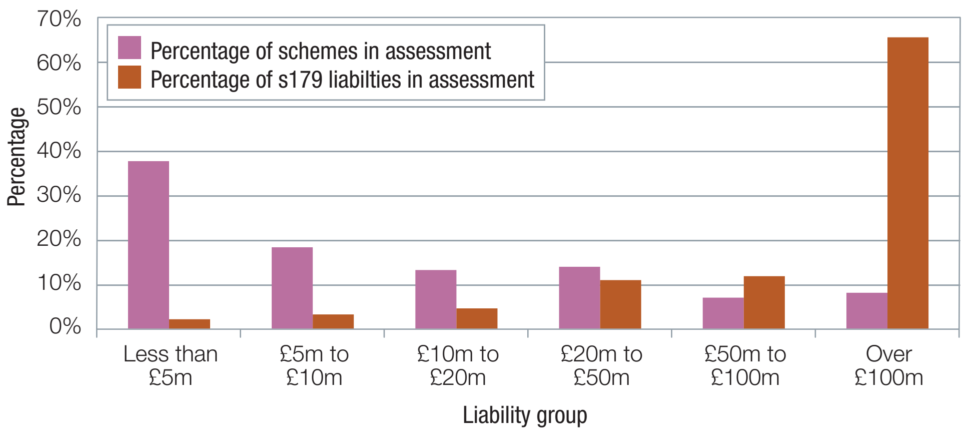
Chart 10.4 | Percentage of schemes in assessment in each liability group, 31 March 2011



Source: PPF / The Pensions Regulator

Schemes with less than £5 million liabilities make up 38.4 per cent of schemes in assessment, compared with 26.5 per cent in the Purple dataset.

Chart 10.5 | Percentage of schemes and percentage of s179 liabilities by liability group for schemes in assessment, 31 March 2011

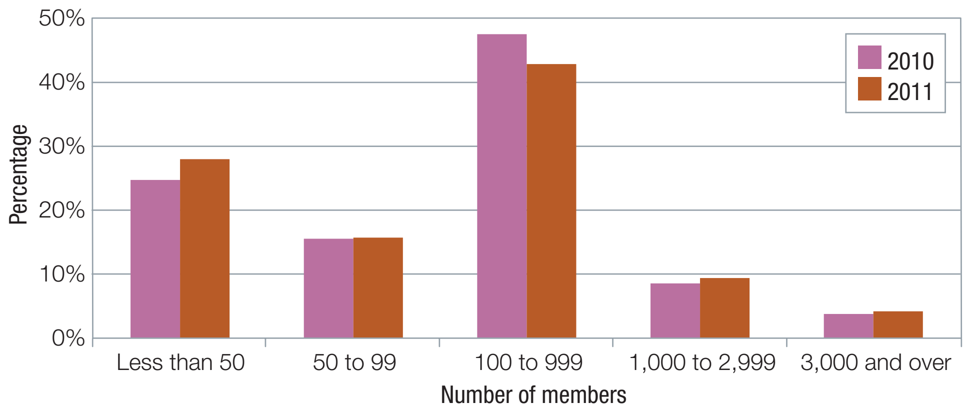


Source: PPF / The Pensions Regulator

Schemes with liabilities of more than £100 million represent 8.2 per cent of schemes in assessment but 66.9 per cent of liabilities.

43 per cent of the schemes in assessment were in the 100-999 membership range in 2011. 44 per cent had under 100 members.

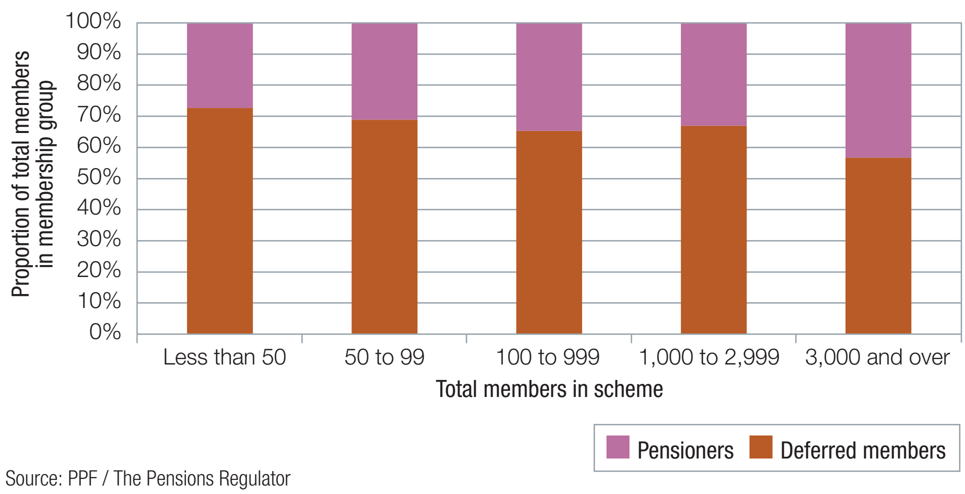
Chart 10.6 | Proportion of schemes in assessment by membership size



Source: PPF / The Pensions Regulator

The group with the largest number of members is also the group where the schemes are the most mature.

Chart 10.7 | Maturity of schemes in assessment by membership size*

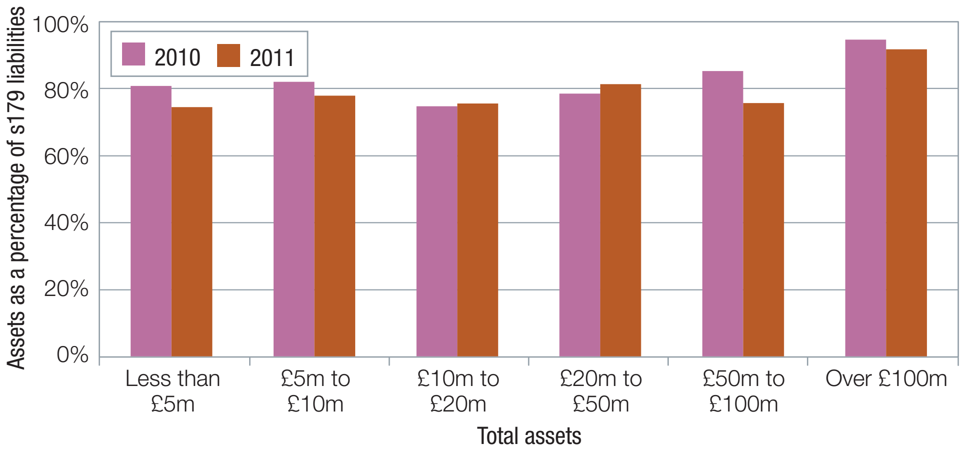


Source: PPF / The Pensions Regulator

*For the purpose of this chapter only pensioners and deferred members are considered. There are no active members in the dataset.

10.4 Funding level

Chart 10.8 | Average funding level of schemes in assessment by asset size



Source: PPF / The Pensions Regulator

Chart 10.9 | Total s179 deficit of schemes in deficit by liability size

Source: PPF / The Pensions Regulator

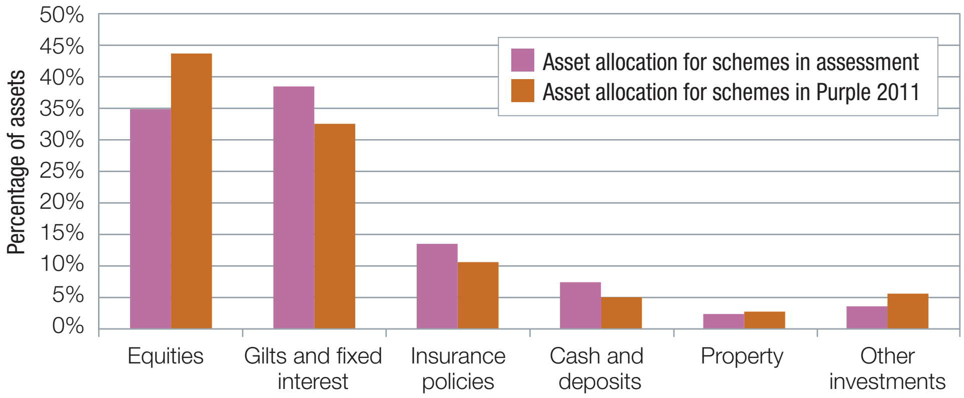
2011 saw a large increase in the deficit of the largest schemes. This is mainly due to the entry of seven schemes with liabilities over £100 million while only one scheme in this liability group has left assessment.

Prior to assessment, schemes tended to hold less of their assets in equities more in gilts and fixed interest and insurance policies than schemes in the Purple 2011 dataset.

When schemes transfer into the PPF their assets will be transitioned to fit in with the PPF's asset allocation as set out in its Statement of Investment Principles (SIP).[40]

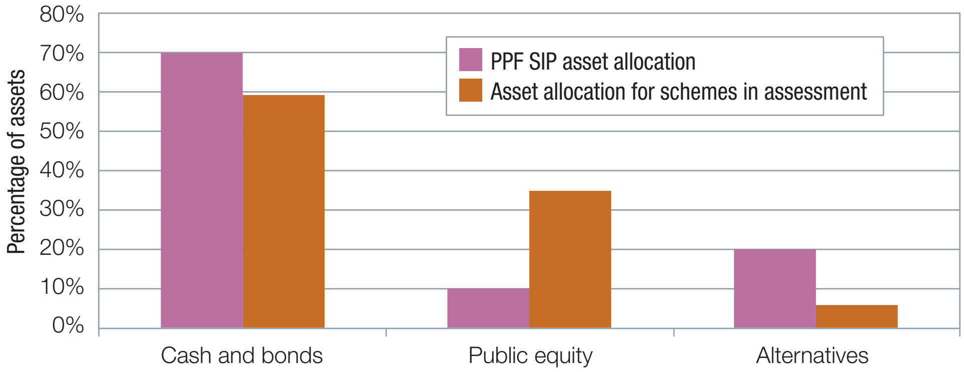
10.5 Asset allocation

Chart 10.10 | Simple average asset allocations prior to assessment for schemes in assessment and the Purple 2011 dataset, 31 March 2011



Source: PPF / The Pensions Regulator

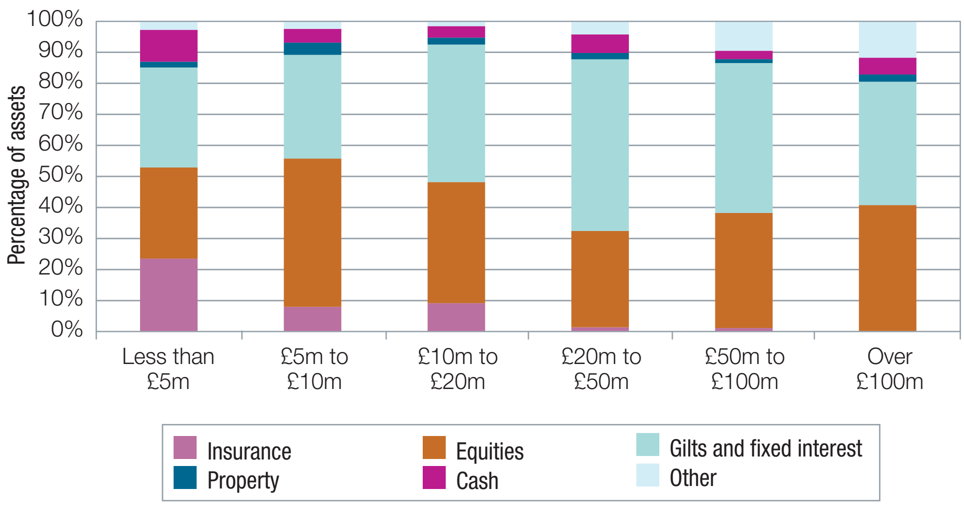
Chart 10.11 | Weighted-average asset allocations prior to assessment for schemes in assessment and the PPF's SIP asset allocation, 31 March 2011



Source: PPF / The Pensions Regulator

40 http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/SIP_November_2010.pdf

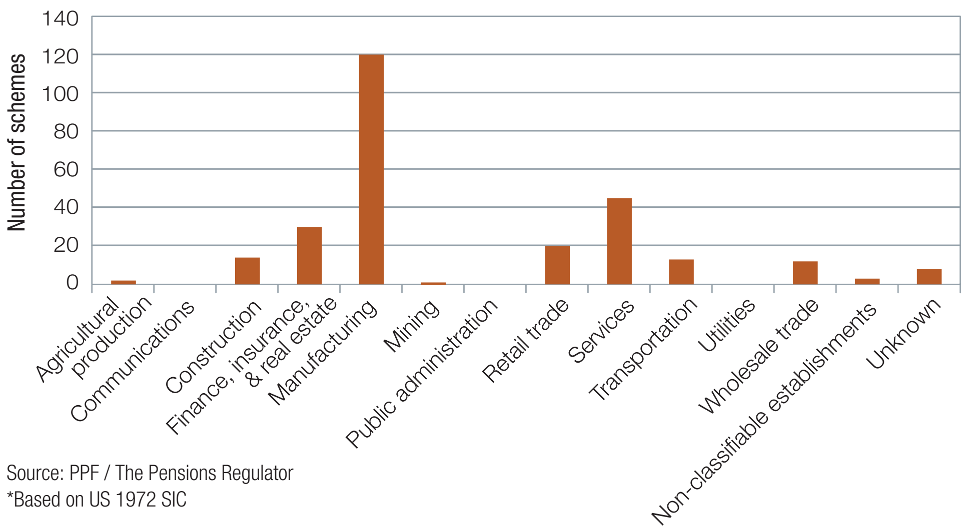
Chart 10.12 | Asset allocation of schemes in assessment prior to entry, by asset size



Source: PPF / The Pensions Regulator

10.6 Industry classification

Chart 10.13 | Distribution of schemes in assessment by industry classification*



Source: PPF / The Pensions Regulator
*Based on US 1972 SIC

Larger schemes, by asset size tended to hold a higher proportion of assets in gilts and fixed interest than smaller schemes, prior to entering assessment.

Smaller schemes tend to have a higher proportion of their assets in insurance policies, while the largest schemes do not hold any insurance policies.

The manufacturing industry contributed 120 of the 260 schemes in assessment (46.2 per cent) for which industry classification is known.

Manufacturing accounts for 46.2 per cent of schemes in assessment with an industry classification compared to 30.7 per cent of schemes with known data in Purple 2011.

Table 10.2 | Distribution of schemes in assessment by industry classification*

Industry	Number of schemes per industry in assessment	Percentage of schemes (schemes in assessment)	Percentage of schemes with industry data available (schemes in assessment)	Percentage of schemes with industry data available (Purple 2011 dataset)
Agricultural production	2	0.7%	0.8%	1.1%
Communications	0	0.0%	0.0%	0.6%
Construction	14	5.2%	5.4%	3.2%
Finance, insurance and real estate	30	11.2%	11.5%	17.0%
Manufacturing	120	44.8%	46.2%	30.7%
Mining	1	0.4%	0.4%	0.8%
Public administration	0	0.0%	0.0%	0.5%
Retail trade	20	7.5%	7.7%	5.3%
Services	45	16.8%	17.3%	24.6%
Transportation	13	4.9%	5.0%	4.9%
Utilities	0	0.0%	0.0%	1.4%
Wholesale trade	12	4.5%	4.6%	9.8%
Non-classifiable establishments	3	1.1%	1.2%	4.3%
Unknown	8	3.0%	n/a	n/a
Total	268	100.0%	100.0%	100.0%

Source: PPF / The Pensions Regulator
* Based on US 1972 SIC

11 PPF Compensation

11.1 Summary

- When an eligible defined benefit (DB) scheme transfers into the PPF, the PPF generally pays a starting level of compensation of 90 per cent of scheme pension (subject to a compensation cap) to members who were yet to reach their normal retirement age (NRA) at the date the scheme entered assessment. The PPF will generally pay a starting level of compensation equivalent to 100 per cent of scheme pension to those who were already over their NRA at the start of the assessment period.[41]
- The PPF made its first compensation payments in the 2006/07 financial year following the first scheme transfer in November 2006. A total of £1.4 million was paid out in 2006/07, rising to £17.3 million in 2007/08, £37.6 million in 2008/09, £81.6 million in 2009/10 and £119.5 million in 2010/11.
- At 31 March 2011, 33,069 members were in receipt of PPF compensation, up from 20,775 in the previous year. Average compensation in payment stood at £3,889[42] a year. The number of members with compensation not yet in payment (deferred members) as at 31 March 2011 totalled 42,063. For these members, the average accrued periodic compensation (before any prospective application of the compensation cap at NRA) was £3,295 a year.
- As of 31 March 2011, males constituted 72 per cent of pensioner and deferred members, down from 76 per cent the previous year.[43]
- Spouses and dependants account for 15 per cent of those currently in receipt of compensation, receiving 10 per cent of compensation in payment.
- Around 68 per cent of pensioner compensation is attributable to former employees of the manufacturing sector, down from 77 per cent a year before.
- The West-Midlands is the region in largest receipt of compensation, currently receiving 23 per cent of total pensioner compensation.
- As of 31 March 2011, only 100 pensioners were affected by the compensation cap (£29,748.68 a year for those aged 65 in 2010/11 after the 90 per cent scaling).
- The vast majority of members are in receipt of (or have accrued) compensation of less than 25 per cent of the cap.
- The majority of compensation and liabilities was accrued in relation to service before 6 April 1997 and is therefore not subject to indexation. Compensation accrued on or after 6 April 1997 has historically been increased each year in line with Retail Price Inflation (RPI) capped at 2.5 per cent with a floor of 0 per cent.

41 For full details of the conditions and processes governing the payment of PPF compensation, please visit http://www.pensionprotectionfund.org.uk/Pages/Compensation.aspx

42 The annualised average rate of compensation is calculated by scaling up compensation over one month to reflect one year. This measure, which excludes lump sum payments, is used in order to accurately represent periodic compensation in payment at 31 March 2011.

43 Unless otherwise stated, totals and averages relating to pensioners include dependants.

- Deferred compensation has historically been revalued over the period to NRA in line with RPI capped at 5 per cent per annum (for compensation accrued before 6 April 2009) and RPI capped at 2.5 per cent per annum (for compensation accrued on or after 6 April 2009), subject to a floor of 0 per cent in both cases.
- The government has introduced new rules to move to the use of the Consumer Prices Index (CPI) for the purpose of the indexation and revaluation (subject to the appropriate caps and floors as detailed above). These changes affect pension revaluation from April 2011 and indexation from January 2012. All figures of compensation presented in this chapter are, where relevant, based on historical RPI inflation indexation and revaluation.

11.2 Total compensation and number of members

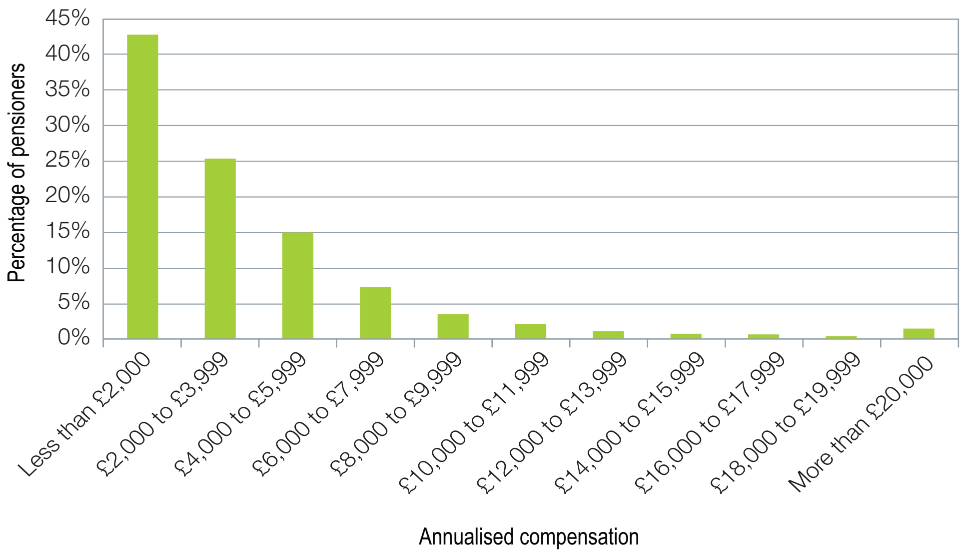
Table 11.1 | Total compensation and numbers of members

	Year				
	2007	2008	2009	2010	2011
Total compensation (£ million, year to 31 March)	1.4	17.3	37.6	81.6	119.5
Total pensioner members (31 March)	1,457	3,596	12,723	20,775	33,069
Total deferred members (31 March)	5,621	8,577	18,009	26,058	42,063

Source: PPF / The Pensions Regulator

11.3 Distribution of Compensation

Chart 11.1 | Distribution of pensioners by annualised compensation level

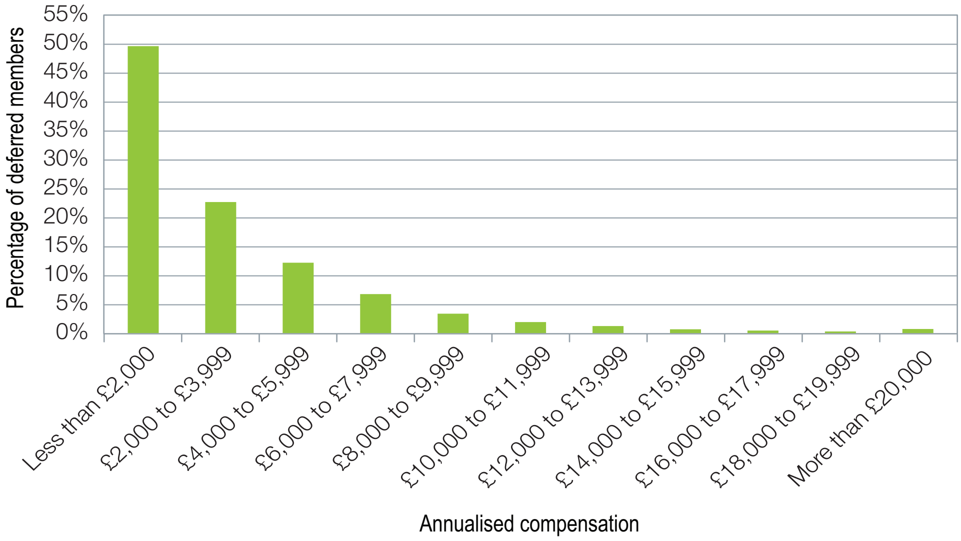


Source: PPF/ The Pensions Regulator

83 per cent of pensioner members are in receipt of annualised compensation of less than £6,000.

85 per cent of deferred members have accrued annualised compensation of less than £6,000.

Chart 11.2 | Distribution of deferred members by annualised compensation level

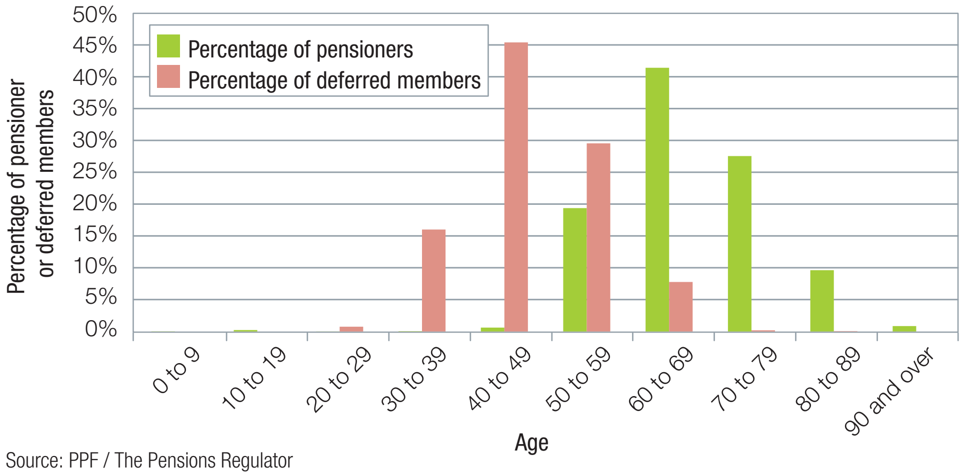


Source: PPF / The Pensions Regulator

11.4 Age and Gender

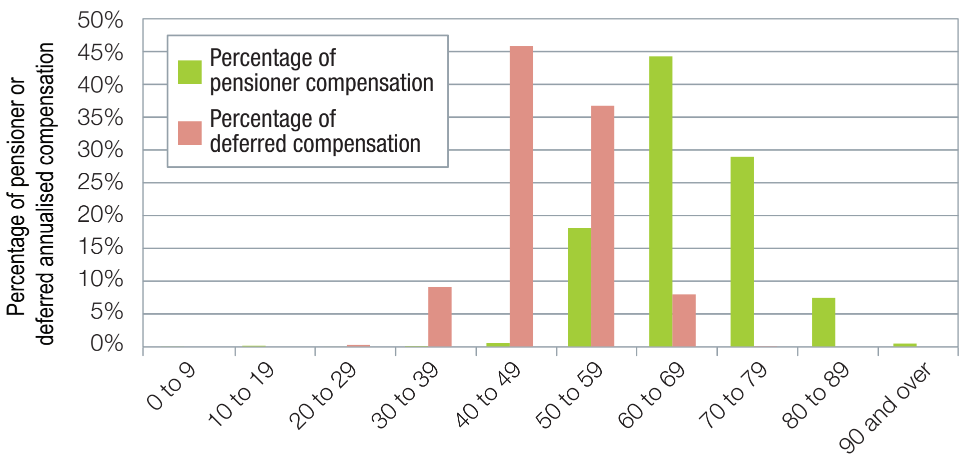
62 per cent of pensioner members are aged less than 70 and 62 per cent of deferred members are aged less than 50.

Chart 11.3 | Distribution of pensioner and deferred members by age



Source: PPF / The Pensions Regulator

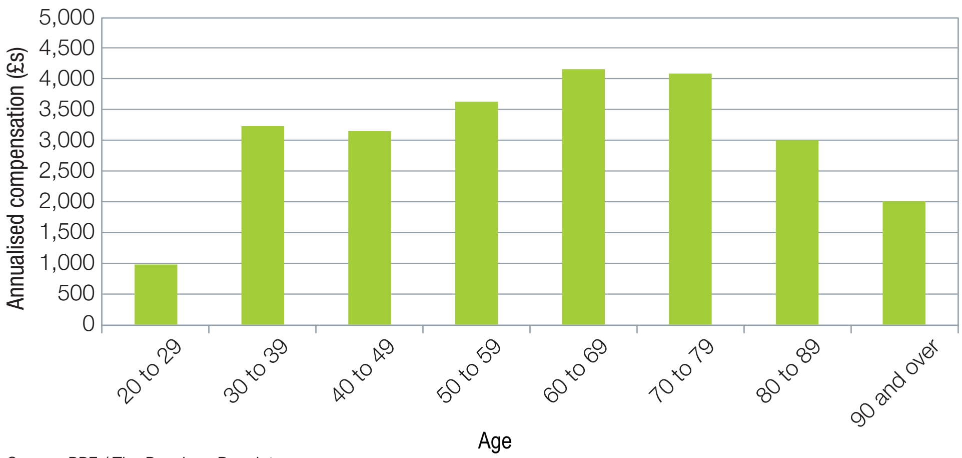
Chart 11.4 | Distribution of annualised pensioner and deferred compensation by age



Source: PPF / The Pensions Regulator

46 per cent of all deferred compensation is attributable to members in the 40 to 49 age range and the age range of 50 to 59 makes up a further 37 per cent.

Chart 11.5 | Average annualised pensioner compensation by age

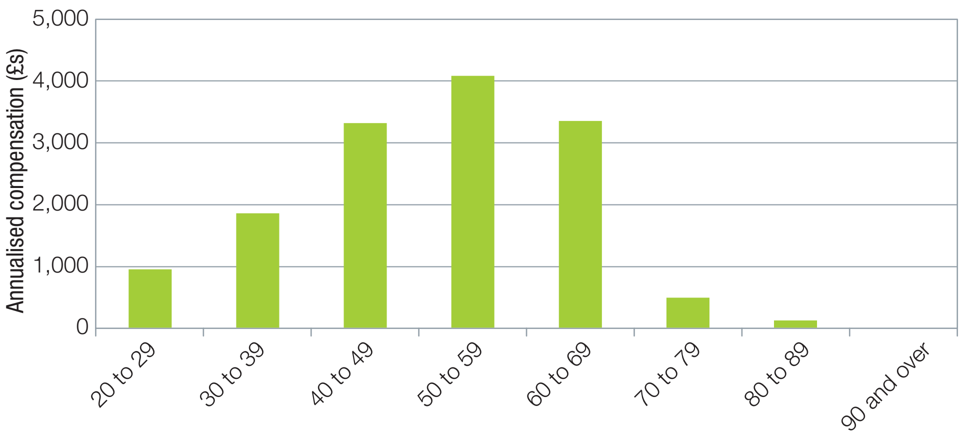


Source: PPF / The Pensions Regulator

Average annualised compensation for pensioner members peaks between 60 and 79.

Average annualised compensation accrued by deferred members peaks between 50 and 59.

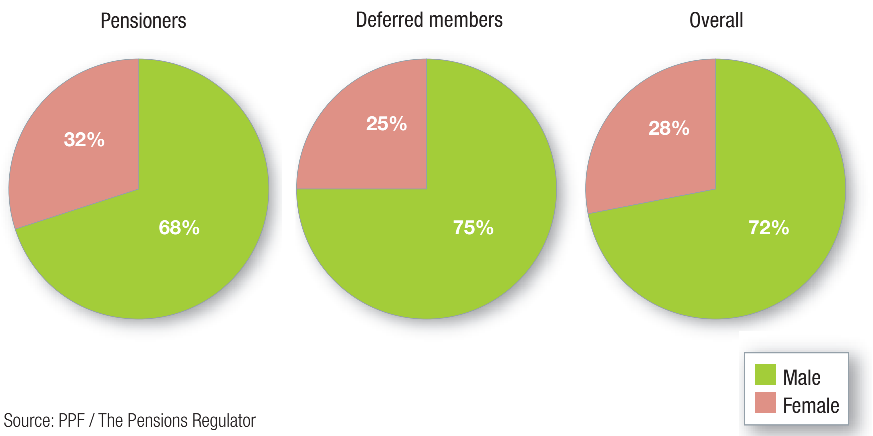
Chart 11.6 | Average annualised deferred member compensation by age



Source: PPF / The Pensions Regulator

Overall, males make up 72 per cent of members of transferred schemes (down from 76 per cent last year).

Chart 11.7 | Gender composition of pensioners and deferred members



Source: PPF / The Pensions Regulator

11.5 Spouses and other dependants

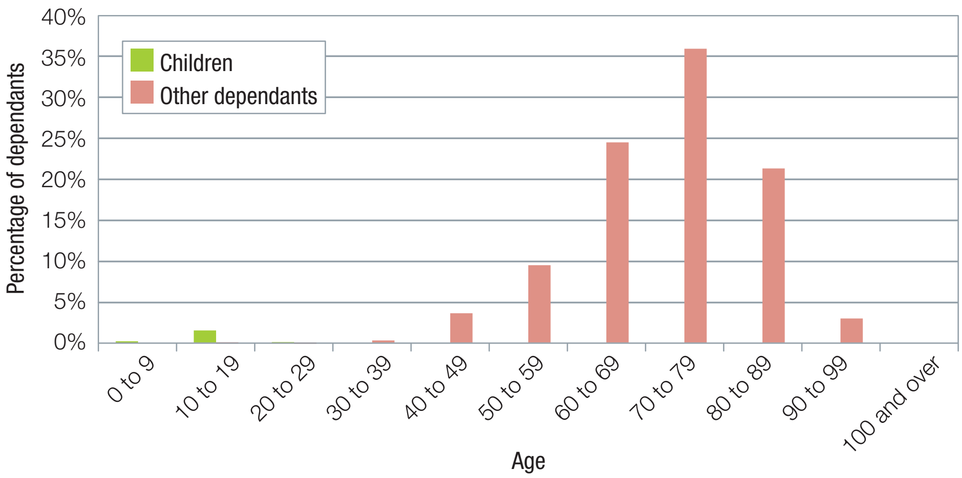
Table 11.2 | Proportions of dependants and members within the PPF current pensioner population

	Number within pensioner population	Percentage of total population	Annualised compensation (£000s, pa)	Percentage of total annualised compensation
Dependants	4,974	15%	£12,583	10%
Members	28,095	85%	£116,039	90%
Total	33,069	100%	£128,622	100%

Source: PPF / The Pensions Regulator

Dependants constitute only a small proportion of total pensioners and compensation.

Chart 11.8 | Distribution of children and other dependants by age



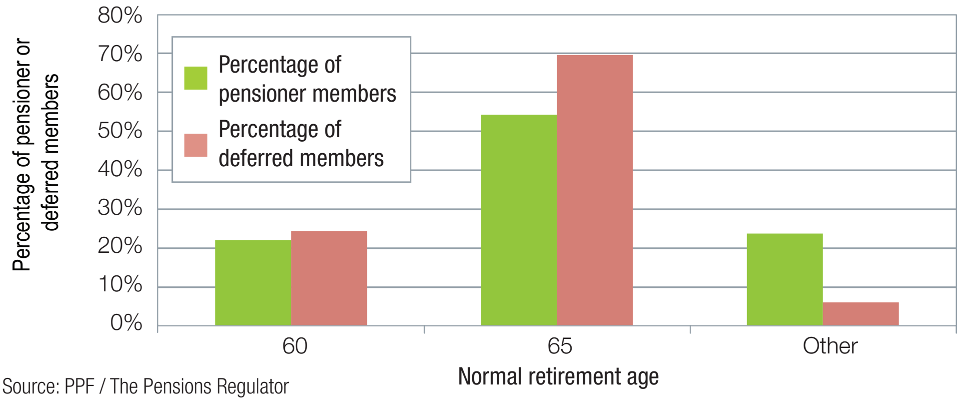
Source: PPF / The Pensions Regulator

The distribution of dependants shows that they tend to be older on average than pensioner members (see Chart 11.3).

The vast majority of pensioner and deferred members have an NRA of 65 for their largest tranche of compensation.

11.6 Normal Retirement Age (NRA)

Chart 11.9 | Distribution of pensioner and deferred members by NRA of largest compensation tranche

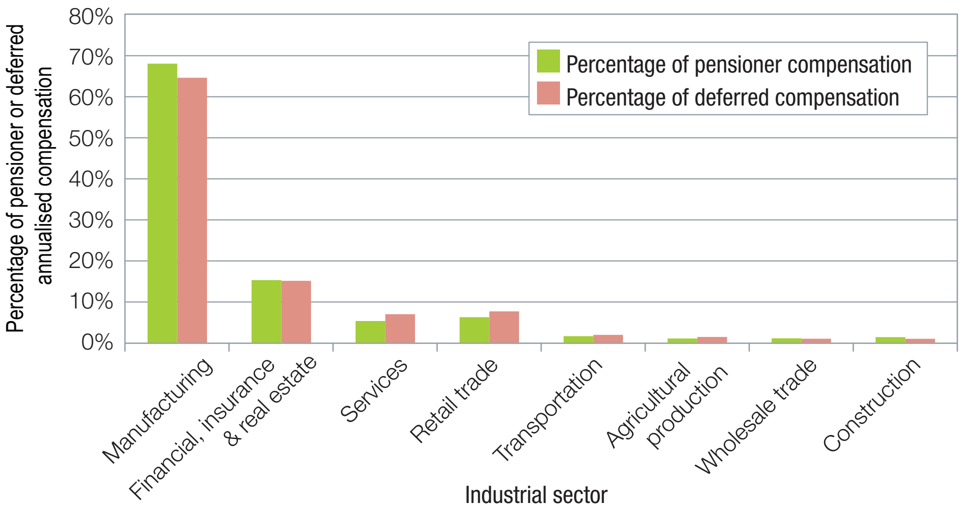


Source: PPF / The Pensions Regulator

The vast majority of PPF compensation is directed towards former employees of the manufacturing sector. This reflects the disproportionately large manufacturing constituency within the PPF sponsor universe. The pensioner compensation directed to former employees of the manufacturing industry has fallen to 68 per cent from 77 per cent the previous year.

11.7 Industry

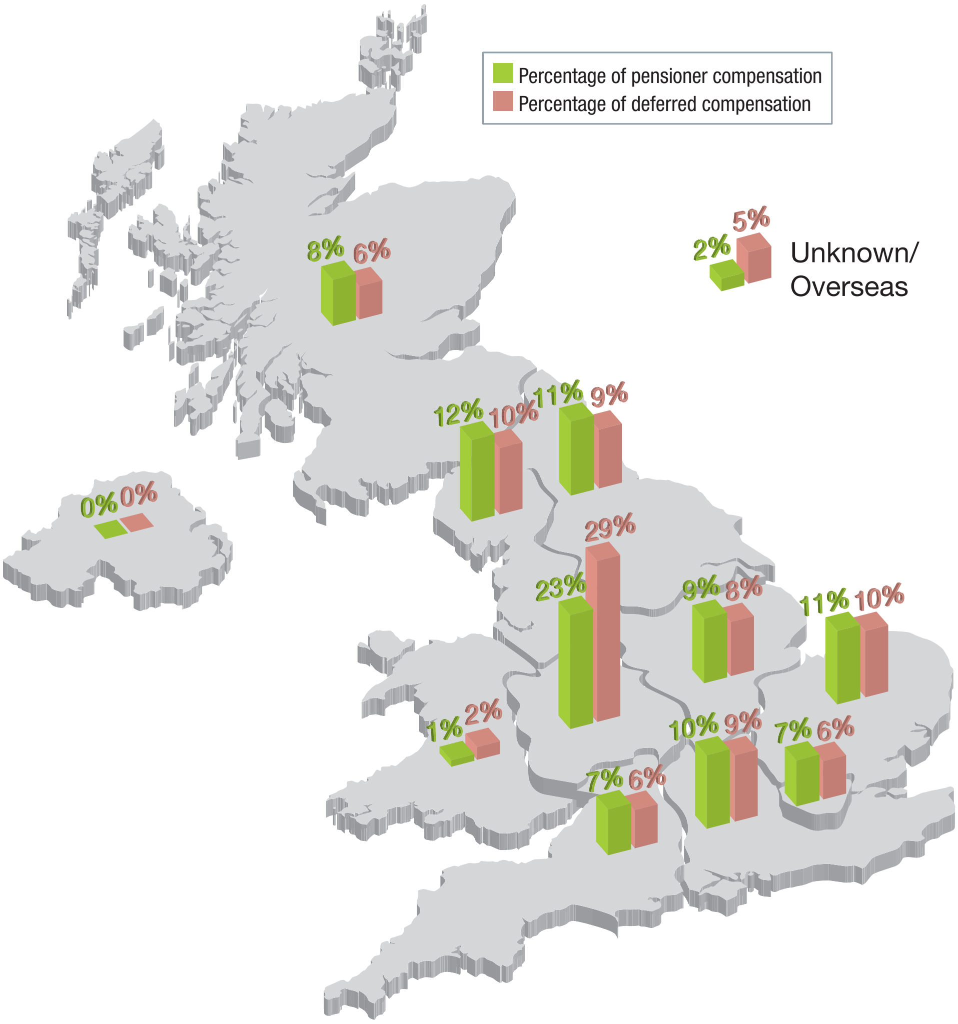
Chart 11.10 | Pensioner and deferred member annualised compensation by industrial sector*



Source: PPF / The Pensions Regulator
* Based on US 1972 SIC

11.8 Geography

Chart 11.11 | Pensioner and deferred member annualised compensation by UK region



Source: PPF / The Pensions Regulator

The West Midlands clearly dominates as a destination for PPF compensation, due to the number of relevant sponsor insolvencies in the region.

The majority of compensation and liabilities was accrued in relation to service before April 1997.

11.9 Period of service

Table 11.3 | Pre- and post-April 1997 annualised compensation for pensioners and deferred members

	Pensioners		Deferred	
	Compensation (£000s, pa)	Percentage of total	Annualised compensation (£000s, pa)	Percentage of total annualised compensation
Pre-April 1997	104,314	81%	79,898	58%
Post-April 1997	24,308	19%	58,714	42%
Total	128,622	100%	138,612	100%

Source: PPF / The Pensions Regulator

Table 11.4 | Value of liabilites[44] attributable to pre and post April 1997 compensation for pensioners and deferred members

	Pensioners		Deferred	
	Liabilities (£000s)	Percentage of total	Liabilities (£000s)	Percentage of total
Pre-April 1997	1,354,708	74%	1,080,658	52%
Post-April 1997	473,074	26%	998,886	48%
Total	1,827,782	100%	2,079,544	100%

Source: PPF / The Pensions Regulator

44 On the basis used for the PPF's Annual Report and Accounts 2010/11.

12 Risk Reduction

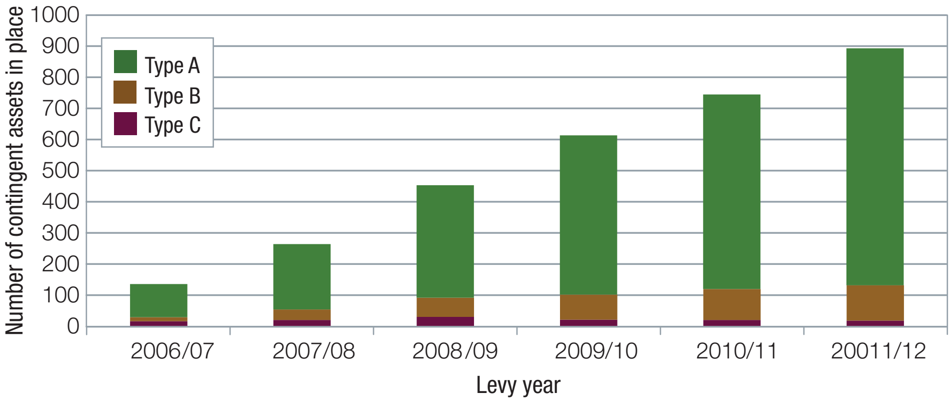
12.1 Summary

- The total number of recognised contingent assets (CAs) in place has risen by 20 per cent, from approximately 750 for the 2010/11 levy year to 900 for 2011/12.
- Schemes in the Purple 2011 dataset (excluding those schemes which were in a PPF assessment period as at 31 March 2011) had by 7 April 2011 certified approximately £28.0 billion of deficit reduction contributions (DRCs)[45] to reduce deficits for the 2011/12 levy year. This was similar to the £29.1 billion certified for the previous levy year.
- The DRCs were not only paid by companies sponsoring the largest schemes; around 44.1 per cent of the £28.0 billion was paid by employers sponsoring schemes with fewer than 10,000 members.
- MQ5 data from the Office for National Statistics (ONS) covering 350 large pension schemes, including 100 local authorities, show that employers' special contributions (i.e. those in excess of regular annual contributions) increased markedly in 2010 to £16.1 billion, a record level, up 60 per cent on the level in 2009. In the first quarter of 2011 they were running at an annual rate of £14.8 billion.
- Analysis of the Pension Regualtor's latest technical provisions and recovery plan data shows that in Tranche 4, the average recovery plan length widened to 9.5 years, the average funding ratio as measured by assets divided by technical provisions fell to 71 per cent, and technical provisions as a percentage of s179 liabilities fell to 102 per cent. Tranche 4 covers schemes with valuation dates between 22 September 2008 and 21 September 2009 when equity markets were very weak and bond yields low.
- Changes in asset allocation were much less marked between Purple 2010 and Purple 2011 after a period of large falls in the equities share and large increases in the bond share (see chapter 7 Asset Allocation for more detail).
- Quarterly F&C surveys of volumes traded by investment banks suggest that £16.8 billion of liabilities were hedged using interest rate derivatives in the first half of 2011, the same as in the second half of 2010 and significantly above that in the first half of 2010 and second half of 2009.
- £13.7 billion of liabilities were hedged using inflation derivatives in the first half of 2011. Inflation-hedging activity peaked in the second and third quarters of 2009.
- Industry sources suggest that the total amount of hedging done using derivatives is around £200-250 billion, 15-18 per cent of total liabilities (on a full buy-out basis).
- Total risk transfer business covering buy-outs, buy-ins and longevity hedges amounted to £31 billion between the end of 2006 and the third quarter of 2011. Just under half of the total reflected buy-in activity, just over 30 per cent reflected buy-outs and just over 20 per cent longevity hedges (which started in 2009).

45 The certificates cover deficit reduction contributions made since the last scheme valuation

12.2 Contingent assets

Chart 12.1 | Contingent assets by type*



Source: PPF / The Pensions Regulator

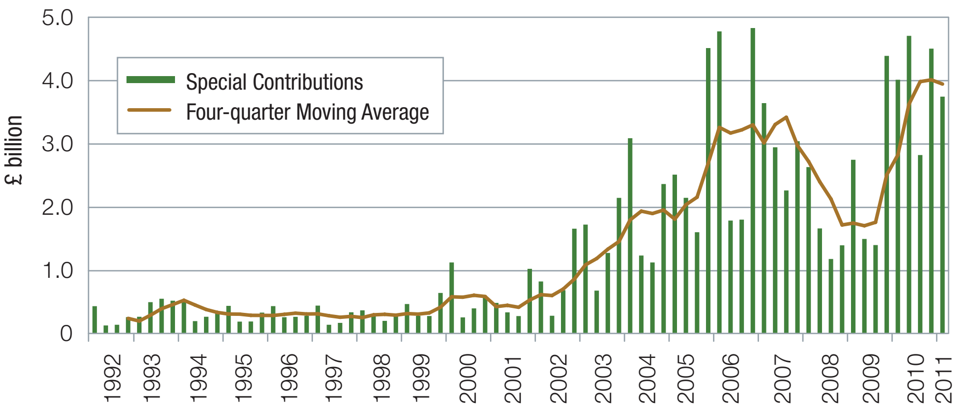
*The numbers of recognised contingent assets for each year presented in Chart 12.1 may change as a result of, for example, successful appeals. This is likely to mainly affect the latest year. The figures for 2010/11 reported in Purple 2010 showed the total number of contingent assets in place as 722 whereas the latest estimate is 747. However, there was only a minor change for 2009/10.

Type A contingent assets are guarantees provided by the parent/group companies to fund the scheme, most commonly, to a pre-arranged percentage of liabilities. Type B contingent assets comprise security over holdings of cash, real estate and/or securities. Type C contingent assets consist of letters of credit and bank guarantees.

The total number of recognised contingent assets has risen by 20 per cent from approximately 750 for the 2010/11 levy year to 900 for 2011/12.

12.3 Special contributions

Chart 12.2 | Special contributions



Source: 'Investment by Insurance Companies. Pension Funds and Trusts', ONS

Special contributions have increased markedly in 2010 and first half of 2011 relative to the levels observed in 2008 and 2009.

In Tranche 4, recovery plan lengths rose while the ratio of technical provisions to s179 liabilities fell. Valuations for this tranche were at a time of financial distress.

The average quarterly interest rate and inflation risk traded by investment banks over the latest year was £22 million and £14 million respectively.

12.4 The scheme funding regime

Table 12.1 | Technical Provision (TP) and Recovery Plan (RP) lengths (unweighted)*

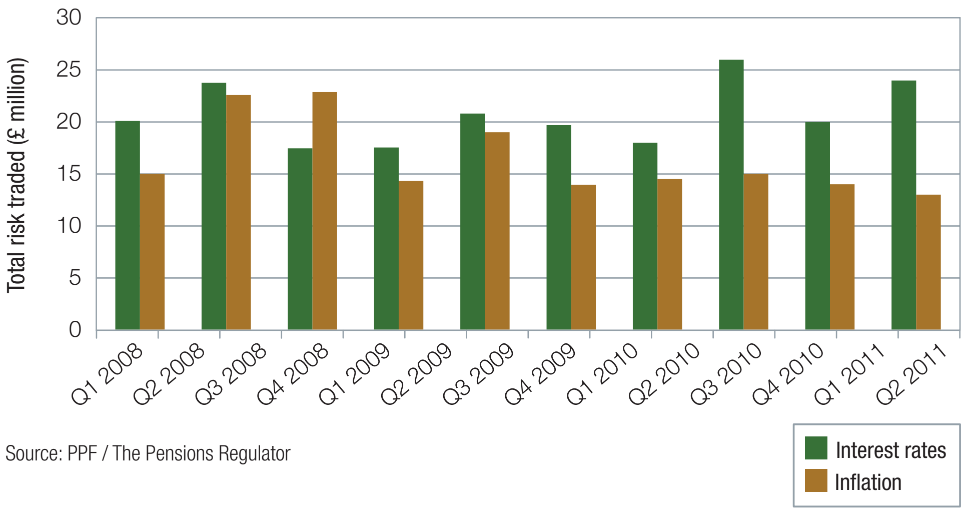
Tranche	Valuation dates	Number of plans	Average recovery plan length years	Assets as a percentage of Technical Provisions	Technical provisions as a percentage of s179 liabilities
1	2005-06	1,928	7.8	79.80%	105.2%
2	2006-07	1,829	7.3	82.00%	114.2%
3	2007-08	1,787	8.4	80.90%	110.9%
4	2008-09	1,849	9.5	71.30%	102.0%

*Notes: (1) valuation dates run from 22 September to 21 September (2) the Tranche 4 number of plans includes 1455 schemes from Tranche 1.

Source: PPF / The Pensions Regulator

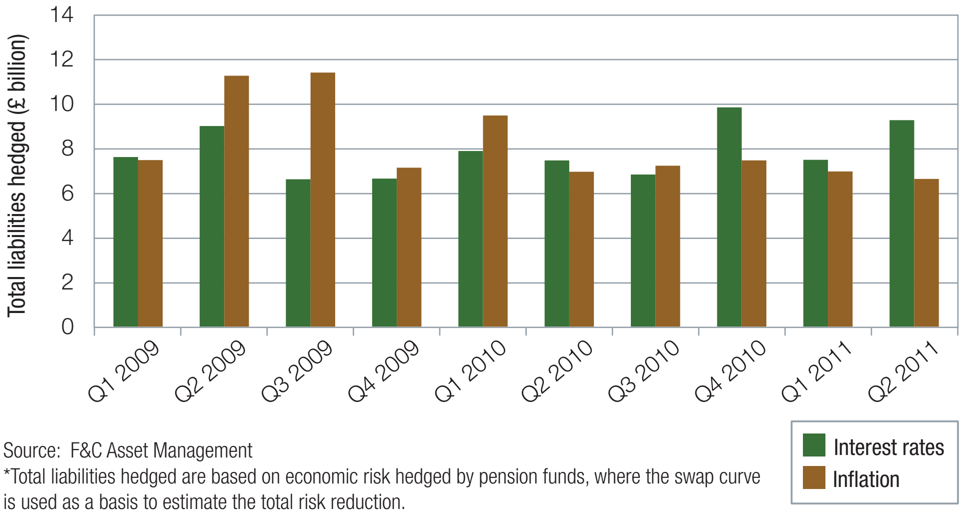
12.5 Liability Driven Investment

Chart 12.3 | Inflation and interest risk traded for liability hedging purposes



Source: PPF / The Pensions Regulator

Chart 12.4 | Average quarterly flow of liabilities being hedged*



Source: F&C Asset Management
*Total liabilities hedged are based on economic risk hedged by pension funds, where the swap curve is used as a basis to estimate the total risk reduction.

The average quarterly flow of liabilities being hedged against interest and inflation movements were £8.5 billion and £7.0 billion respectively. The flow of inflation-hedging business has fallen back compared with Q1 2009 to Q1 2010 while interest rate hedging has risen.

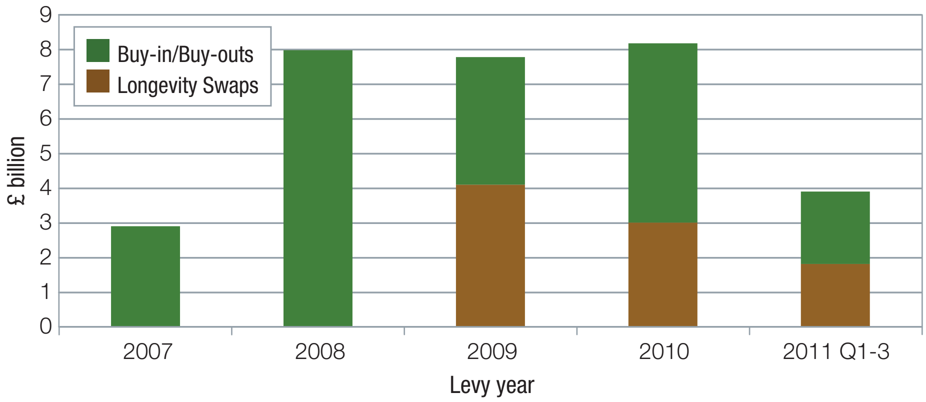
12.6 Buy-out, Buy-in and Longevity Hedging

Buy-out and buy-in transactions provide schemes with the opportunity to remove risk relating to all or part of their liability. Under a buy-out deal, a scheme transfers its entire liability to an insurer in exchange for all scheme assets. Insurers tend to require assets significantly in excess of scheme liabilities to compensate for the risk transferred. Buy-in deals are effectively partial buy-outs where the insurance policy is a scheme investment.

While both longevity swaps and buy-in/buy-out can mitigate the risk of greater than expected life expectancy, under the former there is no transfer of the underlying scheme assets to a counterparty. Longevity swaps entail the pension scheme exchanging fixed payments for cashflows that vary in accordance with the longevity experience of a reference population (either the named scheme members or a wider sample).

The value of risk transfer deals since the end of 2006 has totalled £31 billion.

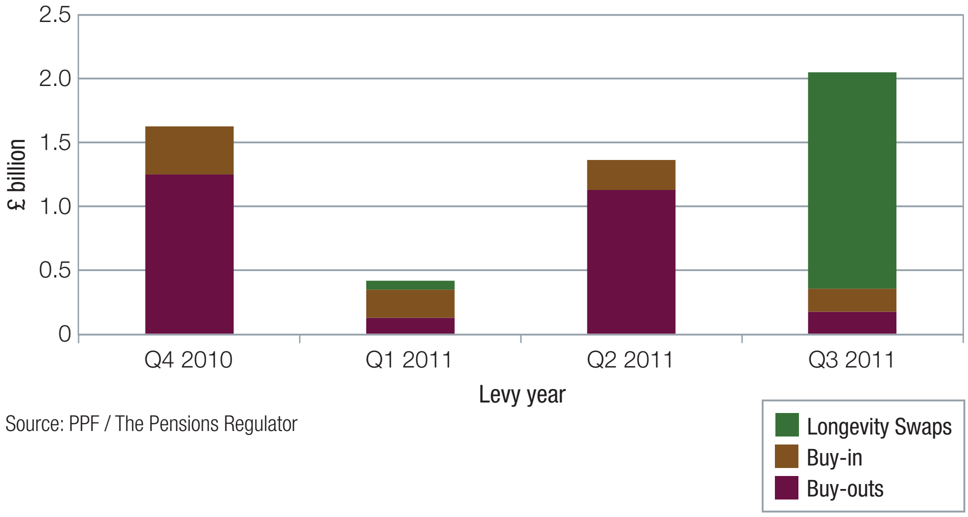
Chart 12.5 | Value of risk transfer deals since 2007



Source: PPF / The Pensions Regulator

Over the year to Q3 2011, the total value of transfer deals was £5.4 billion of which 49 per cent were longevity swaps, 31 per cent were buy-ins and 19 per cent buy-outs.

Chart 12.6 | Value of risk transfer deals in the year to Q3 2011



Source: PPF / The Pensions Regulator

Chapter 3 appendix

Schemes by size band

Schemes	Status				All
	Open	Closed	Paid up	Winding up	
Member group					
5 to 99 members	344	1,187	657	88	2234
100 to 999 members	368	1,752	757	34	2937
1,000 to 4,999 members	183	529	118	-	847
5,000 to 9,999 members	52	125	13	-	-
Over 10,000 members	66	146	7	-	-
Total	1013	3739	1552	-	-

Members by size band

Members	Status				All
	Open	Closed	Paid up	Winding up	
Member group					
5 to 99 members	12,919	54,206	31,585	2,558	2234
100 to 999 members	127,166	655,024	230,140	9,882	2937
1,000 to 4,999 members	422,155	1,178,493	253,219	8,329	847
5,000 to 9,999 members	374,038	878,013	89,178	6,930	190
Over 10,000 members	2,789,481	4,666,632	157,427	16,375	224
Total	3,725,759	7,432,368	761,549	44,074	6,432

Membership by member type

	Active members	Deferred members	Pensioner members
5 to 99 members	15,141	53,240	32,887
100 to 999 members	185,337	527,358	309,517
1,000 to 4,999 members	362,747	903,721	595,728
5,000 to 9,999 members	257,340	614,675	476,144
Over 10,000 members	1,522,181	3,160,073	2,947,661
Total	2,342,746	5,259,067	4,361,937

Schemes, membership, and s179 Liability by Industry

Industry	Agricultural Production	Communications	Construction	Finance, insurance and real estate	Manufacturing	Mining	Public administration	Retail trade	Services	Transportation	Utilities	Wholesale trade
Total number of schemes	66	39	200	1,049	1,891	50	32	327	1,516	303	87	605
Total % of schemes	1.1	0.6	3.2	17.0	30.7	0.8	0.5	5.3	24.6	4.9	1.4	9.8
Total DB members	41,300	456,921	387,767	2,571,532	3,211,065	38,226	32,180	1,321,918	1,743,983	619,161	317,775	510,752
Total % of memberships	0.4	4	3.4	22.3	29.4	0.3	0.3	11.3	15.6	5.6	2.8	4.6
s179 liability (£ bns)	2.0	57.2	33.4	221.9	245.8	4.9	3.6	66.9	139.9	51.9	34.9	37.0
Total % s179 liability	0.2	6.4	3.7	24.7	27.3	0.5	0.4	7.4	15.6	5.8	3.9	4.1

Schemes from Purple 2011 dataset entering Closed to new members and Closed to future accrual status by year from 1991 to 2010*

	Status	
	Closed to new members	Closed to future accrual
1991	25	-
1992	14	6
1993	14	-
1994	26	-
1995	44	-
1996	67	9
1997	187	28
1998	91	16
1999	113	23
2000	171	46
2001	290	55
2002	407	94
2003	317	124
2004	246	109
2005	223	130
2006	290	241
2007	179	150
2008	144	124
2009	119	176
2010	108	188

*Note that Open Hybrid schemes whose status was altered as described in Chapter Three are not included in these figures

Chapter 4 appendix

Scheme Size

		5 to 99	100 to 9,999	1,000 to 4,999	5,000 to 9,999	10,000 and over
£ bn	Assets	11.1	84.9	139.5	110.9	622.1
	s179 liabilities	10.4	88.9	149.3	112.1	609.0
	Buy-out liabilities	15.2	128.3	214.2	160.9	916.9
Schemes by s179 funding group	0% to 50%	29	22	-	-	-
	50% to 75%	313	642	178	29	18
	75% to 100%	861	1,324	420	86	91
	Over 100%	1,073	923	234	76	111
Schemes by buy-out funding group	0% to 50%	235	399	111	24	14
	50% to 75%	1,114	1,850	542	116	144
	75% to 100%	657	569	159	43	57
	Over 100%	270	93	22	8	-

Scheme Maturity

		25% and less	Between 25% and 50%	Between 50% and 75%	Between 75% and 100%
£ bn	Assets	128.5	507.0	309.6	23.4
	S179 liabilities	151.3	516.6	283.5	18.4
Schemes by s179 funding group	0% to 50%	39	7	-	-
	50% to 75%	724	411	43	-
	75% to 100%	1,120	1,350	294	18
	Over 100%	628	1,045	603	141

Scheme Status

		Open	Closed to new entrants	Closed to future accrual	Winding up
£ bn	Assets	283.2	630.6	50.6	4.1
	S179 liabilites	281.1	631.4	53.9	3.3
	Buy-out liabilites	415.1	936.9	78.6	4.9
Schemes by s179 liability group	0% to 50%	7	22	19	-
	50% to 75%	227	631	312	10
	75% to 100%	440	1,632	686	24
	Over 100%	339	1,454	535	89
Schemes by estimated buy-out liability group	0% to 50%	154	396	223	10
	50% to 75%	567	2,228	936	35
	75% to 100%	200	915	323	47
	Over 100%	92	200	70	36

Results indicating five or less schemes have been supressed to preserve confidentiality

Industry

		Agricultural production	Communications	Construction	Finance, insurance and real estate	Manufacturing	Mining	Public administration	Retail trade	Services	Transportation	Utilities	Wholesale trade
Schemes by status	Open	8	-	33	135	248	15	17	45	309	67	18	62
	Closed	35	30	114	633	1080	30	13	187	856	180	59	376
	Paid up	21	8	50	257	543	-	-	79	313	54	8	155
	Winding up	-	-	-	24	20	-	-	16	38	-	-	12
£ bn	Assets	2.2	54.2	35.6	239.8	239.2	4.5	3.3	69.3	127.9	50.9	37.1	35.9
	s179 liabilities	2.0	57.2	33.4	221.9	245.8	4.9	3.6	66.9	139.9	51.9	34.9	37.0

Includes only those schemes for which a classification was available. Results indicating five or less schemes have been suppressed to preserve confidentiality.

Glossary

Active member

In relation to an occupational pension scheme, a person who is in pensionable service under the scheme.

Acronyms

- LDI
  Liability-driven investment
- ONS
  Office for National Statistics

Administration

See Company: trading status.

Aggregate funding position

Sum of assets less sum of liabilities, or sum of scheme funding positions. In a pool of schemes where schemes in deficit outweigh schemes in surplus there is an aggregate deficit.

Assessment period

The time when a scheme is being assessed to see if the Pension Protection Fund can assume responsibility for it.

Buy-out basis

The level of coverage the current assets will provide if all benefits were to be bought out in the name of the individual member with an insurance company. See also full buy-out.

Closed (to new members)

The scheme does not admit new members. Existing members can continue to accrue pensionable service/benefits.

Company: business types

- Limited liability partnerships
  These are a type of alternative corporate business vehicle that gives the benefits of limited liability but allows its members the flexibility of organising their internal structure as a traditional partnership.

- Partnership
  The relationship that exists between individuals who run a business together with a view to making a profit. The rights of each partner are governed by a partnership agreement or the Partnership Act 1980.
- Private company
  A company registered under the Companies Act 1985 that is not a public limited company. A private company may be registered as a limited or unlimited liability company. It must have at least one member and at least one director. There is no minimum share capital requirement.
- Public limited company
  A company registered under the Companies Act 1985. It must have at least two members and two directors and a share capital that complies with the authorised minimum amounts. It can offer its shares to the public and may be among the public companies that trade on the Stock Exchange.
- Registered charity
  An institution (corporate or not) which is established for exclusively charitable purposes and which is registered with the Charity Commission.
- Sole trader
  An individual who carries on a business on his or her own account. The individual is fully liable for any losses of the business and pays income tax on any taxable profits of the business.

Company: trading status

- Active/currently trading
  The company is continuing to trade.
- Administration
  One of the main corporate insolvency rescue procedures. It can be a precursor to a company voluntary arrangement under which the company is restructured and passed back to its directors. In an administration, the insolvency practitioner, as officer of the court, takes over powers of management of the business (but is able to delegate these back to management) with the objective of rescuing the company or (if that is not possible, or if the result would be better for creditors) rescuing the business as a going concern and providing protection from actions by creditors while doing so. A partnership can also be subject to administration as a prelude to a partnership voluntary arrangement.
- Dissolved
  The company has ceased trading. All assets of the company have been disposed of and/or it has been taken off the register at Companies House.
- Dormant
  The company is not currently trading but remains a corporate entity and/or remains on the register at Companies House.
- In liquidation
  Either a creditor or the company can apply to the courts to put the company into liquidation. It is the process which eventually brings a company's existence to an end after distributing its assets to creditors/shareholders.

- **Liquidated**
  Following the liquidation process, the company has ceased trading. All assets of the company have been disposed of and/or it has been taken off the register at Companies House.
- **Receivership**
  (Also known as administrative receivership or Law of Property Act (LPA) 1925 receivership.) Non-court procedure whereby an insolvency practitioner takes control of the whole of a company's assets under the terms of a charge or mortgage.

Default risk

The risk that the borrower will be unable to satisfy the terms of its borrowing obligations with respect to the timely payment of interest and repayment of the amount borrowed.

Deferred member

In relation to an occupational pension scheme, a person (other than an active or pensioner member) who has accrued rights under the scheme.

Deficit reduction contribution

A one-off (or irregular) contribution made by a scheme sponsor to a pension scheme to reduce the level of deficit.

Defined benefit

Benefits are worked out using a formula that is usually related to the members pensionable earnings and/or length of service. These schemes are also referred to as final salary or salary related pension schemes.

Defined contribution

Benefits are based on the amount of contributions paid, the investment returns earned and the amount of pension this money will buy when a member retires. These schemes are also referred to as money purchase pension schemes.

Dun & Bradstreet (D&B)

A provider of insolvency scores.

FRS17

In November 2000, the UK Accounting Standards Board released a new financial reporting standard, numbered 17 ('FRS17'). This sets out the accounting treatment for retirement benefits such as pensions and medical care during retirement. It replaces SSAP 24 ('Accounting for pension costs') and UITF Abstract 6 ('Accounting for post-retirement benefits other than pensions').

Full buy-out

The cost of insuring a pension scheme in the private market. The discount rate applied to liabilities would be more prudent in general than the discount rate applied to section 179 and MFR valuations. The benefit assumed in private insurance is usually non-capped and thus could be greater than Pension Protection Fund coverage.

Gilt yield

The yield, if held to maturity, of a government (non-indexed) bond.

Hybrid scheme or partial defined benefit scheme

A scheme that can provide defined benefits and defined contribution benefits. A scheme providing benefits on a defined contribution basis but that is or was contracted out of the state scheme on either a GMP or Reference Scheme test basis is a common example of a hybrid scheme.

IAS19

An international accounting standard equivalent of FRS17.

Insolvency events

These are the insolvency triggers set out in the Pension Protection Fund legislation.

Insolvency risk

The risk that a borrower will have to close business due to its inability to service either the principal or interest of its debt. This is a more extreme event than a default. See also Insolvency events.

Insurance company

Insurance companies provide a range of services to pension schemes, including:

- asset investment;
- asset management;
- investment advice and expertise;
- custodian facilities; and
- scheme administration services.

Insurance managed funds

A unitised fund invested in multiple investment categories managed by an insurance company.

Insurance policy

Investment class: an annuity or a deposit administration contract purchased from an insurance company.

LTRM

The Pension Protection Fund's Long-Term Risk Model, which is based on stochastic simulations of economic scenarios and their respective impacts on assets and liabilities of pension schemes under coverage and the credit quality of the sponsoring employers.

MQ5 data

The data from the ONS MQ5 enquiry is based on a sample of 350 pension schemes. This is comprised of around 100 local authorities and 250 public and private corporations (the PPF database excludes local authorities and public corporations). The sample has total assets of £1,100 billion, which is much higher than the PPF database. All schemes with more than 20,000 members are automatically included and schemes with less than 20,000 members are randomly selected. The sample is made up of what are known as 'superannuation and self-administered pension funds'. A self-administered pension fund id defined as an occupational pension schemes with units invested in one or more managed schemes or unit trusts; a superannuation pension fund is defined as a an organisational pension programme created by a company for the benefit of its' employees. The sample may also contain defined contribution schemes.

Open

The scheme continues to accept new members, and benefits continue to accrue.

Paid up (or frozen)

All contributions to the scheme have stopped and no further pensionable service accrues. Members' benefits for earlier service continue to be held and invested in the scheme.

Participating employer

An employer that has some (or all) employees who can join an occupational pension scheme. This term is usually used where there is more than one employer participating in a single scheme.

Pensioner member

A person who is currently receiving a pension from the scheme or from an annuity bought in the trustee's name.

Pension Protection Fund (PPF)

A statutory corporation run by the Board of the Pension Protection Fund, established under the Pensions Act 2004.

Pension protection levy

This is the annual amount that a pension scheme is charged by the Pension Protection Fund. It is composed of a scheme-based levy and a risk-based levy. It is similar to an insurance premium.

The Pensions Regulator

The UK regulator of work-based pension schemes, an executive non-departmental public body established under the Pensions Act 2004.

Principal employer

The employer named in the trust deed and rules of the scheme which usually has powers such as those to appoint trustees, amend the scheme rules or wind the scheme up. This is often the employer who set up the scheme, or its successor in business.

Risk-based levy

See pension protection levy. Calculated on the basis of a pension scheme's deficit and insolvency risk of the sponsoring employer.

Scheme actuary

The named actuary appointed by the trustees of a defined benefit occupational pension scheme to carry out specific duties set out in the Pensions Act 1995.

Section 179 (s179) valuation

To calculate the risk-based pension protection levy the Pension Protection Fund Board must take account of scheme underfunding. To obtain a consistent basis for determining underfunding, schemes can complete a Pension Protection Fund valuation (section 179). This valuation will be based on the level of assets and liabilities for the scheme. The liabilities will be based on the scheme benefits taking into account key features of the levels of compensation paid by the Board of the Pension Protection Fund as set out in Schedule 7 of the Pensions Act.

Scheme-based levy

See pension protection levy. Calculated on the basis of section 179 liabilities and the number of members participating in the pension scheme.

Scheme funding position

The difference between the assets and liabilities of a pension scheme (scheme deficit if negative, scheme surplus if positive).

Scheme funding valuation

New legislation on scheme funding came into force on 30 December 2005. The new requirements, introduced by the Pensions Act 2004, replace the minimum funding requirement and apply to occupational pension schemes providing defined benefits.

Scheme member

In relation to an occupational pension scheme, a scheme member is any person who:

- is an active member;
- is a deferred member;
- is a pensioner member;
- has rights due to transfer credits under the scheme; or
- has pension credit rights under the scheme.

This includes scheme members whose only entitlements are equivalent pension benefits (EPBs) as those rights were earned through pensionable employment. Members (for occupational and personal schemes) do not include dependants of members. Those whose only entitlements are lump sum benefits payable on death are also not included.

Scheme return notice

The Pensions Act 2004 set out the requirement to send occupational pension schemes a scheme return to complete. The information collected in the scheme return will further enable the regulator to perform its new role and responsibilities. The scheme return notice is issued to schemes to inform them that it is time to complete a scheme return.

Sectionalised scheme

A multi-employer scheme which is divided into two or more sections where:

- any contributions payable to the scheme by an employer in relation to the scheme, or by an employee of that employer, are allocated to that employer's section; and
- a specified proportion of the assets of the scheme is attributable to each section of the scheme and cannot be used for the purposes of any other section.

Some sections open/some sections closed

A scheme that has sections with different status types. For example the scheme may have a defined benefit section closed to new entrants, and a defined contribution section open to new entrants.

Swap

A contract calling for the exchange of payments over time. Often one payment is fixed in advance and the other is floating based upon the realisation of a price or interest rate.

Total deficit

Sum of scheme deficits, or sum of scheme funding positions for schemes in deficit only.

Trustees

- Corporate trustee (non-professional)
  A company usually related to the employer (or the employer itself) set up to act as trustee for a scheme or a series of related or associated schemes.

- Member-nominated trustee (MNT)
  A person nominated by the members (and sometimes elected) to be a trustee of the scheme. A MNT may be a member of the scheme. A MNT is appointed in accordance with sections 16-21 of the Pensions Act 1995.

- Pensioneer trustee
  A pensioneer trustee is an individual or a company recognised by HMRC (Inland Revenue) as having pensions expertise.

- Professional trustee (including corporate)
  A professional trustee not connected with the employer and not a scheme member. The trustee could be a corporate trustee company or an individual. A professional trustee provides trusteeship and trustee services to a number of unrelated and non-associated pension schemes.

- Statutory independent trustee
  A trustee appointed to a scheme where an insolvency practitioner has been appointed over an employer in accordance with sections 22-26 of the Pensions Act 1995.

Voluntary form reporting

Electronic forms are available on the Pension Protection Fund's website for pension schemes to provide data regarding sectionalised schemes, contingent assets, participating employers, scheme structure, estimates of pension fund deficits on a section 179 basis, deficit reduction contributions and block transfers.

Winding up/wound up

After the wind-up is complete (the scheme is wound up), there will be no assets or liabilities left in the scheme, and the scheme will cease to exist as a legal entity. Winding up describes the process of reaching wind-up from normal ongoing status. To make sure that members will still receive benefits, there are several options:

- transferring pension values to another pension arrangement;
- buying immediate or deferred annuities; or
- transferring the assets and liabilities of the scheme to another pension scheme.

The scheme must be wound up in accordance with the scheme rules and any relevant legislation.

How to contact us:

Pension Protection Fund

Pensions Protection Fund

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The Pensions Regulator

The Pensions Regulator

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