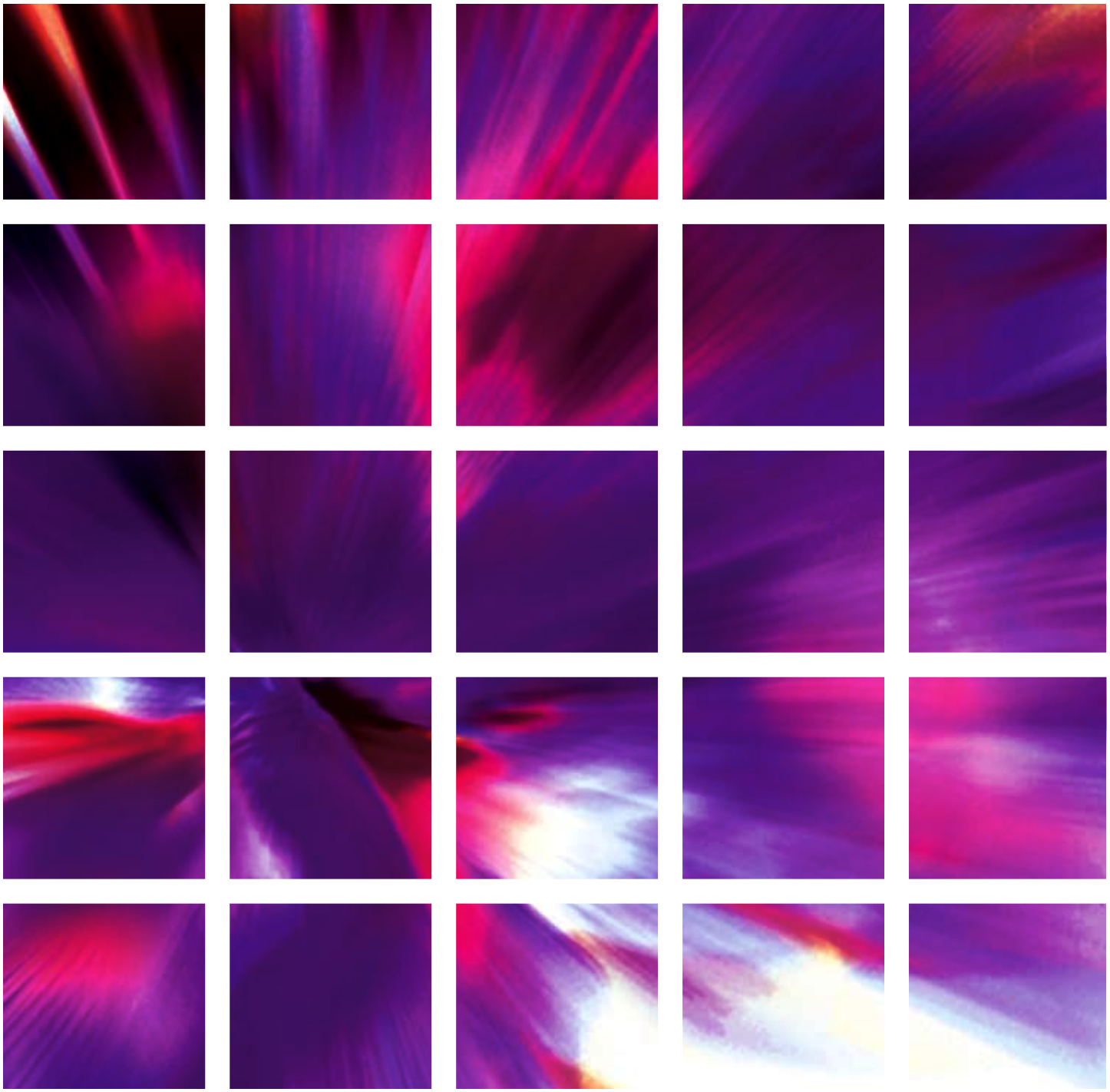


The Purple Book

DB PENSIONS UNIVERSE RISK PROFILE | 2008

Pension Protection Fund

The Pensions Regulator

Purple 2008 gives the most comprehensive picture to date of the risks faced by PPF-eligible defined benefit pension schemes.

Contents

Charts and Tables

Chapter 4:




Chapter 5:










1 Executive summary

1. Introduction

This is the third 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.

The key aim of this publication is to increase knowledge and help understanding of DB schemes in the UK and the ways in which they are changing.

Much of the analysis of the Purple Book 2008 ('Purple 2008') is based on new information from scheme returns provided to the regulator and issued in December 2007 and January 2008. This data covers 6,898 PPF-eligible DB schemes - some 93.2 per cent of the total number and 97.4 per cent of estimated total liabilities. The 2008 dataset is larger than those used in the 2006 and 2007 Purple books (covering 5,772 and 5,892 schemes respectively). The availability of a larger data set reflects, among other factors, improvements to the design of the scheme return intended to permit better PPF validation procedures.

Comparisons are made not only with the Purple Books of 2006 and 2007, but also with the extended Purple 2006 and Purple 2007 datasets, covering 7,751 and 7,542 schemes respectively. These extended datasets more fully reflect the universe of PPF-eligible schemes in each year. Construction of these datasets was possible in the wake of the Purple Book publication following the submission and cleaning of further scheme information as part of the PPF levy invoicing and collection process. The declines in the eligible universe reflect such factors as scheme mergers, schemes transferring into the PPF compensation scheme and better information on eligibility. Purple 2008 also includes comparisons of the position of DB schemes in the 2008 dataset at 31 March 2008, 30 March 2007 and 31 March 2006. The publication puts all of this information into context by using other data sources to look at trends in key variables.

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. Much of Purple looks at the position at 31 March 2008. Since then, risks will have increased given the effect of adverse market movements on scheme funding and the impact of the recession on insolvency risk.

This annual publication is evolving over time. Purple 2008 includes new chapters on PPF compensation payments (Chapter 11) and on risk reduction (Chapter 12). These are in addition to the extra chapters on PPF levy payments (Chapter 9) and schemes in the PPF assessment process (Chapter 10) introduced in Purple 2007. The latest scheme returns also include more detailed information on asset allocation (Chapter 7). The scheme funding chapter (Chapter 4) includes, for the first time, information on Technical Provisions (a prudent measure of liabilities used in the scheme specific funding regime introduced by the Pensions Act 2004). Chapter 3 on scheme demographics includes more accurate information on scheme status, as the result of an improved treatment of hybrid schemes. As time goes on, the Purple data will provide important information on trends in DB pension schemes. Comments and suggestions for improvement of the Purple Book are again welcome.

2. The data

- In Purple 2007, the PPF-eligible defined benefit (DB) universe was estimated to be 7,800, while the analysis covered a sample of 5,892 PPF-eligible schemes.
- The set of 5,892 schemes has now been augmented to produce an extended Purple 2007 sample, covering a total of 7,542 schemes. This gives a best estimate of the eligible universe for the 2007/08 levy year of approximately 7,500 schemes.
- Comparisons of some of the key analyses using the Purple 2007 and extended Purple 2007 datasets show that most of the findings using aggregate and weighted averages are little affected.
- In Purple 2008, we have been able to use a dataset of 6,898 PPF-eligible schemes, covering 93.2 per cent of the universe of schemes and 97.4 per cent of estimated liabilities (comparable figures for the Purple 2007 dataset are 76 per cent and 90 per cent).
- The scheme return data for these schemes include valuation information on scheme assets and liabilities, asset allocation, the participating employers, scheme type and status, membership details, the trustees and their advisers.
- Further information has come from electronic forms (available on the PPF's website) covering items such as deficit reduction contributions and contingent assets.
- The scheme return valuation data and electronic returns have been used by the PPF actuaries to produce estimates of section 179 (s179) funding at common dates (31 March 2006, 30 March 2007 and 31 March 2008) for comparability purposes. Liabilities on a s179 basis are, broadly speaking, what would have to be paid to an insurance company to take on the risk of paying PPF compensation in the event of employer insolvency.
- Although both PPF and the regulator use many measures of insolvency risk for analysis and modelling, the main focus in Purple is on the insolvency failure scores supplied by Dun & Bradstreet (D&B). The failure scores are designed to indicate the likelihood of a company ceasing operations without paying all creditors over the next 12 months. D&B failure scores are used in the PPF's risk-based levy calculations.

3. Scheme demographics

- The proportion of open schemes continues to decline.
- Open schemes constitute only 31 per cent of the Purple 2008 sample compared with 36 per cent in 2007.
- Forty-four per cent of scheme members were members of open schemes in March 2008, down seven percentage points from March 2007.
- Scheme memberships for the Purple 2008 sample totalled 12.4 million. The largest category of scheme memberships is deferred (42 per cent). Thirty-six per cent are current pensioner memberships, and 22 per cent are members actively employed by the sponsor of their pension scheme.
- As scheme size increases, there is a tendency for the proportion of pensioner memberships of a scheme to increase.
- Schemes sponsored by firms in the manufacturing sector continue to dominate the Purple sample, constituting more than 35 per cent of schemes and s179 liabilities compared with the sector's 13 per cent share of economic output.




4. Scheme funding

- The s179 information for the Purple 2008 dataset of 6,898 schemes has been rolled back to 31 March 2006 and 30 March 2007, and rolled forward from the date given in the scheme return to 31 March 2008. Movements in financial markets have resulted in marked changes in funding between the three dates.
- The aggregate funding position on a s179 basis has deteriorated from a surplus of £74.2 billion (a funding level of 109.7 per cent) at 30 March 2007 to a deficit of £5.1 billion (a funding level of 99.4 per cent) at 31 March 2008. At 31 March 2006 there was an aggregate deficit of £10.2 billion, a funding level of 98.7 per cent.
- As at 31 March 2008, on a s179 basis, 68.4 per cent of schemes in the Purple 2008 sample were in deficit with a total deficit of £67.7 billion and 31.6 per cent were in surplus with a total surplus of £62.6 billion.
- The comparable figures for 30 March 2007 are: 54.4 per cent of schemes were in deficit with a total deficit of £31.0 billion and 45.6 per cent of schemes were in surplus with a total surplus of £105.2 billion.
- The average full buy-out funding level has decreased from 69.0 per cent at 30 March 2007 to 61.7 per cent in 2008.
- Funding on the accountancy (FRS17) basis, however, has shown a large improvement, reflecting the impact of higher corporate bond yields on discount rates. The aggregate FRS17 funding level was 86.7 per cent in March 2007, climbing to 98.5 per cent in March 2008.
- For the first time in the Purple Book, liabilities and deficits have been estimated using the Technical Provisions measure.
- The deficit on this basis was £148.3 billion at 31 March 2008, up from £55.7 billion at 31 March 2007. This reflects the negative impact of financial conditions. The Technical Provisions measures should, however, be taken as illustative since they are largely based on relevant ratios of TPs to s179 liabilities for sub-samples of the Purple dataset.
- Previously, FRS17 measures generally approximated Technical Provisions, whereas more recently they have risen to levels nearer that of s179 measures.
- Size of scheme remains an important indicator of funding level, with very large and very small schemes (by number of members) showing materially higher levels of funding than those of intermediate sizes.
- Mature schemes also show higher funding levels.

5. Funding sensitivities

- Changes in estimated market conditions since October 2002 have caused the monthly aggregate funding position of pension schemes measured on a s179 basis to vary by around £260 billion (with the greatest deficit in February 2003 at £109.2 billion and the greatest surplus in June 2007 at £148.9 billion).
- Funding can also exhibit considerable variation on a daily basis. During October 2008 the aggregate deficit rose from £46.9 billion to £145.7 billion over the space of two weeks.
- Market movements between 31 March and 30 October 2008 have resulted in deterioration in scheme funding of around £70 billion.

- The number of schemes in deficit on a s179 basis for the Purple 2008 dataset peaked in February 2003 at around 5,600 schemes (around 81 per cent of the dataset) and troughed in June 2007 at around 2,700 schemes (around 39 per cent).
- An increase in longevity such that experienced mortality is now equivalent to that of an individual two years younger would increase schemes' liabilities by around five per cent, or £38.0 billion.
- If the assumed rate of inflation increases by 0.1 per cent then the s179 liabilities for schemes increases by approximately 1.5 per cent or £12.4 billion, when a year ago this resulted in a 1.0 per cent increase in liabilities. This is as a result, for example, of a higher proportion of liabilities being due to deferred rather than current members.
- A 0.1 per cent (10 basis point) reduction or increase in nominal gilt yields increases or reduces scheme funding by around £15 billion; a 2.5 per cent increase or decrease in the market value of equities will increase or reduce scheme funding by £11 billion.
- Therefore, a 1 percentage point (100 basis point) change in gilt yields is broadly equivalent in its impact to a 34 per cent change in equity prices (compared with 25 per cent in Purple 2007). The greater relative sensitivity to changes in gilt yields in Purple 2008 reflects the rise in the gilt share and the fall in equity share in overall asset allocation.
- On 31 March 2008, the FTSE All Share Index stood at 2,927.05 (end-March 2007 at 3,283, end-March 2006 at 3,048), while the 10-year gilt yield was 4.4 per cent (end-March 2007 at 5.0 per cent, end-March 2006 at 4.5 per cent).
- A 2.5 per cent fall in equity markets and 0.1 percentage point fall in bond yields would result in a worsening of the aggregate deficit from £5 billion to £31 billion.

6. Insolvency risk

- The weighted average one-year ahead insolvency probability for the Purple 2008 dataset, derived from D&B failures scores, was 0.23 per cent as at March 2008.
- Comparisons with earlier years are difficult because of changes in D&B rating methodology.
- Corporate insolvencies for the economy as a whole rose in the second and third quarters of 2008 when they were 26 per cent higher than a year earlier. The insolvency rate is likely to rise significantly in 2009 given the economic downturn.
- By mid-December, the increase in insolvencies had not translated into increased claims on the PPF, with the number of s120 notices for PPF-eligible schemes yet to show a significant increase. This is probably the result of the universe of companies sponsoring PPF-eligible schemes consisting of older and larger companies than the universe of companies for the economy as a whole.

7. Asset allocation

- Equities and securities in the gilts and fixed interest category continue to dominate scheme asset allocation.
- The joint share of equities and gilts and fixed interest has, however, declined from 89.4 per cent in 2006 to 89.1 per cent in 2007 and 87.0 per cent in 2008.




- In 2008, the share of gilts and fixed interest increased to 33.1 per cent from 29.6 per cent in 2007 and 28.3 per cent in 2006. Meanwhile, the equity share dropped to 53.9 per cent in 2008 from 59.5 per cent in 2007 and 61.1 per cent in 2006.
- Part of the changes in asset allocation is likely to be a valuation effect. However, flow data from the Office of National Statistics show a continuing disinvestment in equities and continuing investment in bonds.
- As in Purple 2006 and 2007, more mature schemes tend to invest more heavily in gilts and fixed interest and less in equities.
- The new scheme returns underlying Purple 2008 include a more detailed breakdown of assets than in the previous two years.
- A bigger share of total scheme equity holdings is in overseas equities (52 per cent) than in UK equities (48 per cent).
- Total scheme holdings of gilts and fixed interest are spread fairly evenly between government (33.2 per cent), corporate (32.6 per cent) and index-linked (33.9 per cent).
- Looking at simple averages, the share of UK equities is considerably bigger (60.4 per cent) than that for overseas equities (39.6 per cent), while the share of government fixed interest securities is considerably higher (47.2 per cent) than the index-linked average (19.8 per cent).
- Smaller schemes have a greater slant within equities to UK equities, and within bonds to conventional government bonds.

8. Long-term risk and short-term risk concentration

- A large proportion of short-term risk emanates from schemes with the highest insolvency probabilities (those in insolvency Group 10 with an insolvency probability of more than 3.5 per cent). This group alone accounts for 36.1 per cent of short-term risk, with an average insolvency probability of 12.5 per cent.
- The PPF is currently consulting on the inclusion of long-term unexpected risk in the formula used to calculate individual levy bills.
- The proposed new levy formula is designed to calculate individual levies so that they more accurately reflect the degree of long-term risk each scheme poses to the PPF.
- The limited increase in the levy estimate for 2009/10 takes account of the more difficult operating conditions facing scheme sponsors.

9. Levy payments to the PPF

- The PPF is expecting to collect £585 million in respect of the levy in the 2007/08 levy year. This is £90 million less than the levy estimate of £675 million set out by the PPF in December 2006.[1]
- The amount collected for 2007/08 differed to the estimate due to deficit reduction contributions, contingent assets and schemes or sponsoring employers challenging their insolvency probabilities.
- The under-collection for 2007/08 is much lower that that in 2006/07 (£304 million).

1 The 2007/08 Pension Protection Levy Estimate Consultation Document, December 2006.

The 2006/07 under-collection had mainly reflected the impact of better data becoming available.

- The number of schemes paying no risk-based levy increased from 414 to 630 in the 2007/08 levy year (representing 8.8 per cent of the total number of schemes and 11.9 per cent of total liabilities).
- The top 10 levy payers paid a smaller proportion of total levy in 2007/08, 11 per cent (£59.9 million) compared with 14 per cent (£35.2 million) in 2006/07.
- Levy paid in 2007/08 represented 0.08 per cent of scheme assets up from 0.04 per cent in 2006/07, reflecting improved collection.
- Schemes in the manufacturing sector experienced the largest increase in levy payments from £75.4 million to £178.9 million, around 30 per cent of the total levy. This is similar to the sector's share of the 2006/07 levy and its share of total PPF liabilities.
- In 2007/08, the risk-based levy was capped at 1.25 per cent of a scheme's s179 liabilities compared with 0.5 per cent in 2006/07.
- Four hundred and eleven schemes had their risk-based levy capped in 2007/08, six per cent of the total. The liabilities of those capped schemes totalled £7.4 billion or one per cent of total liabilities.

10. Schemes in the PPF assessment process

- There were 217 schemes (123,000 members) in a PPF assessment period as at 31 March 2008, compared with 179 (115,000 members) a year earlier.
- The rise in schemes in assessment reflects 93 new schemes entering and remaining in assessment, 32 schemes transferring into the PPF and 23 being rescued, deemed to be ineligible or withdrawn.
- Where the industry is known, just under half the schemes in assessment came from manufacturing (48.1 per cent) while 15.3 per cent came from services.
- As at 31 March 2008, on a s179 basis, the aggregate assets of schemes in assessment totalled £4.2 billion and aggregate liabilities £5.4 billion. Liabilities averaged £24.8 million per scheme and assets averaged £19.4 million.
- Over 40 per cent of the schemes in assessment have liabilities below £5 million, although schemes this small make up only 30 per cent of the Purple 2008 dataset.
- The aggregate funding level (total assets divided by total liabilities) of the schemes in assessment as at 31 March 2008 was 78.3 per cent. This is below both the aggregate funding levels of the schemes in the Purple 2008 dataset (99.4 per cent) and the aggregate funding level of the schemes in assessment at 30 March 2007 of 84.6 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 84.5 per cent. Those with less than £50 million in assets have an average funding level of 72.0 per cent.
- The asset allocation of schemes in assessment (taken from the scheme return prior to




their entering the assessment period) is weighted towards equities (43 per cent) and gilts and fixed interest assets (29 per cent). This equity share is lower than the figure of 54 per cent of assets for the Purple 2008 sample. Once in assessment, schemes tend to follow an investment strategy that is more oriented towards gilts and fixed interest holdings.

- Between end-March and end-September 2008, 20 schemes in the schemes in assessment dataset had transferred into the PPF, out of a total of 61 transferred since April 2005.

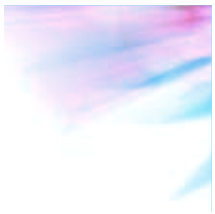
11. PPF compensation

- 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.
- Over the financial year 2007/08, 3,596 members received PPF compensation. Average compensation in payment stood at £4,609 per annum. The number of members with compensation not yet in payment (deferred members) as at 31 March 2008 totalled 8,577. In these cases, the average compensation accrued was £4,648 per annum.
- As at 31 March 2008, males constitute more than 75 per cent of both pensioner and deferred members and receive more than 85 per cent of compensation in both categories.
- Spouses and dependents account for 13 per cent of those currently in receipt of compensation, receiving eight per cent of compensation in payment.
- More than 85 per cent of compensation is attributable to former employees of the manufacturing sector.
- As at 31 March 2008, only nine pensioners were affected by the compensation cap (£27,770.72 per annum for age 65 in 2008/09 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 compensation cap.

12. Risk reduction

- The total number of contingent assets in place has risen by approximatley 75 per cent, from around 260 for the 2007/08 levy year to around 450 for 2008/09.
- Schemes in the Purple 2008 dataset had certified approximately £16.6 billion of special contributions to reduce deficits by 7 April 2008.
- They were submitted for the purpose of enabling a more up-to-date assessment of the scheme funding position and, hence, mitigate their levy bills.
- The deficit reduction contributions were not only paid by companies sponsoring the largest schemes; around 53 per cent was paid by employers sponsoring schemes with fewer than 10,000 members.
- The scheme specific funding regime introduced by the Pensions Act 2004 plays a key role in DB risk reduction and is taken into account in the PPF's long-term risk modelling.
- Schemes are reducing investment risk through diversification (moving into alternative asset classes such as insurance, private equity and hedge funds), by shifting from equity to fixed income securities, and through the use of derivatives to hedge inflation and interest rate risk.
- Liability-driven investment (LDI) strategies are becoming increasingly popular. National Association of Pension Funds (NAPF) survey data indicate that 23 per cent of schemes had implemented an LDI strategy on or before 2008, up from 17 per cent in 2006.






2

The data

2.1 Summary

- The main body of the analysis in the Purple Book 2008 ('Purple 2008') is based on new scheme returns for a dataset of 6,898 defined benefit schemes predominantly in the private sector.
- The dataset covers 93.2 per cent of schemes in the estimated PPF-eligible universe, and some 97.4 per cent of the total estimated s179 liabilities, and 12.4 million memberships.
- The dataset is significantly larger than those used in Purple 2006 and Purple 2007, which covered 5,772 and 5,892 schemes respectively.
- Analysis of an expanded 2007 dataset of 7,542 PPF-eligible DB schemes shows that aggregate or weighted average results remain broadly consistent with Purple 2007.

2.2 Introduction

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

- unfunded public service schemes;
- public sector schemes 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.

Purple 2008 is based on a sample of 6,898 schemes.

For a more comprehensive list see 'eligible schemes' on the PPF's website at: www.pensionprotectionfund.org.uk/index/who-is-eligible.htm

The Purple Book 2008 uses a dataset of 6,898 PPF-eligible schemes. The dataset is drawn from the universe of DB schemes eligible for protection by the PPF and liable to pay the PPF levies. The members of such schemes may be entitled to compensation should an insolvency event occur in relation to a scheme's employer.

This 2008 dataset covers 93.2 per cent of the estimated total PPF-eligible DB universe in terms of schemes and 97.4 per cent in terms of liabilities. It covers almost all large schemes and around 90 per cent of small schemes. The dataset used this year is larger than those used in the 2006 and 2007 Purple Books (5,722 and 5,892 respectively). The availability of a larger sample reflects such factors as an improved design of the scheme return to include better validation on filling in the form (thereby reducing the need for subsequent correction) together with greater understanding of the data.

The eligible universe in 2008 is now estimated at around 7,400 schemes, down from around 7,500 in 2007 and 7,800 in 2006. The fall in the size of the universe reflects such factors as scheme mergers, schemes' buying out benefits with an insurance company, and schemes transferring into the PPF compensation scheme. Table 2.1 illustrates how each of the three data sets and universes are split by scheme size (number of memberships).

2.3 The PPF-eligible DB universe

In Purple 2006 the PPF-eligible DB universe was estimated to be 10,800 schemes (based mainly on numbers from the Pensions Regulator's scheme return register). In Purple 2007, the universe was revised down to 7,800 schemes because review processes (eg in preparation for levy invoicing) revealed a number of schemes that did not fulfil the PPF eligibility criteria. The two most common reasons for which schemes were determined to be ineligible were; defined contribution (DC) schemes being erroneously described as DB, and schemes in the register having begun or completed wind-up prior to the PPF's commencement in April 2005. Full information on invoices issued and payments made suggests that the universe in 2006 was somewhat lower at around 7,800 schemes. Such information for 2007 suggests a universe in that year of around 7,500 while progress on the 2008/09 invoicing suggests a universe in 2008 of around 7,400.

Annex A compares some of the key analyses using the original Purple 2007 dataset of 5,892 schemes and the extended Purple 2007 dataset of 7,542 schemes. The general conclusion is that most of the findings using aggregates and weighted averages are little affected, reflecting the fact that the original dataset covered a very high share of total liabilities. However, there were large effects on simple averages given the inclusion of more small schemes and the differences in some areas between large and small schemes.

Table 2.1 | Distribution of schemes by scheme size (number of members)

Number of members	Less than 100	100-999	1,000-4,999	5,000-9,999	More than 10,000	Total schemes
Estimated 2006 DB PPF-eligible universe	5,900	3,500	950	200	250	10,800
Purple 2006 dataset	1,812	2,799	756	175	230	5,772
Estimated 2007 DB PPF-eligible universe	2,840	3,570	930	210	250	7,800
Purple 2007 dataset	1,858	2,877	802	160	195	5,892
Estimated 2008 DB PPF-eligible universe	2,724	3,341	919	192	224	7,400
Purple 2008 dataset	2,468	3,132	884	191	223	6,898
Purple 2008 dataset as a percentage of 2008 PPF-eligible universe	90.6%	93.7%	96.2%	99.5%	99.6%	93.2%

The PPF-eligible universe contained 7,400 schemes in 2008.



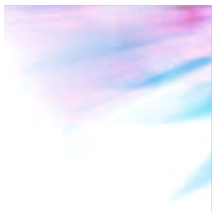



Table 2.2 | Distribution of s179 liabilities (£ billion) by scheme size[2,3] (number of members)

Number of members	Less than 100	100–999	1,000–4,999	5,000–9,999	More than 10,000	Total liabilities (£ billion)
Estimated 2006 DB PPF-eligible universe	25.0	82.2	128.1	56.5	464.0	775.9
Purple 2006 dataset	7.7	65.8	101.9	67.0	426.9	669.3
Estimated 2007 DB PPF-eligible universe	11	79	118	84	498	790
Purple 2007 dataset	7.6	69.7	113.2	72.2	448.1	710.8
Estimated 2008 DB PPF-eligible universe	11.5	84.4	132.6	92.2	512.5	833.2
Purple 2008 dataset	9.4	77.3	129.5	91.7	503.4	811.4
Purple 2008 dataset as a percentage of 2008 PPF-eligible universe	81.1%	91.6%	97.7%	99.5%	98.2%	97.4%

The different compositions of schemes in each membership size group means care should be taken in comparing results from the Purple 2006, 2007 and Purple 2008 datasets.

2.4 Primary sources

The Purple book covers 93 per cent of schemes and 97 per cent of liabilities.

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

The scheme returns include valuation information on scheme assets and liabilities, asset allocation, employers, scheme type and status, membership details, trustees and their advisers. The new scheme returns give more detailed information on asset allocation, for example on the split of equities between domestic and overseas.

Most of the analysis in this year's publication is based on new scheme returns issued in December 2007 and January 2008, covering 6,898 schemes, a somewhat larger number than used in the Purple 2006 and Purple 2007 datasets. The new scheme returns will, in general, form the basis for the 2008/09 levy invoices.

In this publication, there are also comparisons with the information from the scheme returns:

- issued between June 2005 and June 2006, which formed the basis for the 2006/07 levy and most of the analysis in Purple 2006, and
- issued in autumn 2006 which formed the basis for the 2007/08 levy and most of the analysis in Purple 2007.

In making such comparisons, the analysis has focused on the schemes in the 2008 data base which were also in the earlier data bases, around 6,200 in total.

2 Figures for Purple 2008 based on sample of 6,897 due to one scheme with inconsistent funding data.
3 All liabilities are calculated on a s179 basis as at 31 March 2006. Caution should be exercised in comparing liabilities due to differences in roll-forward methodology. In particular, the roll forward methodology used in the majority of this publication is different from that used in Chapter 2. For general comparison purposes, the Chapter 4 figures should be used.

Voluntary form reporting

Electronic forms were available on the PPF'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. The total value of DRC certificates certified before 7 April 2008 and included in the funding estimates in Purple 2008 is approximately £16.6 billion. Around 450 had CAs in place of relevance to the 2008/9 levy with 80 per cent of them being Type A. More information on DRCs and CAs is given in Chapter 12.

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

The D&B failure scores (running from 1 to 100), which cover all the companies in the business universe, are designed to predict the likelihood that a company will cease operations without paying all creditors over the next 12 months. For each score there is a corresponding probability of insolvency, which is used in the PPF's risk-based levy calculations. (More detail on the D&B scores, including changes in methodology for the 2008/9 levy year and new mapping from failure scores to insolvency probabilities are given in Chapter 6.) Internally, the regulator and the PPF employ a wide range of approaches to risk and insolvency probabilities. However, in Purple 2008 D&B insolvency probabilities are used as they are the most widely available and most easily accessible measure of employer risk.

2.5 Funding estimates

This publication shows estimates that, as far as possible, reflect the position at a common date, 31 March 2008, for comparison with the position presented at end-March in the previous two Purple Books. As explained in Chapter 4, funding comparisons between the Purple 2008, 2007 and 2006 datasets would be misleading because of the different schemes those datasets include. Consequently, to compare funding positions, Chapter 4 utilises the Purple 2008 dataset as at 31 March 2008 and the Purple 2008 dataset rolled back to 30 March 2007 and 31 March 2006.

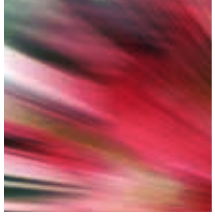
The bulk of the analysis utilises funding estimates on a s179 funding basis. This is, broadly speaking, what would have to be paid to an insurance company to take on the payment of PPF levels of compensation. (For calculation of the 2008/09 risk-based levy, the PPF uses estimates of the scheme's funding position on a s179 basis as at 31 October 2007.)

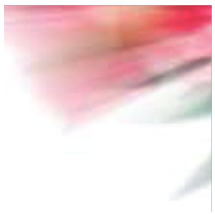
Around 97 per cent of schemes in the Purple 2008 dataset have provided s179 estimates based on financial market conditions (almost all coming from scheme returns). This is up from 44 per cent in last year's Purple Book and 10 per cent in Purple 2006. For these, the PPF has rolled forward the s179 assets and liabilities to 31 March 2008. With very limited exceptions, eligible schemes have had to provide their first s179 valuations by no later than 31 March 2008.

For the small number of schemes for which s179 valuations were not yet available PPF's actuaries prepared estimates using information about Minimum Funding Requirement (MFR) valuations from the scheme returns.

For the purpose of this publication, actuaries at the PPF and the Pensions Regulator have also produced FRS17 and full buy-out estimates of the funding position for the Purple 2008 dataset as at the end of March in 2006, 2007, and 2008. For the first time liabilities and deficits have been estimated using the technical provisions measure. More information on the methodology used in deriving the various estimates is given in Chapter 4.

Almost all schemes provide s179 valuations.






3 Scheme demographics

3.1 Summary

- The proportion of open schemes continues to decline.
- Open schemes constitute only 31 per cent of the Purple 2008 sample compared with 36 per cent in 2007.
- Forty four per cent of scheme members were members of open schemes in March 2008, down seven per cent from March 2007.
- Deferred members and pensioners constitute 78 per cent of total defined benefit membership in March 2008.
- Manufacturing schemes continue to dominate the Purple sample, constituting more than 35 per cent of schemes and s179 liabilities.

3.2 Introduction

This chapter contains a descriptive analysis of the composition of the dataset used in this year's Purple Book. It gives figures for the total number of schemes and total scheme membership, as well as giving a breakdown by size, maturity, scheme status and industrial classification.

As noted in Chapter 2, the Purple dataset covers the vast majority of the defined benefit universe. The 6,898 schemes in the sample represent 93 per cent of the estimated 7,400 schemes in the PPF-eligible universe and 97 per cent of total universe liabilities. Although the following analysis may not exactly represent the features of the PPF-eligible defined benefit (DB) universe, any qualitative difference is therefore likely to be small.

3.3 Scheme status

Scheme status in this Purple Book is split between:

- **open schemes,** where new members can join 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.**

The following analysis does not cover schemes that are wound up since they no longer have members, assets or liabilities.

As highlighted in previous Purple Books, there are significant differences between pure DB defined benefit schemes and hybrids that have DB and DC components. Hybrids represent a substantial proportion of the DB landscape, as many of the largest employers have chosen to migrate towards DC through the provision of a DC section of the existing DB scheme. Care should be taken when looking at any pensions data or surveys to be clear whether they cover pure DB schemes or also include hybrids, as hybrid schemes may no longer accept new DB members despite the scheme being open.

As highlighted in Purple 2006, some 40 per cent of memberships were in the open category, and 25 per cent in the 'part open'. It was noted that this 'part open' segment contained a large number of hybrids where the DB element was closed.

In Purple 2007, the part open category was removed, leaving only a single open category. The percentage of schemes categorising themselves as open was higher than in Purple 2006. It is clear that many hybrid schemes that had listed as 'part open' re-listed as open, even though their DB section was closed. This reflected the re-drafting of the scheme return questionnaire.

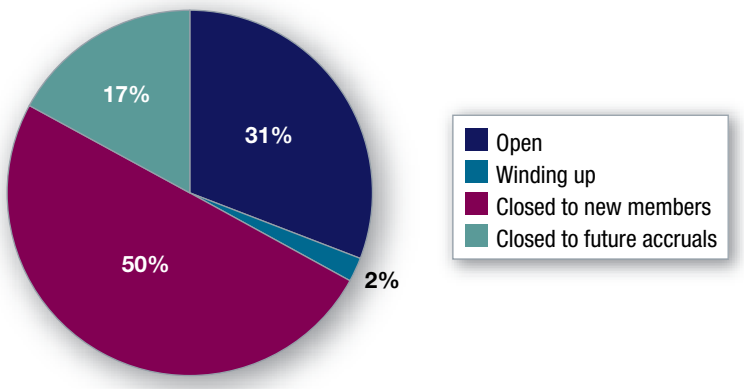
In order to improve analysis of DB closure rates in Purple 2008, greater attention has been paid to open hybrid schemes. The largest schemes in the hybrid category have been analysed separately so as to adjust the information provided in the scheme return and tackle potential misinterpretation introduced by hybrid schemes with closed DB sections listing their status as open. Review of the 100 largest schemes (comprising 79 per cent of the total membership of open hybrids in the data) shows that 71 were closed to DB membership. This comprises 62 per cent of the membership of the top 100 schemes and 49 per cent of the 2008 total open hybrid membership of 3,442,344.

In the following analysis of the 2008 dataset and comparisons with 2007, we have amended the status where necessary for schemes in the top 100 open hybrids (by membership) and present all figures accordingly. We have not extrapolated the changes to all hybrids, since smaller scheme behaviours would not necessarily resemble those of larger schemes.

Chart 3.1 shows the distribution of schemes by status as at 31 March 2008, including hybrid schemes.

Open schemes constitute only 31 per cent of the Purple 2008 sample.

Chart 3.1 | Distribution of schemes by status



Source: The Pensions Regulator, PPF

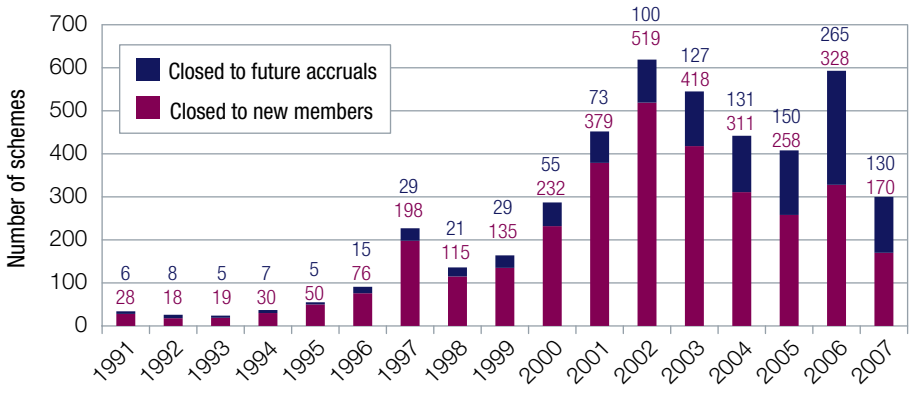
Table 3.1 shows the percentage of schemes in each Purple year by scheme status, including hybrid schemes. A clear decline in the proportion of open schemes is evident.

Table 3.1 | Distribution of schemes by status[4]

Percentage of schemes	Purple 2006	Purple 2007	Purple 2008
Open (plus part open in 2006)	41%	36%	31%
Closed to new members	44%	45%	50%
Closed to future accruals	14%	16%	17%
Winding up	1%	2%	2%

Chart 3.2 shows the year in which the schemes in the dataset currently closed to new members and the schemes currently closed to future accruals enacted those closures.[5] The number of schemes closing to new members appears to be following a downward trend since 2002, with 2006 being the sole exception to the trend.

Chart 3.2 | Numbers of scheme closures by year



Source: The Pensions Regulator, PPF

The rate of scheme closure is consistent with other data, such as that from the Office for National Statistics (ONS), which show a sustained fall in the numbers of open schemes. As before, the evidence suggests that there is not always a stepwise transition in status from a scheme being open, closed to new members, closed to future accruals and then winding up. Some schemes record their status as moving directly from 'open' to 'closed to future accruals' (ie closed to new and existing members).

4 Some columns in this and other tables in this chapter do not sum to 100 per cent due to rounding.

5 Chart 3.2 only shows the most recent status change. For instance, if a scheme became closed to new members in 2002 before closing to future accruals in 2006, only the 2006 status change is recorded.

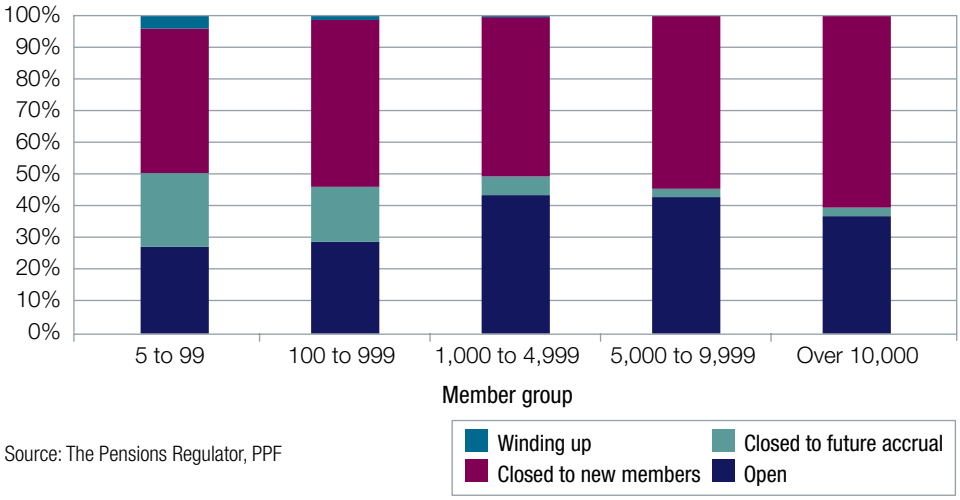
Table 3.2 below shows the distribution of schemes with hybrid schemes removed.

Table 3.2 | Distribution of schemes by status (excluding hybrid schemes)[6]

Percentage of schemes	Purple 2006	Purple 2007	Purple 2008
DB only open (and part open in 2006)	35%	32%	26%
DB only closed to new members	49%	50%	53%
DB only closed to future accruals	15%	17%	18%
DB only winding up	1%	1%	2%

Chart 3.3 shows that, for the Purple 2008 dataset, larger schemes are more likely to be closed to new members.

Chart 3.3 | Scheme status by member group



Source: The Pensions Regulator, PPF

6 Some columns in this and other tables in this chapter do not sum to 100 per cent due to rounding.

3.4 Scheme status and scheme membership

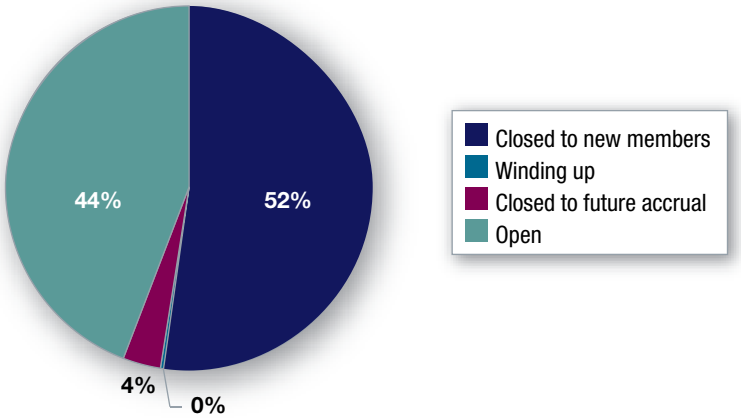
In line with the continuing trend of scheme closures, the number and percentage of members in open status schemes continues to fall. As the numbers of members in open schemes fall, and in particular the numbers of active members in open schemes, comparisons between different data sources and surveys become sensitive to the schemes included and the methodology adopted.

The data presented here show schemes' status as recorded in the March 2008 scheme return. This status is not affected by announced intentions to change status in the future. All schemes in the dataset are PPF-eligible. This is in contrast to surveys that exclude schemes not classified as 'core' private sector and/or implement important classification changes in certain cases.[7] When comparing data sources and surveys it is important to check which scheme set is used, since excluding or altering the status of a large scheme can significantly influence results.

Forty-four per cent of scheme members were members of open schemes in March 2008, down seven percentage points from March 2007.

The percentage of memberships in open schemes in 2008 was 44 per cent (Chart 3.4). This represents a seven percentage point decline from the proportion of members in open schemes in Purple 2007. Going back further, Purple 2006 showed 40 per cent in open schemes and 25 per cent in part-open schemes. The inclusion in the latter figure of hybrids with closed DB sections makes comparison between 2006 and subsequent years difficult. Nevertheless, the conclusion of a consistent decline in open membership between March 2006 and 2008 is supported by similar surveys on the subject conducted by the ONS and NAPF.

Chart 3.4 | Percentage distribution of members by scheme status



Source: The Pensions Regulator, PPF

7 Take as an example the changes to the OPSS survey by the ONS in 2000 in which the BBC and Post Office were reclassified from the public to private sector.

Table 3.3 | Distribution of membership by scheme status

Percentage of members	Purple 2006	Purple 2007	Purple 2008
Open	65%	50%	44%
Closed to new members	33%	46%	52%
Closed to future accrual	2%	3%	4%
Winding up	0%	0%	0%

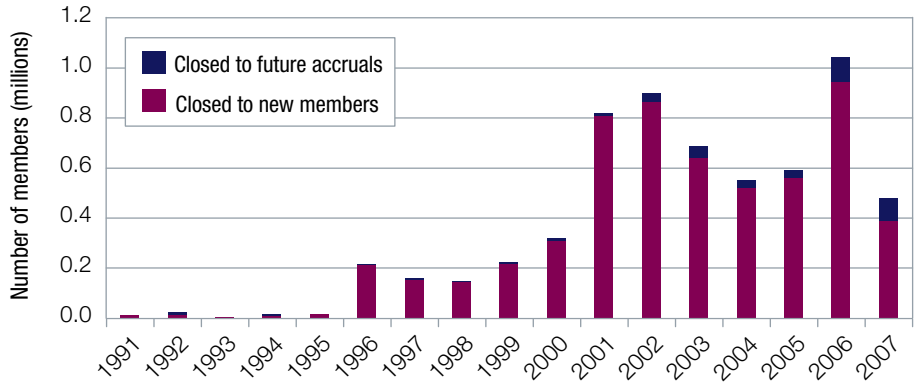
Table 3.4 shows the movement in open and closed membership for DB schemes only (ie excluding hybrids). There is a clear and consistent decline in the proportion of members in open schemes.

Table 3.4 | Distribution of membership by status (excluding hybrids)

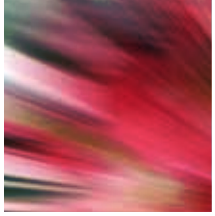
Percentage of members	Purple 2006	Purple 2007	Purple 2008
Open	64%	56%	47%
Closed to new members	34%	41%	49%
Closed to future accrual	2%	3%	3%
Winding up	0%	0%	0%

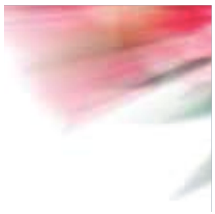
Tracing the number of members entering closed status by year shows that the schemes closing to future accrual are typically smaller than those closing to new members. A comparison of Charts 3.5 and 3.2 shows that the proportion of members entering closed to future accruals is relatively small when compared with the proportion of schemes entering that status.

Chart 3.5 | Number of members entering closed status by year



Source: The Pensions Regulator, PPF






3.5 Scheme membership

Scheme memberships for the Purple 2008 sample totalled 12.4 million.

The distribution of the 12.4 million total membership by membership type and scheme status is given in Table 3.5.

Table 3.5 | Memberships by membership type and status as at 31 March 2008

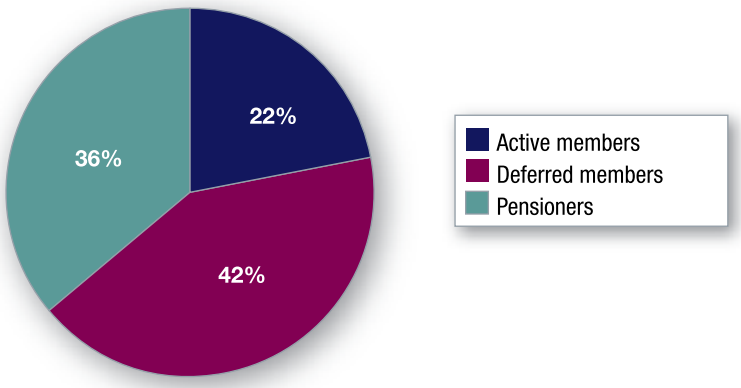
	Open schemes (millions)	Schemes closed to new members (millions)	Schemes closed to future accrual (millions)	Total (millions)
Active members	1.56	1.17	n/a	2.74
Deferred members	1.99	2.96	0.29	5.23
Pensioners	1.92	2.35	0.15	4.43
Total	**5.48**	**6.48**	**0.44**	**12.40**

Active members constitute 22 per cent of the sample. This active category includes both new members joining schemes that are still open and existing members accruing new benefits in schemes closed to new members. Thirteen per cent of scheme members are actives in open schemes, and nine per cent are actives in closed schemes.

There is a wide diversity in membership composition between schemes, from those with no current employees (ie all members are deferreds or pensioners) to very immature schemes with only active members (typically set up as spin-offs of older schemes). Schemes which are closed to future accrual may include current employees amongst those classified as deferred.

Chart 3.6 shows the Purple 2008 membership sample categorised by membership type.

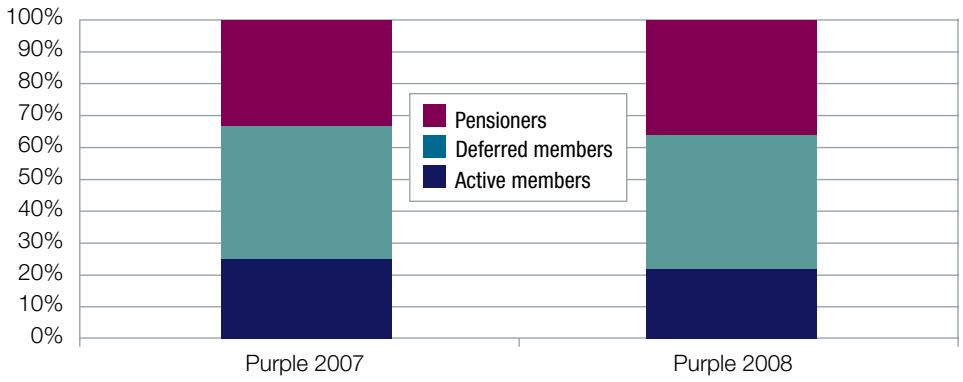
Chart 3.6 | Distribution of member types in Purple 2008



Source: The Pensions Regulator, PPF

Chart 3.7 shows that the proportions of membership types have remained relatively stable between 2007 and 2008. This reflects the fact that membership numbers are dominated by deferred members and pensioners. The size of these groups changes relatively slowly, even if the active membership changes dramatically on account of scheme closure.

Chart 3.7 | Distribution of members by member types in Purple 2007 and Purple 2008

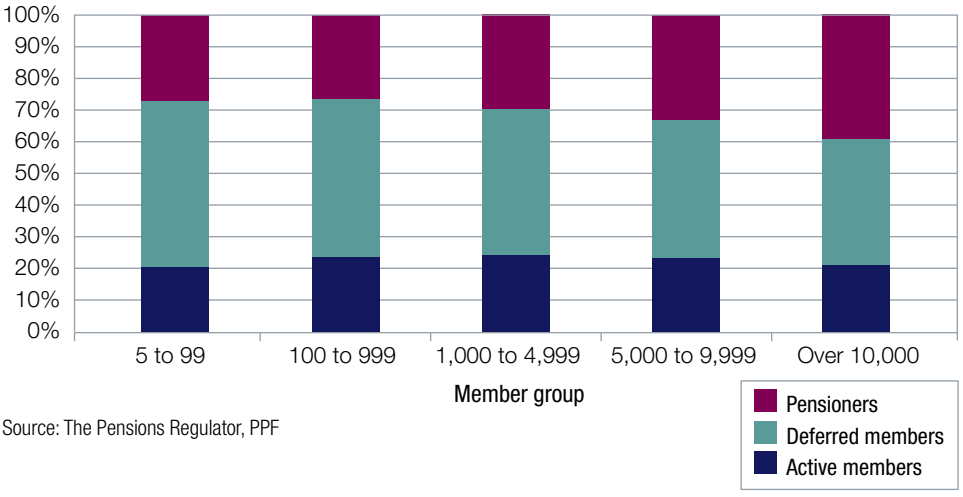


Source: The Pensions Regulator, PPF

Larger schemes continue to have greater proportions of pensioner members (see Charts 3.8 and 3.9 below). This is perhaps unsurprising given the age of many of the bigger schemes and the historic preference for smaller schemes to buy insurance policies for pensioners at retirement.

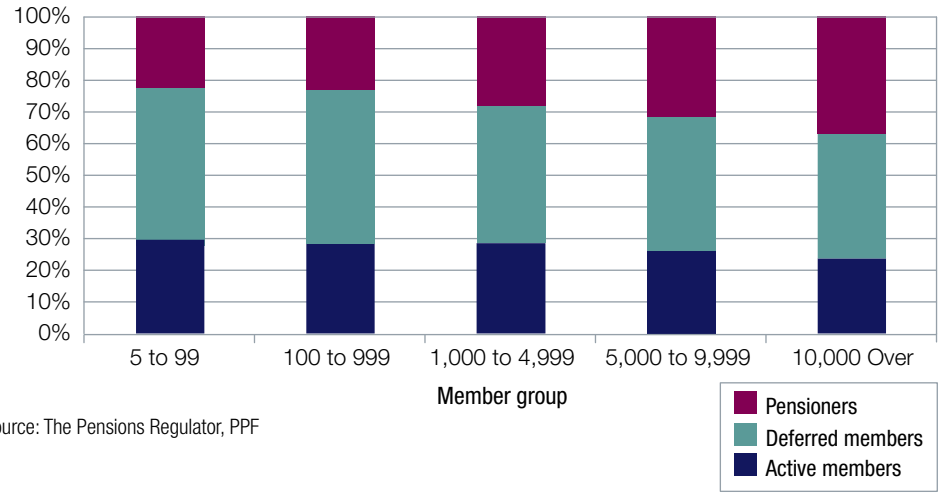
As scheme size increases, the proportion of pensioner memberships rises.

Chart 3.8 | Distribution of member types by member group in the Purple 2008 dataset



Source: The Pensions Regulator, PPF

Chart 3.9 | Distribution of member type by member group in the Purple 2007 dataset



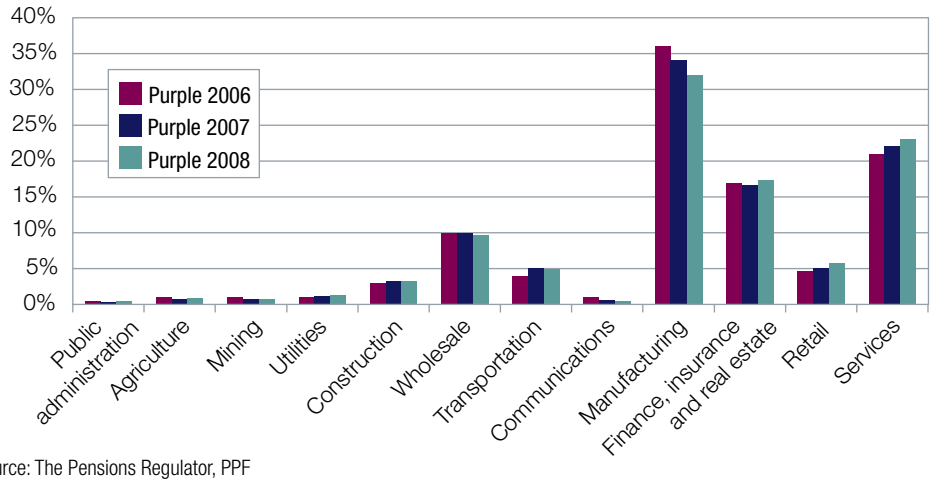
Source: The Pensions Regulator, PPF

3.6 Sample composition by industrial sector

Chart 3.10 shows the distribution of the Purple 2006, 2007 and 2008 scheme sets by industry classification. The proportions of services and retail schemes has risen over the three years, while the proportion of manufacturing schemes steadily declined.

Manufacturing schemes continue to dominate the Purple sample.

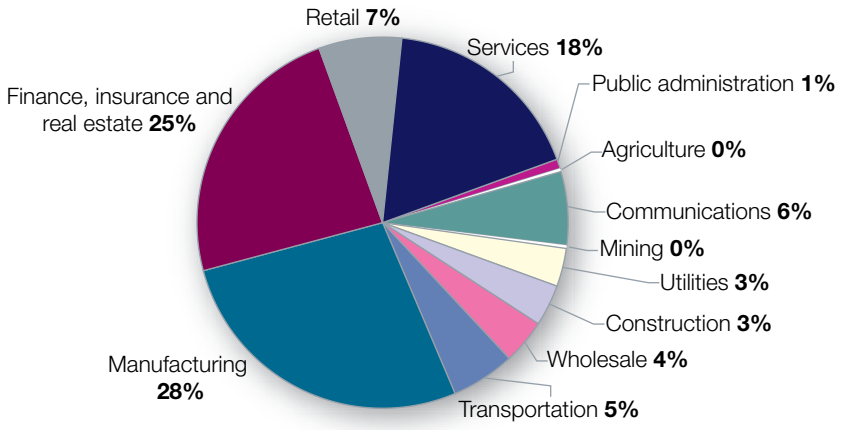
Chart 3.10 | Proportion of schemes by industry classification



Source: The Pensions Regulator, PPF

Chart 3.11 shows the proportion of s179 liabilities by industry classification. Manufacturing and finance, insurance and real estate dominate the defined benefit universe, contributing 28 and 25 per cent of s179 liabilities respectively.

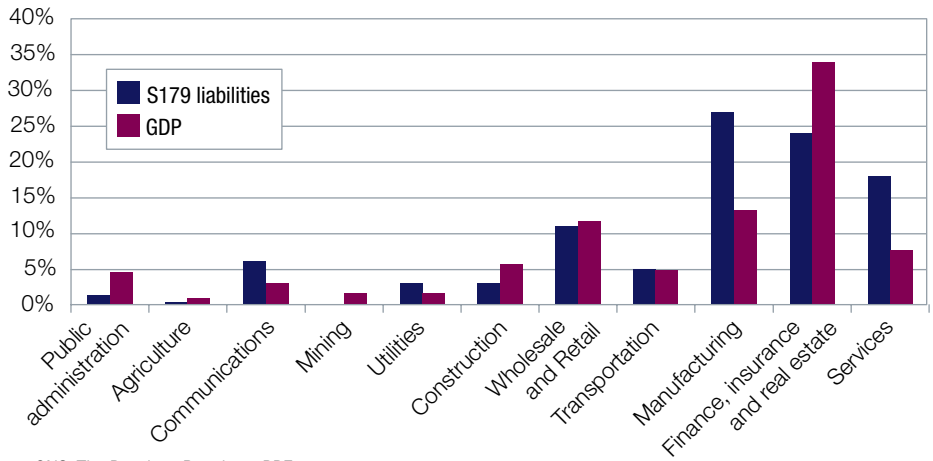
Chart 3.11 | s179 liabilities by industry in the Purple 2008 dataset



Source: The Pensions Regulator, PPF

Comparing the industrial breakdown of s179 liabilities with the weights of those industries in overall GDP provides an indication of the relative strength of defined benefit participation across sectors. As in previous Purple surveys, manufacturing is overrepresented relative to its share in GDP. Schemes in the services sector also had s179 liabilities far exceeding its share of UK output.

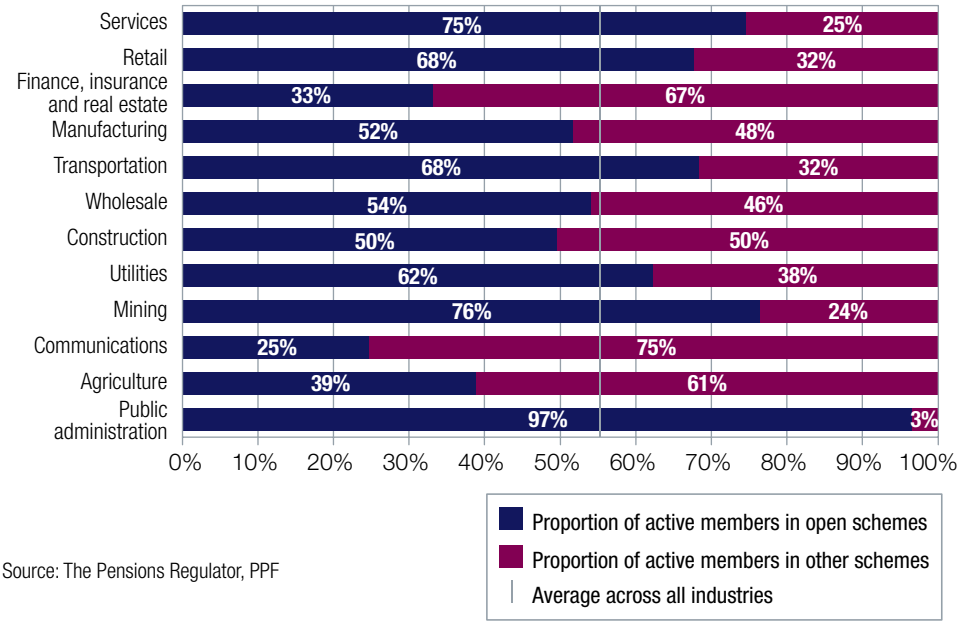
Chart 3.12 | Comparison of the share of s179 liabilities in the Purple 2008 dataset and the share of GDP by industry



Source: ONS, The Pensions Regulator, PPF

Chart 3.13 shows the percentage of active membership in schemes with open status by industrial sector (Purple 2008 dataset). Of the sectors constituting a substantial proportion of the DB universe, services has the largest proportion of active members in open schemes. Less than 40 per cent of active members in the communications and finance industries are members of open schemes.

Chart 3.13 | Active membership in open schemes by industrial sector in the Purple 2008 dataset



Source: The Pensions Regulator, PPF

4 Scheme Funding

4.1 Summary

- The aggregate funding position of the Purple 2008 dataset on a s179 basis has deteriorated from a surplus of £74.2 billion (a funding level of 110 per cent) at 31 March 2007 to a deficit of just over £5 billion (a funding level of 99 per cent) at 31 March 2008.[8]
- The average full buy-out funding level has decreased from 69 per cent in Purple 2007 to 62 per cent in 2008.
- Funding on the accountancy (FRS17) basis, however, has shown a large improvement, reflecting the impact of higher corporate bond yields on the discount rates. The aggregate FRS17 funding level was 87 per cent in March 2007, climbing to 98 per cent in March 2008.
- For the first time in the Purple Book, liabilities and deficits have been estimated using the Technical Provisions (TP) measure. The deficit on this basis was £148 billion at 31 March 2008, up from £56 billion at 30 March 2007. This reflects the negative impact of financial conditions. The TP figures should however, be taken as illustrative since they are largely based on relevant ratios of TPs to s179 liabilities for a sub-sample of the Purple dataset.
- Size of scheme remains an important indicator of funding level, with very large and very small schemes showing materially higher levels of funding than those of intermediate sizes.

4.2 Introduction

The funding picture described in this chapter is derived from data taken at 31 March 2008. The information provided in scheme returns is rolled forward on each measure to allow a common comparison to be made. This is particularly important when markets are volatile, as asset price movements (combined with different scheme valuation dates) may otherwise obscure underlying funding trends.

It is important to note that a range of approximations are involved in the roll forward process. These include, where necessary, an allowance being made for schemes which have not completed a valuation of the particular type required. As with the rest of this document, only schemes in the Purple 2008 dataset are included and so the aggregate assets and liabilities for all PPF-eligible schemes are believed to be somewhat (around three per cent) higher than described here.

The period since March 2008 has seen very significant changes in equity and bond markets. The PPF7800 index provides a snapshot of changes to the aggregate s179 deficit on a monthly basis, giving an indication of the impact of changes in the equity and bond markets since 31 March 2008.

8 The analysis in this chapter is based on a dataset of 6,897 schemes. One scheme was removed from the funding calculations due to inconsistent data.

4.3 Overall funding

The starting point for the following analysis is the set of s179 valuations submitted by schemes to the PPF (primarily through completion of a scheme return at the request of the regulator). Where these are at dates other than 31 March 2008, assets and liabilities have been adjusted, in line with the published PPF methodology, to allow for changes between the valuation date and 31 March 2008.

All s179 valuations performed on or after 31 March 2008 operate on the basis of the published "A4" assumptions. The key changes from previous valuation guidance include an increase in all yields by 0.3 per cent to account for increased competition in the buy-out market, offset to some degree by stronger mortality assumptions. These figures form the basis for PPF levy calculations, subject to subsequent adjustments in defined circumstances.

Liabilities on other bases have been estimated by applying the PPF transformation methodology, while making alternative assumptions to reflect our assessment of typical FRS17, buy-out and TP bases. This assessment is necessarily subjective and subject to a wide margin of error, and users may wish to make alternative assumptions.

In the case of FRS17 bases, most companies do not have 31 March year-ends and there are few comprehensive surveys of practice available which extend outside listed companies. We have based our calculation on the iBoxx yields in common use, while recognising that there is some debate over whether alternative approaches should be adopted which would have produced lower discount rates at 31 March 2008.

In the case of buy-out bases, the calculation is hypothetical, as only small numbers of buy-outs actually occur and the terms achieved are confidential and not necessarily achievable by other schemes. We have used the s179 basis adjusted to be suitable for benefits which are not covered by the PPF. Some providers have indicated that there was a short-term downward shift in buy-out costs in early 2008.

The technical provisions estimates should be taken as illustrative. We have noted from recovery plan submissions that the weighted average of the ratio of TPs to liabilities on the then current s179 basis was 117 per cent in relation to 'second year' valuations covering around 1,200 schemes. These valuations consisted of the set submitted to the regulator in relation to dates after 21 September 2006 and available at the time of data processing. We have assumed that this ratio was applicable to all 6,897 schemes in the Purple 2008 dataset at both 31 March 2007 and 31 March 2008. For 31 March 2006, we have used 'first year' valuations for around 2,000 schemes which were submitted to the regulator in relation to dates up to 21 September 2006. First year recovery plan submissions show the ratio of TPs to s179 liabilities to be 109 per cent at this point. In order to arrive at total TPs for 2006, this percentage is applied to rolled-back 2006 s179 liabilities for all schemes in the Purple 2008 dataset. For more information see the regulator's scheme funding publication dated December 2008 www.tpr.gov.uk/pdf/SchemeFundingAnalysis2008.pdf, noting that the ratios therein differ slightly as a result of different dataset characteristics.

A comparison of Tables 4.1 and 4.2 shows that the aggregate funding position on a s179 basis has declined from 109.7 per cent in March 2007 to 99.4 per cent in March 2008. Accordingly, the aggregate s179 balance has moved from a surplus of £74.2 billion to a deficit of £5.1 billion over the same period.[9]

s179 information for the Purple 2008 dataset is rolled back to 31 March 2006 and 31 March 2007 and rolled forward to 31 March 2008.

Movements in financial markets have resulted in marked changes in funding between the three dates.

9 Note that the PPF 7800 index, which is based on the Purple 2007 dataset, showed a deficit of £23.6 billion at the end of March 2008.

A similar decline is evident in full buy-out measures of funding. The aggregate funding position has fallen from 69.0 per cent in March 2007 to 61.7 per cent in March 2008. The aggregate deficit has risen from £377.2 billion to £518.6 billion over the period.

Funding on the FRS17 basis, however, has shown a large improvement. The aggregate FRS17 funding level was 86.7 per cent in March 2007, climbing to 98.5 per cent in March 2008. This movement largely reflects the positive impact of higher corporate bond yields on the discount rates. Note that FRS17 liabilities fell from £967.3 billion in 2007 to £850.2 billion in 2008.

Tables 4.1 to 4.3 also present funding statistics figures on the basis of TPs. These are deficits that schemes must close as part of the scheme funding process. Funding under this measure has deteriorated from 93.8 per cent in March 2007 to 85.0 per cent in March 2008. The aggregate deficit has climbed from £55.7 billion to £148.3 billion over the period.

On a s179 basis, 68.4 per cent of schemes in the Purple 2008 sample were in deficit with a total deficit of £67.7 billion and 31.6 per cent were in surplus with a total surplus of £62.6 billion.

Table 4.1 | Key funding statistics as at 31 March 2008

	s179	FRS17	Full buy out	Technical provisions
Total number of schemes	6,897	6,897	6,897	6897
Total assets (£ billion)	837.2	837.2	837.2	837.2
Total liabilities (£ billion)	842.3	850.2	1356.0	985.5
Aggregate funding position (£ billion)	-5.1	-13.1	-518.6	-148.3
Total balance for schemes in deficit (£ billion)	-67.7	-64.8	-520.4	-
Total balance for schemes in surplus (£ billion)	62.6	51.8	1.6	-
Funding level	99.4%	98.5%	61.7%	85.0%

Table 4.2 | Key funding statistics as at 31 March 2007

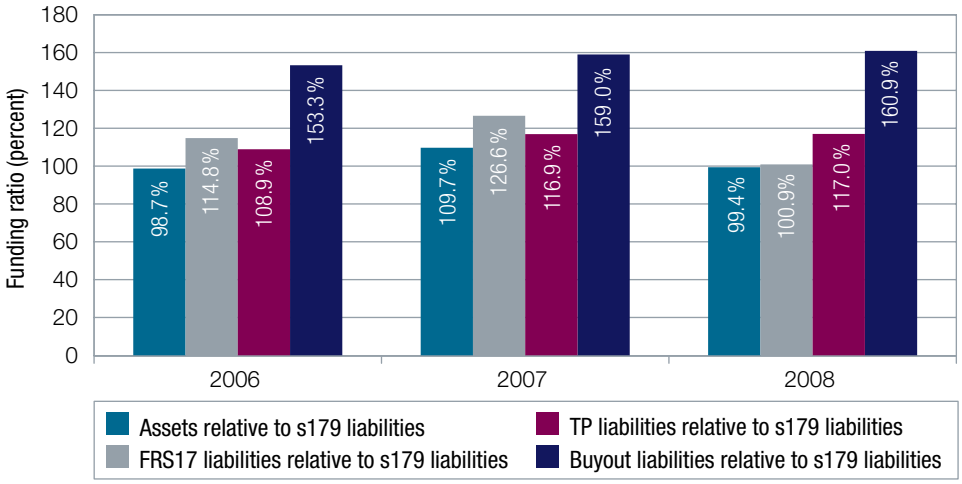
	s179	FRS17	Full buy out	Technical provisions
Total number of schemes	6,897	6897	6,897	6,897
Total assets (£ billion)	838.5	838.5	838.5	838.5
Total liabilities (£ billion)	764.3	967.3	1215.7	894.2
Aggregate funding position (£ billion)	74.2	-128.7	-377.2	-55.7
Total balance for schemes in deficit (£ billion)	-31.0	-149.8	-381.6	-
Total balance for schemes in surplus (£ billion)	105.2	21.0	4.4	-
Funding level	109.7%	86.7%	69.0%	93.8%

Table 4.3 | Key funding statistics as at 31 March 2006

	s179	FRS17	Full buy out	Technical provisions
Total schemes	6,897	6897	6897	6897
Total assets (£ billion)	801.2	801.2	801.2	801.2
Total liabilities (£ billion)	811.4	931.8	1243.8	884.4
Aggregate funding position (£ billion)	-10.2	-130.6	-442.6	-83.2
Total balance for schemes in deficit (£ billion)	-69.5	-149.4	-444.8	-
Total balance for schemes in surplus (£ billion)	59.3	18.8	2.2	-
Funding level	98.7%	86.0%	64.4%	90.6%

Chart 4.1 shows the level of assets, FRS17 liabilities, TP liabilities and buy-out liabilities relative to s179 liabilities for the three Purple years. The chart illustrates the decline in s179 funding in 2008 in addition to the fall in FRS17 liabilities relative to their s179 measure.

Chart 4.1 | Assets, FRS17 liabilities, TP liabilities and buyout liabilities relative to s179 liabilities, as at end-March 2006, 2007 and 2008



Source: The Pensions Regulator, PPF

4.4 Analysis of funding by size of scheme membership

Table 4.4 shows that, for the Purple 2008 dataset, apart from the very smallest schemes, the larger schemes are more likely to have higher s179 funding. Those with more than 10,000 members hold 62 per cent of the liabilities and constitute 64 per cent of the members in the sample. The category containing the smallest schemes also shows a relatively high average funding level.

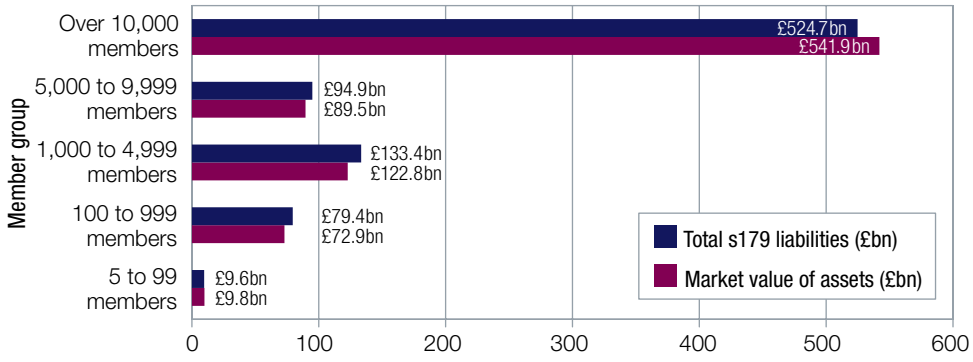
Table 4.4 | s179 funding levels by scheme size as at 31 March 2008

Scheme size measured by number of members	Number of schemes in sample	Market value of assets (£ billion)	Total s179 liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level [10]
5 to 99 members	2,468	9.9	9.7	0.2	102%	101%
100 to 999 members	3,132	73.0	79.5	-6.5	92%	88%
1,000 to 4,999 members	884	122.8	133.4	-10.6	92%	89%
5,000 to 9,999 members	191	89.6	94.9	-5.4	94%	93%
Over 10,000 members	222	542.0	524.8	17.2	103%	100%
Total	**6,897**	**837.2**	**842.3**	**-5.1**	**99%**	**94%**

10 Note that several schemes with unorthodox funding arrangements were excluded from the simple average so as to avoid misleading distortions.

Size of scheme remains an important indicator of funding level, with very large and very small schemes (by number of members) showing materially higher levels of funding than those of intermediate sizes.

Chart 4.2 | Total assets and liabilities on an s179 basis as at 31 March 2008



Source: The Pensions Regulator, PPF

Table 4.5 shows that stronger funding among the larger and smaller schemes is also evident when liabilities are measured in full buy-out terms.

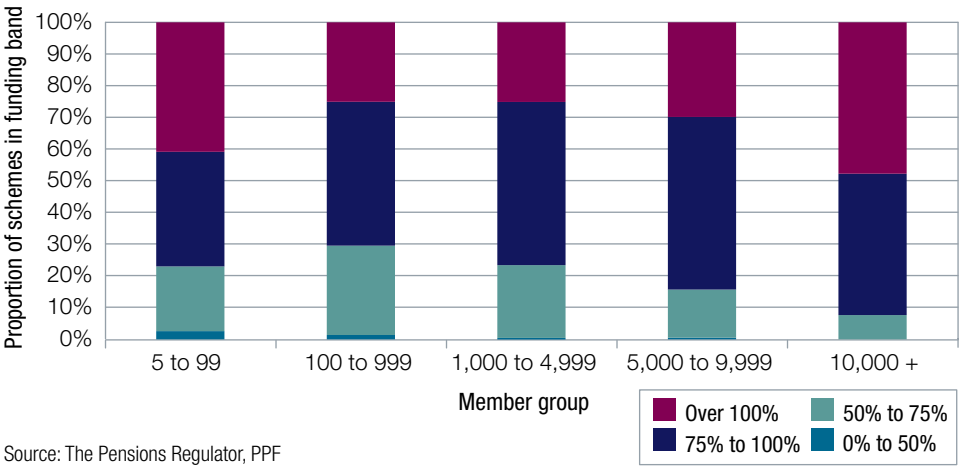
Table 4.5 | Estimated full buy out levels by scheme size as at 31 March 2008

Scheme size measured by number of members	Schemes in sample	Market value of assets (£ billion)	Total buy out liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level[11]
5 to 99 members	2,468	9.9	15.5	-5.6	64%	63%
100 to 999 members	3,132	73.0	127.2	-54.2	57%	55%
1,000 to 4,999 members	884	122.8	213.5	-90.7	58%	56%
5,000 to 9,999 members	191	89.6	152.0	-62.4	59%	59%
Over 10,000 members	222	542.0	847.7	-305.7	64%	63%
Total	**6,897**	**837.2**	**1355.8**	**-518.6**	**62%**	**59%**

11 Note that several schemes with unorthodox funding arrangements were excluded from the simple average so as to avoid misleading distortions.

Chart 4.3 shows the distribution of s179 funding level bands by scheme size as at 31 March 2008. As in previous years, there is a significant number of poorly funded schemes offsetting the large proportion of well funded schemes in the smallest size band.

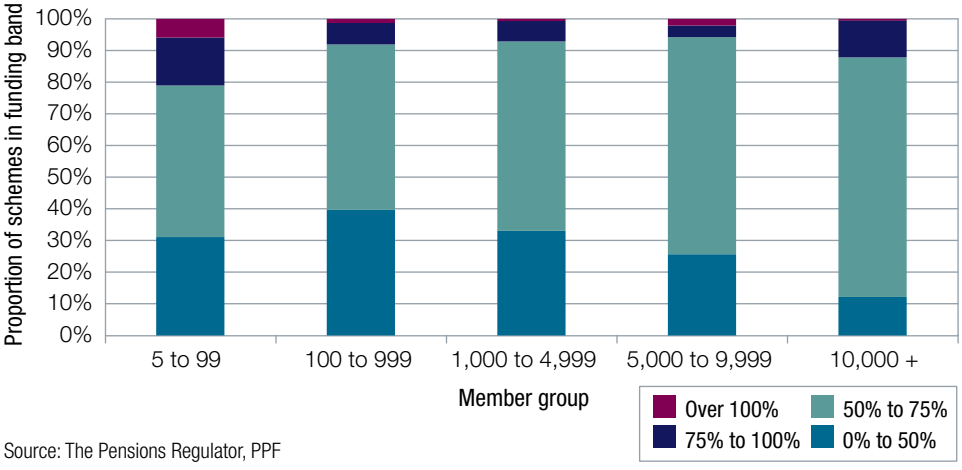
Chart 4.3 | Distribution of s179 funding levels by size of scheme membership as at 31 March 2008



Source: The Pensions Regulator, PPF

Chart 4.4 shows the distribution of buy-out funding level bands by scheme size. Note that the 100 to 999 member bracket includes the largest proportion of poorly funded schemes. The group of largest schemes (with more than 10,000 members) has the smallest proportions of schemes with both very strong and weak funding.

Chart 4.4 | Distribution of estimated buy-out levels by scheme size by members as at 31 March 2008



Source: The Pensions Regulator, PPF

More mature schemes exhibit higher relative funding levels.

4.5 Analysis of funding by scheme maturity

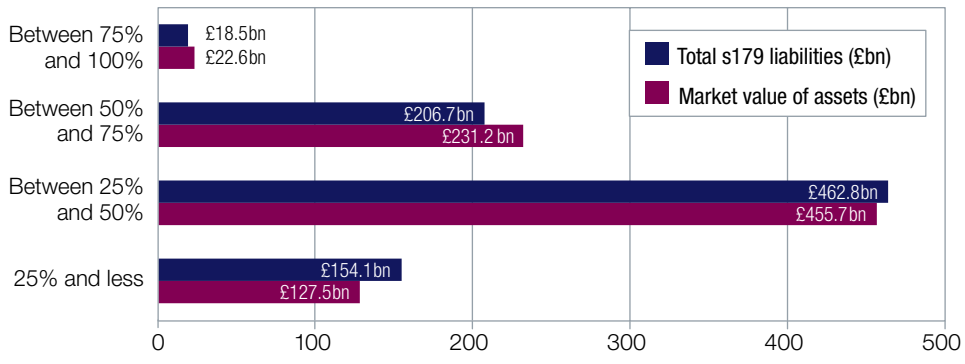
As shown in Table 4.6, more mature schemes exhibit higher relative funding levels. There is a clear division between the two least mature groups, which both exhibit s179 deficits, and the two most mature, with s179 surpluses.

Table 4.6 | Analysis of s179 funding levels by scheme maturity as at 31 March 2008

Proportion of s179 liabilities relating to pensioners	Schemes in sample	Market value of assets (£ billion)	Total s179 liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level[12]
25% and less	3,161	127.6	154.1	-26.5	83%	86%
Between 25% and 50%	2,725	455.7	462.9	-7.2	98%	95%
Between 50% and 75%	835	231.3	206.7	24.6	112%	111%
Between 75% and 100%	176	22.6	18.5	4.1	122%	132%
Total	**6,897**	**837.2**	**842.3**	**-5.1**	**99%**	**94%**

Chart 4.5 shows the distribution of s179 assets and liabilities by scheme maturity. The vast majority of assets and liabilities fall into the 25 per cent to 50 per cent of liabilities to current pensioner bracket. The chart restates the funding disparity between more and less mature schemes discussed in reference to Table 4.6.

Chart 4.5 | Distribution of s179 assets and liabilities by scheme maturity as at 31 March 2008



Source: The Pensions Regulator, PPF

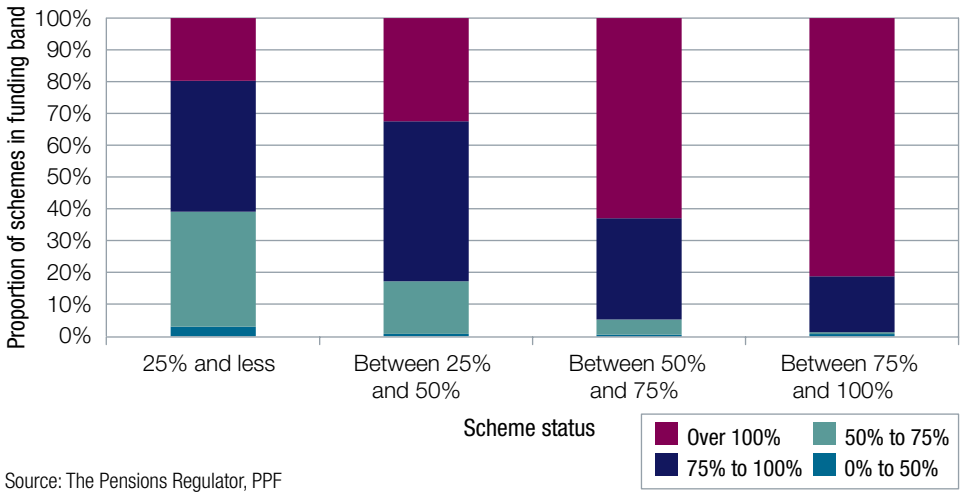
12 Note that several schemes with unorthodox funding arrangements were excluded from the simple average so as to avoid misleading distortions.

As in previous years, the results presented above are likely to be affected by the fact that compensation for pensioners who were above normal pension age at the date of assessment stands at 100 per cent of benefits accrued, while compensation for those below normal pension age at the date of assessment is 90 per cent of benefits accrued (subject to the compensation cap). Superficially, it might be expected that this would lead to lower levels of s179 funding for very mature schemes. However, it is likely that a greater proportion of pensioners' benefits will have been earned pre-1997. The funding positions of more mature schemes may benefit from the fact that the PPF does not provide indexation in payment on compensation for benefits accrued before 6 April 1997.

In addition, the buy-out basis used for assessing PPF liabilities is likely to show higher apparent funding levels for more mature schemes as a result of the differences between buy-out liabilities and funding targets for mature and immature schemes. Buy-out bases typically use lower discount rates than TPs, and this effect is much more significant in relation to younger members.

Chart 4.6 shows the distribution of funding level groups by scheme maturity. Each successively larger maturity group has a greater proportion of well funded schemes and a lower proportion of schemes with weak s179 funding.

Chart 4.6 | Distribution of funding levels on an s179 basis by scheme maturity as at 31 March 2008



Source: The Pensions Regulator, PPF

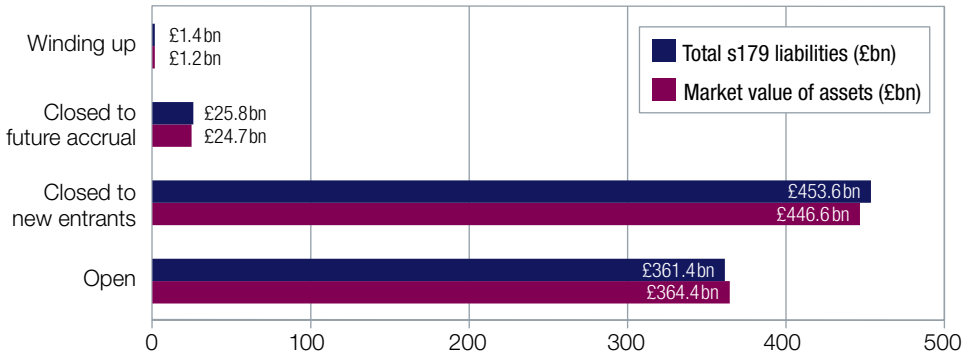
4.6 Analysis of funding by scheme status

The pattern of funding levels by status remains largely unchanged from Purple 2007. Table 4.7 shows that open schemes have the stronger funding than closed schemes on both a weighted and unweighted average basis. Closed schemes exhibit greater assets and liabilities than in Purple 2007, largely due to a reallocation of some large hybrid schemes from the open to closed category (as explained in Chapter 3).

Table 4.7 | Analysis of s179 funding levels by scheme status at 31 March 2008

Scheme size measured by number of members	Schemes in sample	Market value of assets (£ billion)	Total s179 liabilities (£ billion)	Balance (£ billion)	Weighted average funding level	Simple average funding level
Open	2,126	364.5	361.4	3.1	101%	94%
Closed to new entrants	3,446	446.7	453.6	-6.9	98%	93%
Closed to future accrual	1,177	24.7	25.8	-1.1	96%	93%
Winding up	148	1.3	1.4	-0.1	92%	104%
Total	6,897	837.2	842.3	-5.1	99%	94%

Chart 4.7 | Distribution of s179 assets and liabilities by scheme status at 31 March 2008



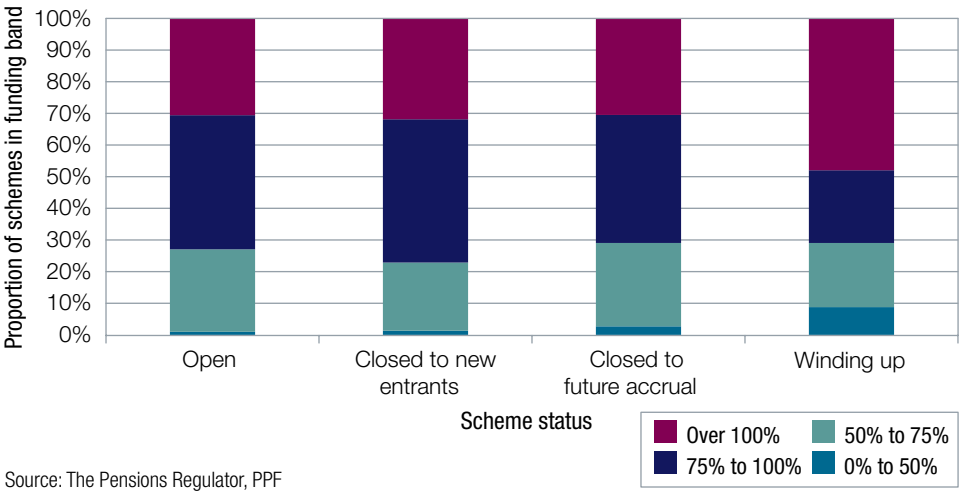
Source: The Pensions Regulator, PPF

Chart 4.8 shows the distribution of s179 funding levels by scheme status as at 31 March 2008.

Open schemes are slightly better funded in aggregate than schemes which are closed to new entrants. However, the proportions of the different funding level groups is broadly similar across the two groups.

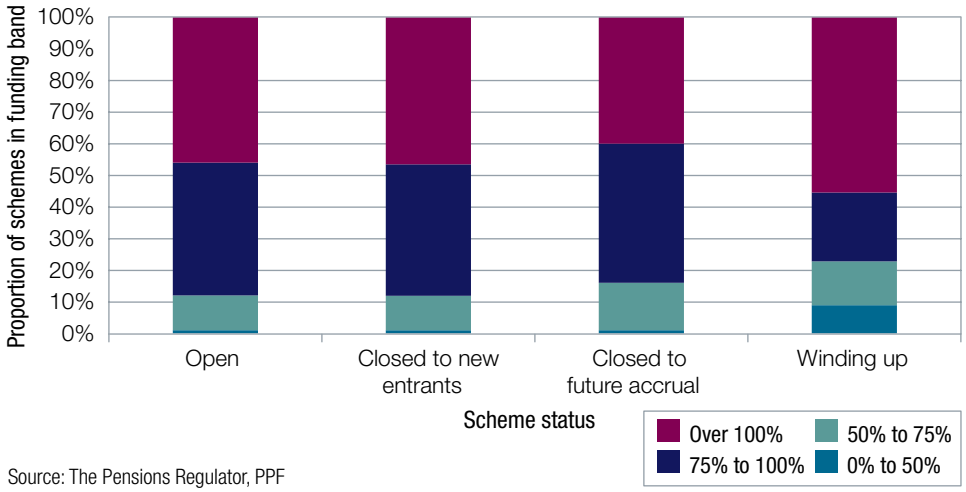
Schemes which are closed to future accrual or are winding up are also more likely to show significant underfunding. Schemes actually winding up are more likely to show a surplus, although the position here is likely to be complicated by the different winding up scenarios, and the extent to which schemes in PPF assessment are included in the dataset.

Chart 4.8 | Distribution of s179 funding levels by scheme status as at 31 March 2008



Source: The Pensions Regulator, PPF

Chart 4.9 | s179 funding levels as at 31 March 2007 by scheme status

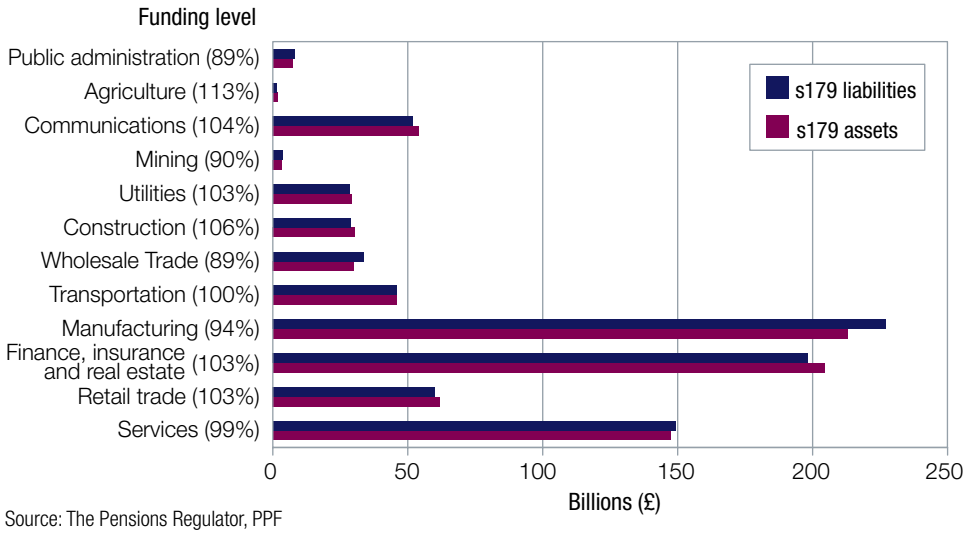


Source: The Pensions Regulator, PPF

4.7 Analysis of funding by employer industry

Chart 4.10 shows assets and liabilities concentrated in the same three broad industry groups as in previous Purple Books: communications; finance, insurance and real estate; and manufacturing. Of these, communications shows the highest funding level and manufacturing the lowest. Care must be taken in drawing conclusions from this data, as different industries favour different benefit designs, and this may impact on the extent to which PPF compensation differs from full benefits.

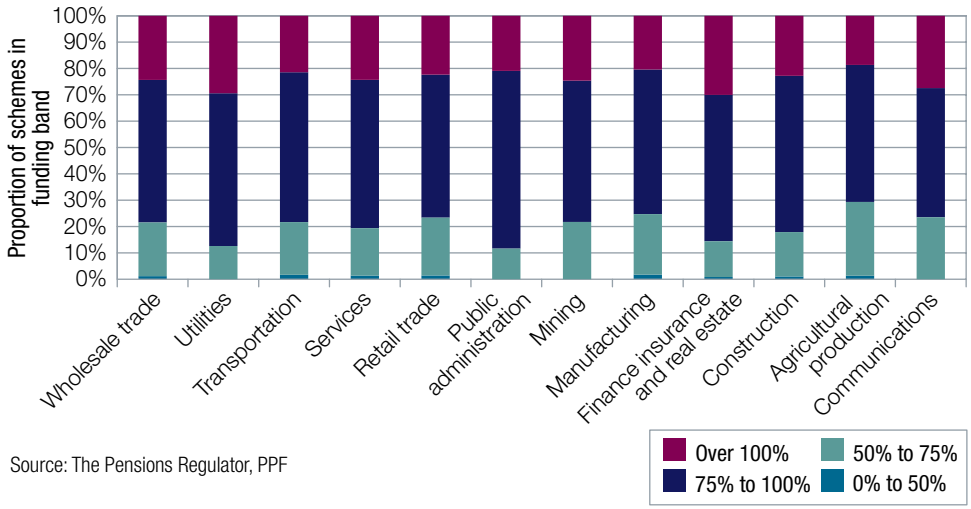
Chart 4.10 | s179 assets and liabilities by industrial sector with overall funding level as at 31 March 2008



Source: The Pensions Regulator, PPF

Chart 4.11 shows the distribution of funding levels by sector. Transportation and manufacturing have the largest proportion of poorly funded schemes. Aside from this observation, the distribution of funding levels appears relatively constant across sectors.

Chart 4.11 | Distribution of s179 funding levels as at 31 March 2008 by industry



Source: The Pensions Regulator, PPF

5 Funding sensitivities

5.1 Summary

- Changes in estimated market conditions since October 2002 have caused the monthly aggregate funding position of pension schemes measured on a s179 basis to vary by around £260 billion (with the greatest deficit in February 2003 at £109.2 billion and the greatest surplus in June 2007 at £148.9 billion).
- Funding can also see considerable variation on a daily basis. During October 2008 the deficit rose from £46.9 billion to £145.7 billion over the space of two weeks.
- The number of schemes in deficit on a s179 basis peaked in February 2003 at around 5,600 schemes (around 81 per cent of the dataset) and troughed in June 2007 at around 2,700 schemes (around 39 per cent).
- An increase in longevity such that experienced mortality is now equivalent to that of an individual two years younger would increase schemes' liabilities by around five per cent, or £38.0 billion.
- If the assumed rate of inflation increases by 0.1 per cent then the s179 liabilities for schemes increases by approximately 1.5 per cent or £12.4 billion.
- A 0.1 per cent (10 basis point) reduction or increase in nominal gilt yields increases or reduces scheme funding by around £15 billion; a 2.5 per cent increase or decrease in the market value of equities will increase or reduce scheme funding by £11 billion.
- So broadly a one percentage point (100 basis point) change in gilt yields is equivalent in its impact to a 34 per cent change in equity prices (compared with 25 per cent in Purple 2007).

5.2 Introduction

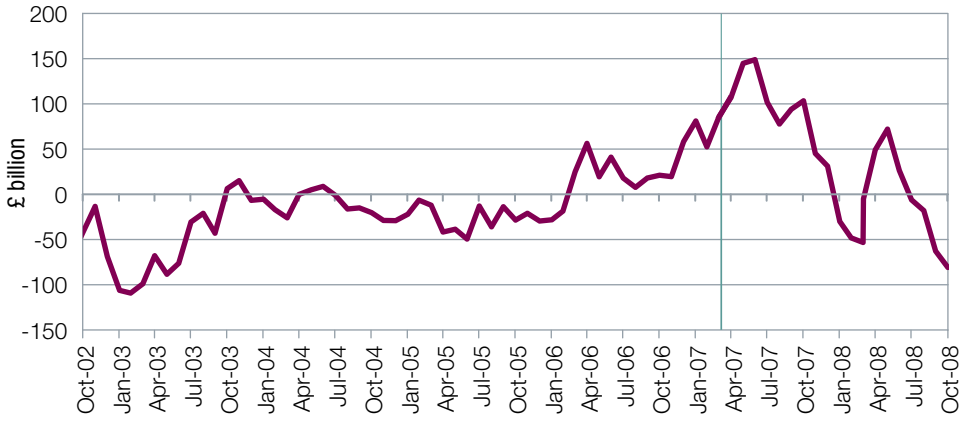
The analysis in Chapter 4 provides a snapshot of funding at three points in time, end-March in 2006, 2007 and 2008. In practice, funding levels are inherently volatile and are susceptible to changes in relation to the following:

- asset values, especially equity prices. These tend to be a more volatile asset class than bonds but demonstrate the potential to offer higher returns (based on very long-term empirical evidence);
- the discount rate used to value liabilities;
- the deficit reduction contributions made by employers;
- inflation; and
- the assumptions of expected mortality.

This chapter describes this volatility and sets out various sensitivities.

5.3 Aggregate s179 funding [13]

Chart 5.1 | Estimated aggregate s179 assets less aggregate s179 liabilities of pension schemes in the Purple 2008 dataset



Source: PPF

Changes in market conditions have resulted in £260 billion variation in funding.

Calculations based on the Purple 2008 dataset show how changes in market conditions since October 2002 have caused the considerable variation in aggregate funding position of pension schemes on a s179 basis. The aggregate funding position, in fact, varied by nearly £260 billion with the largest deficit to date at £109.2 billion[14] in February 2003 and the greatest surplus at £148.9 billion in June 2007. These figures are based on adjustments in the assets and liabilities of individual pension schemes, calculated at their respective valuation dates on an approximate basis, using changes in market indices for principal asset classes and the fixed interest and index-linked gilt yields used to value liabilities.

The approximation does not allow for benefit accrual or payments, actual scheme experience, or changes in mortality assumptions. The majority of the analysis in this chapter does not involve changes in special contributions, except in Chart 5.7 where the changes are specifically addressed. This is consistent with the methodology adopted for the purposes of the PPF7800 index which has been published by the PPF since July 2007.[15]

The PPF7800 index will, in coming months, move to using an extended Purple 2008 dataset rather than an extended Purple 2007 dataset. The end-March aggregate balance for the Purple 2008 dataset was -£5 billion, compared with the -£23 billion recorded by the PPF7800 index. This suggests that the PPF7800 index based on the Purple 2008 database will show somewhat better funding throughout.

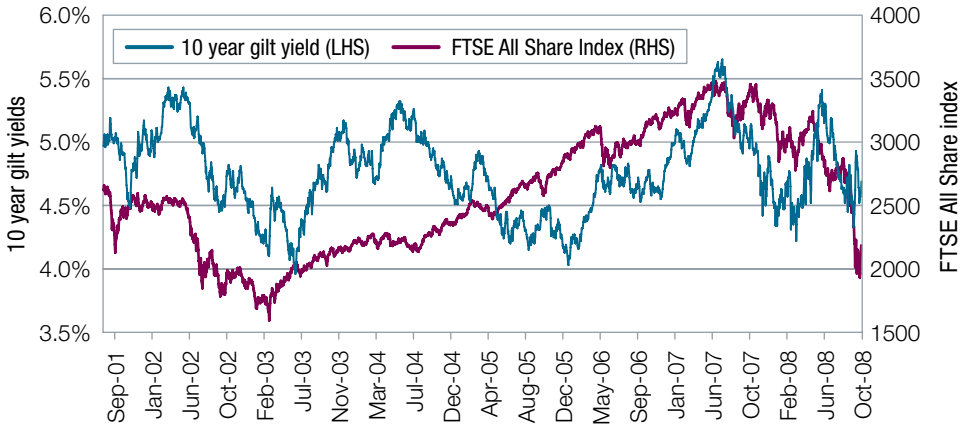
13 All funding levels in this chapter are derived using actual proportionate changes in s179 assets and liabilities from the extended Purple 2007 dataset (used to calculate the PPF7800 index) to the Purple 2008 dataset as at 31 March 2008. This is to estimate the effect that market conditions would have on the funding levels of schemes in the Purple 2008 dataset at all points in the time series. As such, these figures will be different to those in Chapter 4 and in the PPF7800 releases.

14 These figures are based on the new (version A4) actuarial assumptions as at March 2008 for s179 valuations. The impact of these changes is to improve funding by about £80 billion compared with estimates based on the earlier data set and previous (version A3) actuarial assumptions.

15 This is available at: http://www.pensionprotectionfund.org.uk/index/ppf_7800_index.htm.

The s179 valuation estimate as at 31 March 2008 includes deficit reduction contribution certificates (DRCs) submitted to the PPF by 7 April 2008. These certificates document DRCs paid since the latest scheme valuation. Earlier DRCs will have been subsumed in the scheme asset figures as at the valuation date. The transformation methodology implicitly assumes that the DRCs are paid on the date to which the valuation result is transformed. Movements in scheme funding are then driven almost entirely by movements in financial markets. To this extent, schemes that have been making large special contributions in recent years (as suggested by the ONS data in Chapter 12) will cause the earlier funding figures to give too favourable a picture of the 'real' funding position and underestimate the improvement in recent years.

Chart 5.2 | Movements in stock markets and gilt yields



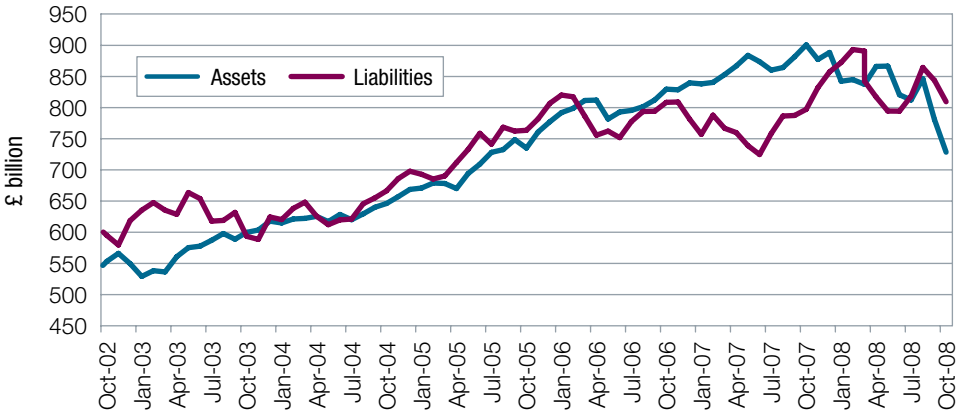
Source: Bloomberg

The market conditions behind the variation in s179 funding can be seen in Chart 5.2, while Chart 5.3 shows the movements in s179 assets and liabilities that underlie the figures in Chart 5.1. In summary:

- falling gilt yields and equity markets resulted in a maximum deficit of £109.2 billion in February 2003;
- the period from March 2003 to the end of 2003 saw equity markets and gilt yields rising, leading to a reduction in the aggregate deficit;
- from the end of 2003 to the end of 2005 the aggregate funding level remained relatively constant (with a funding variation of around £58 billion) due to the continuing rise in equity levels being largely balanced by falling gilt yields;
- between early 2006 and June 2007 the aggregate s179 funding position significantly improved as a result of rising gilt yields alongside rising equity markets, with the surplus peaking in June 2007 at £148.9 billion; and,

- the credit crunch has resulted in falling equity markets and gilt yields so that the deficit by end-October 2008 had widened to £80.9 billion. There was a temporary improvement in April and May 2008, reflecting higher bond yields as a result of inflation concerns. Also, at end-March 2008, the actuarial basis for calculating s179 liabilities was changed to reflect the lower cost of buy-out resulting from greater competition.

Chart 5.3 | Estimated movement in s179 assets and liabilities of schemes in the Purple 2008 dataset



Source: PPF

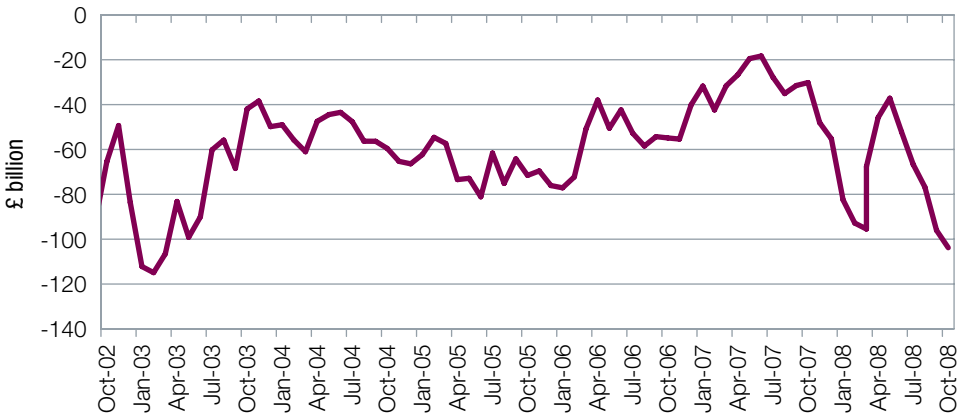
The credit crunch has widened the aggregate deficit.

5.4 Schemes in s179 deficit

The movements of deficits and s179 assets and liabilities for schemes in deficit since October 2002 are shown in Charts 5.4 and 5.5. Over this period, the smallest deficit of schemes in deficit was £18.3 billion in June 2007 and largest in February 2003 at £114.9 billion. The deficit remained relatively low (at around half the size of the largest deficit) until the beginning of 2008 when the deficit began to grow again to a figure in October 2008 of £103.8 billion.

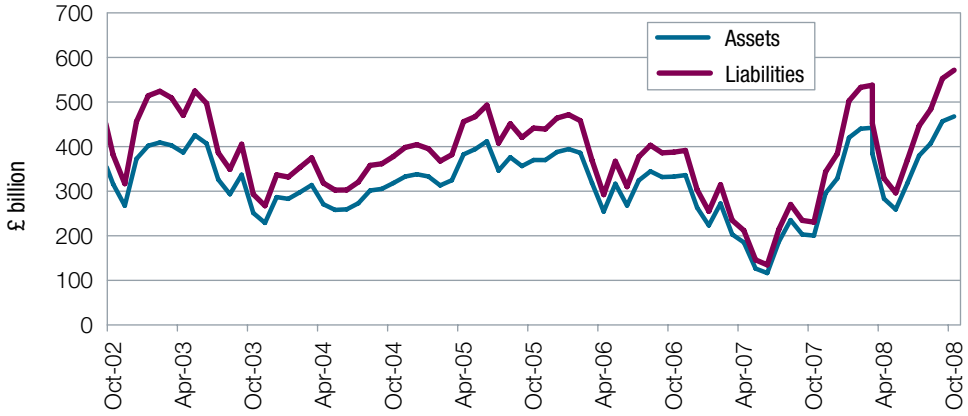
The difference between the largest and smallest deficits is narrower than in the case of all schemes because financial market conditions can swing schemes from surplus to deficit, or deficit to surplus. For example, consider a scheme where movements in financial markets result in the funding position moving from a deficit of £30 million to a surplus of £10 million. The aggregate balance improves by £40 million whereas the aggregate balance for all schemes in deficit only improves by £30 million because at the point the scheme moves into surplus it ceases to be a scheme in deficit. In February 2003, there were over 5,600 schemes in deficit (around 81 per cent of all schemes) and in June 2007 there were nearly 2,700 schemes in deficit (representing 39 per cent of schemes).

Chart 5.4 | Estimated aggregate s179 assets less aggregate s179 liabilities of schemes in the Purple 2008 dataset excluding schemes in surplus



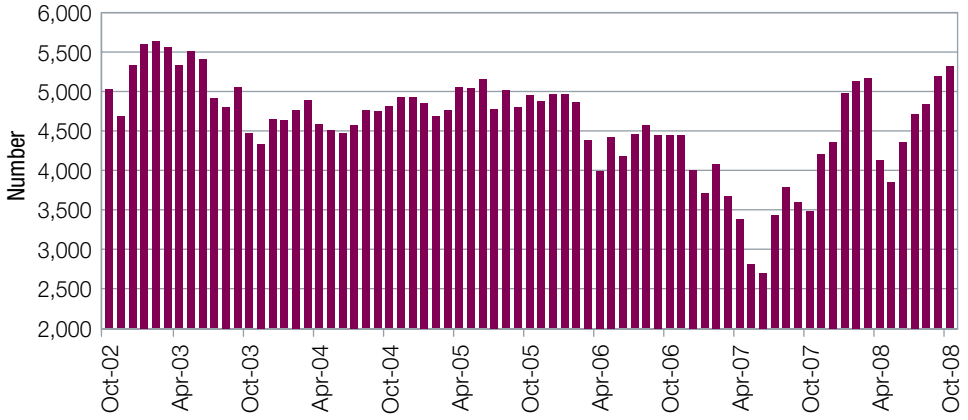
Source: PPF

Chart 5.5 | Estimated aggregate s179 assets and liabilities for schemes in the Purple 2008 dataset (excluding schemes in surplus)



Source: PPF

Chart 5.6 | Estimated number of schemes in deficit on a s179 basis each month in the Purple 2008 dataset



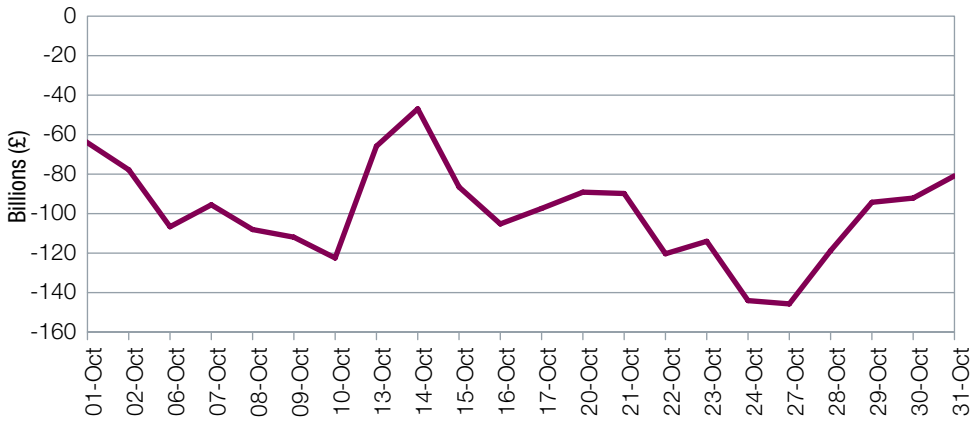
Source: PPF

Changes in market conditions have resulted in the number of schemes in deficit varying by 2,700.

5.5 Daily funding volatility

During October 2008, aggregate funding varied by £100 billion.

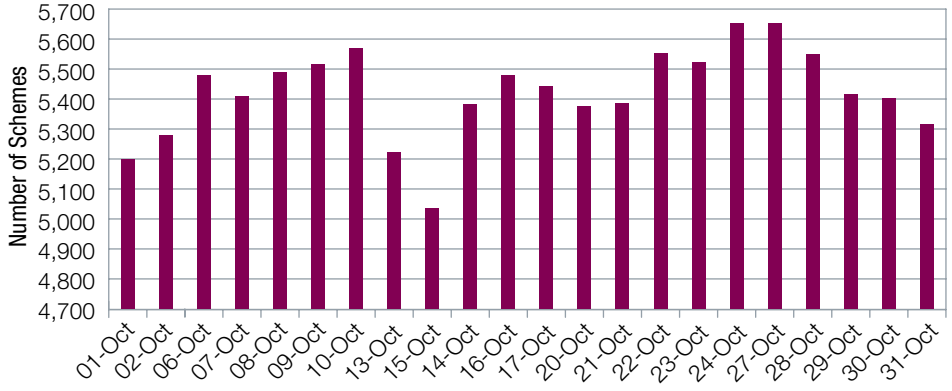
Chart 5.7 | Estimated aggregate s179 assets less estimated s179 liabilities of pension schemes in the Purple 2008 dataset for October 2008



Source: PPF

The monthly volatility of scheme funding on an s179 basis over a large period of time was shown in Chart 5.1. However, there can be considerable volatility on a daily basis. This is illustrated by the movements in the deficit in October 2008, albeit a month of exceptional market volatility (Chart 5.7). Over just nine working days from 14 October to 27 October 2008, the deficit increased to £145.7 billion from £46.9 billion due to falling 10-year gilt yields (from 4.9 per cent to 4.5 per cent) and declining equity markets. The number of schemes in deficit increased from just over 5,000 (64 per cent of all schemes) to over 5,600 (85 per cent of schemes). Between the beginning and end of October, the funding level and numbers of schemes in deficit were much the same, hiding a good deal of the funding volatility.

Chart 5.8 | Estimated number of schemes in the Purple 2008 dataset in s179 deficit for October 2008



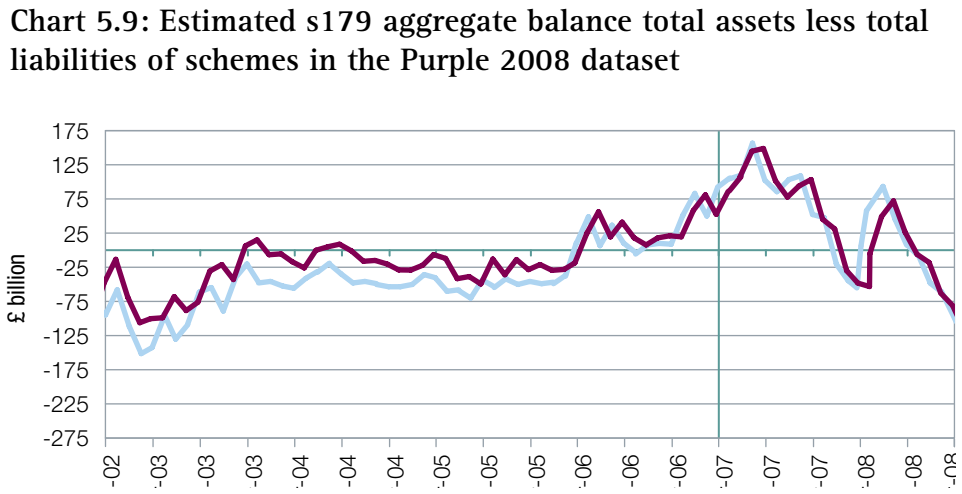
Source: PPF

5.6 Aggregate s179 funding position excluding special and normal contributions

Chart 5.1 showed that the funding position in October 2008 was similar to that in mid-2003. However, it must be emphasised that this analysis only shows the impact of changes in financial markets on funding from the level of assets and liabilities at 31 March 2008. It assumes, for example, that the levels of special contributions (as captured in the asset figures and DRC certificates) result in the same fixed addition to scheme asset valuations throughout. As a result, the index gives a flattering picture of the genuine funding position going back in time.

In Chart 5.9 we have used the data from the Office of National Statistics' (ONS) MQ5 survey[16] to illustrate the impact of stripping out special contributions from each year. It can be seen that the deficit in February 2003 would be around £40 billion worse than shown in the PPF7800 and the position at the end of October 2008 would be significantly better than between 2002 and 2003.

Chart 5.9 | Estimated s179 aggregate balance total assets less total liabilities of schemes in the Purple 2008 dataset



16 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), of which around 10 are not included in final calculations. It is estimated in MQ5 that pension funds have total assets of around £1,000 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 is 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 an organisational pension programme created by a company for the benefit of its employees. The sample may also contain defined contribution schemes..

5.7 Rules of thumb for the aggregate s179 funding position

In terms of their effects on the aggregate balance a one per cent rise in gilt yields is equivalent to a 34 per cent rise in equity markets.

Table 5.1 | Analysis of expected movements in s179 funding levels from a base aggregate deficit of £5bn at 31 March 2008

s179 Assets less s179 Liabilities (£bn)							
Equity Markets	Gilt Yields						
	-0.30%	-0.20%	-0.10%	0%	0.10%	0.20%	0.30%
7.50%	-20	-4	12	28	42	57	70
5.00%	-31	-15	1	17	31	46	60
2.50%	-42	-25	-10	6	21	35	49
0.00%	-53	-36	-20	-5	10	24	38
-2.50%	-64	-47	-31	-16	-1	13	27
-5.00%	-75	-58	-42	-27	-12	2	16
-7.50%	-85	-69	-53	-38	-23	-9	5

Table 5.1 relates the sensitivities of the aggregate deficit to changes in gilt yields and equity prices. From this it can be seen that:

- a 0.1 per cent (10 basis points) reduction or increase in gilt yields increases or reduces scheme funding by around £15 billion;
- a 2.5 per cent increase or decrease in equity markets will increase or reduce scheme funding by £11 billion; and
- so broadly, a 1 per cent (100 basis point) rise in gilt yields has a roughly equivalent effect on the balance as a 34 per cent rise in equity markets.

Compared with Purple 2007, funding has become more sensitive to changes in nominal gilt yields and a little less sensitive to changes in equity markets. In Purple 2007, the two sensitivities above produced the same impact on funding (£12 billion). A 1.0 per cent change in gilt yields was then roughly equivalent to a 25 per cent change in equity prices. The greater sensitivity to changes in gilt yields in Purple 2008 reflects the rise in the gilt share and fall in equity share in overall asset allocation (see Chapter 7).

When the changes are combined it can be seen that a 2.5 per cent increase in equity prices coupled with a 0.1 per cent increase in gilt yields as at 31 March 2008, would give an aggregate surplus (with all other things being equal) of £21 billion. The equivalent falls in equity prices and gilt yields would lead to a deficit of £31 billion.

Tables 5.2 and 5.3 below show the equivalent sensitivity of s179 assets and liabilities to movements in gilt yields and equity indices.

Table 5.2 | Analysis of expected movement in s179 assets from a base of 100 at 31 March 2008

s179 Assets relative to a base of 100							
Equity Markets	Gilt Yields						
	-0.30%	-0.20%	-0.10%	0%	0.10%	0.20%	0.30%
7.50%	105	105	104	104	104	103	103
5.00%	104	103	103	103	102	102	102
2.50%	102	102	102	101	101	101	100
0.00%	101	101	100	100	100	99	99
-2.50%	100	99	99	99	98	98	98
-5.00%	98	98	98	97	97	97	96
-7.50%	97	97	96	96	96	95	95

Table 5.3 | Analysis of expected movement in s179 liabilities from a base of 100 at 31 March 2008

s179 liabilities relative to a base of 100							
s179 liabilities relative to 31 March level (=100)	Gilt Yields						
	-0.30%	-0.20%	-0.10%	0%	0.10%	0.20%	0.30%
	107	104	102	100	98	96	94

5.8 Sensitivity analysis for schemes in deficit on a s179 basis

Table 5.4 | Analysis of expected movement in s179 funding levels from a base total deficit of £68bn as at 31 March 2008, excluding schemes in surplus

s179 Assets less s179 Liabilities (£ billion)							
Equity Markets	Gilt Yields						
	-0.30%	-0.20%	-0.10%	0%	0.10%	0.20%	0.30%
7.50%	-80	-70	-61	-53	-46	-39	-34
5%	-86	-76	-66	-57	-50	-43	-37
2.50%	-93	-81	-71	-62	-54	-47	-41
0%	-99	-88	-77	-68	-59	-51	-45
-2.50%	-106	-94	-83	-73	-64	-56	-49
-5%	-113	-101	-90	-79	-70	-61	-53
-7.50%	-120	-108	-97	-86	-76	-67	-59

Table 5.4 shows how the underfunding position of schemes in deficit (on a s179 basis) varies with gilt yields and equity markets. It can be seen that if gilt yields rise by 0.3 per cent and equity markets by 7.5 per cent than the deficit of these schemes would fall to £34 billion. Conversely, if gilt yields fell by 0.3 per cent and equity markets by 7.5 per cent the total deficit would rise to £120 billion.

It can be seen in Table 5.5 that as equity markets fall the s179 assets of schemes in deficit rise. For example, a fall in equity prices of 7.5 per cent results in a 17 per cent increase in asset levels. This is because a fall in equity markets results in an increase in the number of schemes in deficit, causing the aggregate value of assets of schemes in deficit to increase. At a scheme level the relative value of assets falls as expected.

Table 5.5 | Analysis of expected movement in s179 assets from a base of 100 at 31 March 2008 excluding schemes in surplus

s179 Assets relative to a base of 100							
Equity Markets	Gilt Yields						
	-0.30%	-0.20%	-0.10%	0%	0.10%	0.20%	0.30%
7.50%	110	104	97	79	74	66	62
5.00%	124	106	102	91	76	70	64
2.50%	124	110	103	99	82	74	67
0.00%	126	121	106	100	92	79	71
-2.50%	127	123	117	102	97	90	76
-5.00%	127	124	120	114	99	92	79
-7.50%	129	124	120	117	102	95	90

5.9 Benefit and inflation effects

If the assumed rate of inflation increases by 0.1 per cent then the s179 liabilities for schemes in the Purple 2008 dataset increase by approximately 1.5 per cent or £12.4 billion. A year ago, the same rise in the assumed rate of inflation resulted in a 1.0 per cent increase in liabilities. This increased sensitivity is a result of a higher proportion of liabilities being due to deferred pensioners (from 56.0 per cent in 2007 to 64.5 per cent in 2008) and a greater proportion of post-1997 relative to pre-1997 liabilities. This calculation assumes that nominal yields are unchanged so that real yields reduce as a result of the increase in inflation. Conversely, if the assumed rate of inflation decreases by 0.1 per cent then s179 liabilities would fall by approximately £12.0 billion or 1.4 per cent. If it is assumed that real yields are constant so that nominal yields fall as inflation declines, then liabilities increase by around 0.7 per cent (£5.6 billion); the lower benefit levels compared with the central scenario are more than offset by the impact of the lower yield as a discount factor.

5.10 Impact of changes in expected mortality

The future expected mortality experience of scheme members is one of the key assumptions required to place a value on a scheme's liabilities. An increase in longevity such that experienced mortality is now equivalent to that of an individual two years younger would increase scheme liabilities by around 4.5 per cent, or £38.0 billion. A decrease in longevity such that experienced mortality is now equivalent to that of an individual two years older would decrease liabilities by £39.8 billion or 4.7 per cent.

An increase in assumed inflation of 0.1 per cent increases liabilities by 1.5 per cent.




6 Insolvency risk[17]

6.1 Summary

- The weighted average one-year ahead insolvency probability, derived from Dun and Bradstreet failure scores, was 0.23 per cent as at March 2008.
- Comparisons with earlier years are difficult because of changes in D&B rating methodology.
- Corporate insolvencies rose in the second and third quarters of 2008, and in the third quarter were 26 per cent higher than a year earlier. The insolvency rate is likely to rise significantly in 2009 given the economic downturn.
- The increase in insolvencies has not as yet translated into increased claims on the PPF, with the number of new s120 notices for PPF eligible schemes yet to show a significant increase. This is likely to be due to the universe of companies sponsoring PPF-eligible schemes being older and larger than the universe of all companies in the economy as a whole.

6.2 Introduction

This chapter examines the insolvency risk of the sponsoring companies of DB schemes. Monitoring corporate health is an important task for both the PPF and the Pensions Regulator (the regulator) as part of the common mandate to protect members' benefits.

This chapter first outlines the various ways in which insolvency risk is gauged by the regulator and the PPF. D&B provides company failure scores which are mapped to a PPF assumed probability of insolvency. The PPF use the assumed probability of insolvency in the calculation of the risk-based levy. These failure-score-based probabilities are used to provide a snapshot of insolvency probabilities for our sample as at 31 March 2008.

6.3 Measuring insolvency risk

Both the PPF and the regulator use various measures of insolvency risk in assessment and modelling, including information from D&B, Moody's, Standard and Poor's (S&P), and Fitch Ratings.

The methodology D&B applies to calculating companies' failure scores has evolved over time reflecting the complex nature of this task. Between the 2007/08 and 2008/09 levy years, the methodology changed to address issues raised by schemes and employers and to account for recent insolvency events. These changes are outlined at www.pensionprotectionfund.org.uk/levy_consultation_aug_07.pdf, while a full explanation of D&B methodology and previous changes can be found in Purple 2006 and Purple 2007.

17 This section examines insolvency risk among the Purple 2008 dataset as at 31 March 2008 based on a sample of 6,898 schemes.

In response to the changes in methodology, the probabilities of insolvency risk relating to each of the UK failure scores were also revisited and a new insolvency table produced. The change applied a finer grading to those employers that represented the lowest insolvency risk, with new lower probabilities of insolvency of 0.01 per cent, 0.03 per cent, and 0.05 per cent for failure scores 100 to 98.

Owing to the methodology changes applied by D&B, it is difficult to compare the corresponding insolvency probabilities over time. This is because it would be unclear whether changes in insolvency probabilities were the result of genuine changes in D&B failure scores or the application of new D&B methodology.

6.4 Insolvency risk and the PPF

This section examines the insolvency risk of companies that sponsor PPF-eligible DB schemes. It provides a breakdown of insolvency probability by scheme characteristics. Unless otherwise stated, all the calculated insolvency probabilities used in this section are unweighted averages.

Insolvency probability

For the Purple 2008 dataset the weighted average insolvency probability (weighted by s179 liabilities) was 0.23 per cent, while the unweighted average was 0.68 per cent.

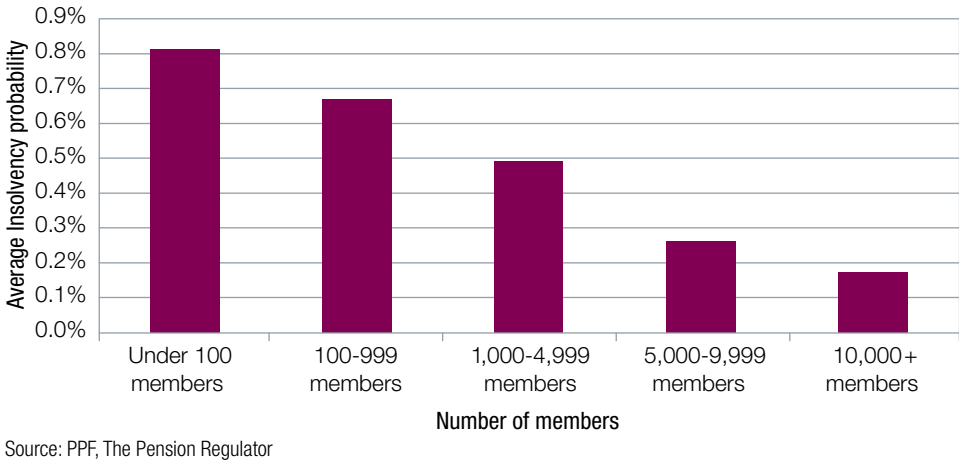
The weighted and unweighted average insolvency probabilities quoted above as at March 2008 differ from those in Purple 2007 (0.31 per cent and 0.76 per cent respectively) due to the combined impact of changes in the Purple sample used, better data on some companies, D&B methodology changes, and changes in the economy.

Insolvency probability and size

Generally, the employers of larger schemes (by membership and liabilities) have lower insolvency probabilities than those of smaller schemes, owing to the fact that larger schemes are backed by larger companies (Charts 6.1 and 6.2 showing simple averages).

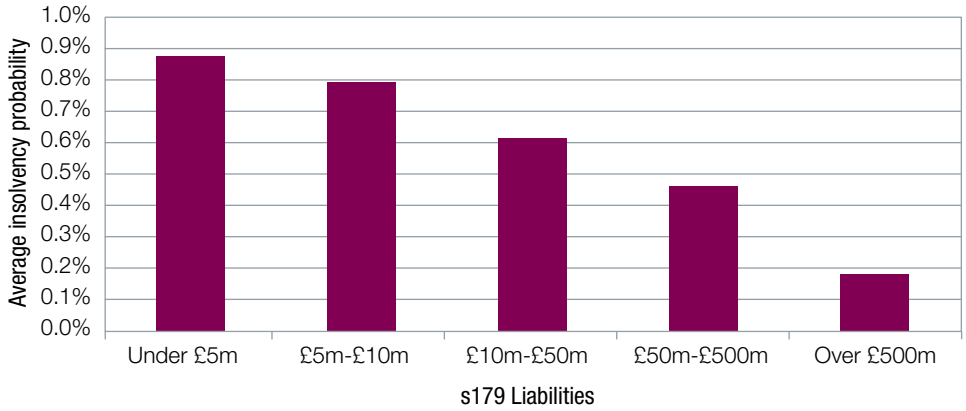
The weighted average insolvency probability is 0.23 per cent in Purple 2008.

Chart 6.1 | Average Insolvency probability by number of members



Source: PPF, The Pension Regulator

Chart 6.2 | Average insolvency probability by s179 liability level



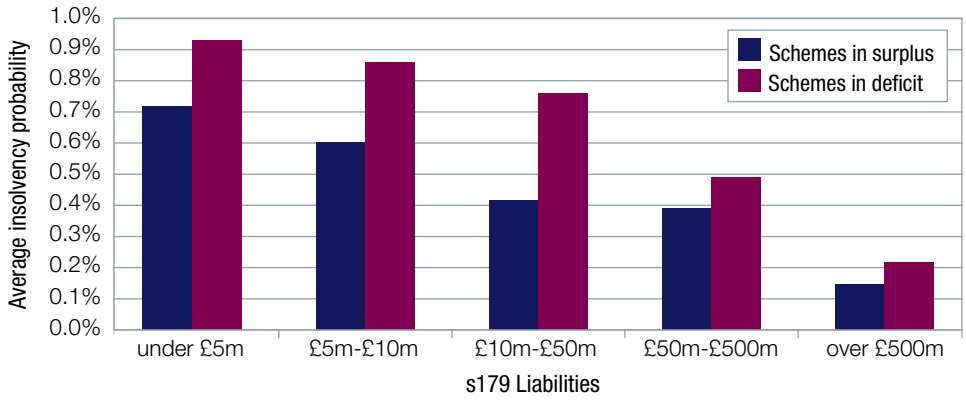
Source: PPF, The Pension Regulator

Insolvency probabilities for sponsoring employers of schemes in deficit are higher then for schemes in surplus.

In 2008, insolvency probabilities for sponsoring employers of schemes in deficit were higher than those for schemes in surplus (Chart 6.3). This was true of every size category.

In previous years, larger schemes (over £50 million) which were in deficit had lower insolvency probabilities than those in surplus. This reversal may owe to these larger schemes doing more (such as providing better scheme data, or putting in place contingent assets) to lower their assessed insolvency probability in 2008.

Chart 6.3 | Average insolvency probability by s179 liability level (schemes in deficit and schemes in surplus)

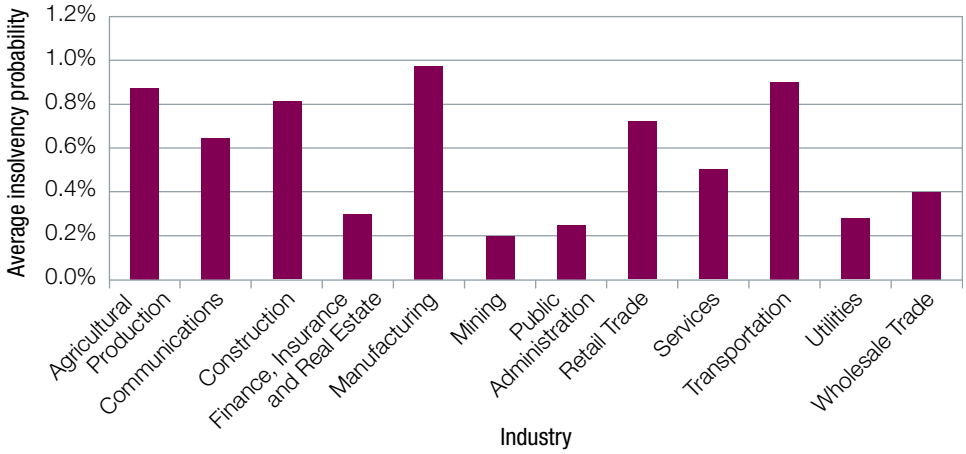


Source: PPF, The Pension Regulator

6.5 Insolvency probability by industry

The 1972 US Standard Industry Classification (SIC) codes have been used to group employers by industry.[18] Chart 6.4 shows the average insolvency probability in all industries for 2008. Manufacturing, agricultural production, and transportation are the three sectors with the highest average insolvency probabilities, while the mining sector has the lowest average insolvency probability.[19]

Chart 6.4 | Average insolvency probability by industry



Source: PPF, The Pension Regulator

18 D&B use the 1972 US Standard Industry Classification (SIC) codes for the purposes of industry classification, so these SIC codes have been used in this document for consistency.

19 These average insolvency probabilities by industry are based on the Purple 2008 sample and will differ to the average industry insolvency probabilities supplied by D&B for the purpose of levy calculation.

6.6 UK growth and insolvencies

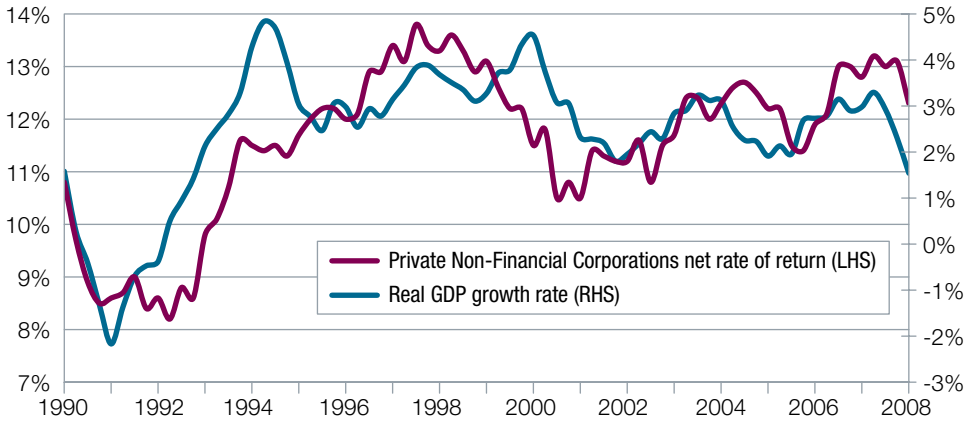
Corporate profitability fell over the year to June 2008.[20] The annual net rate of return earned by non-financial corporations in the second quarter of 2008 was 12.3 per cent, compared to 12.8 per cent a year ago after a period of stability.[21] Previous strong profitability growth was probably one of the factors behind a continued decline in the company liquidation rate. Only 0.55 per cent of active companies in Great Britain went into liquidation in the 12 months ending June 2008, compared to 0.57 per cent in the 12 months to June 2007. Third quarter figures for 2008 point to a reversal of this trend, however, with the liquidation rate edging up to 0.58 per cent.

Corporate insolvencies rose in the second and third quarters of 2008.

Levels of company debt increased during the period of 'cheap money' over the last few years, leading to increased levels of company borrowing. For private non-financial corporations, the ratio of debt to their stock of financial assets was 82 per cent in the second quarter of 2008. While not yet at the heights experienced in 1992 (around 90 per cent), this ratio is similar to the levels experienced in the run up to the early 1990s recession.

Moreover, the ability to service this debt is becoming more difficult. The income gearing of private non-financial corporations rose to 12.5 per cent in the second quarter of 2008, up from 9.5 per cent a year ago.[22]

Chart 6.5 | UK GDP growth and corporate profitability



Source: ONS

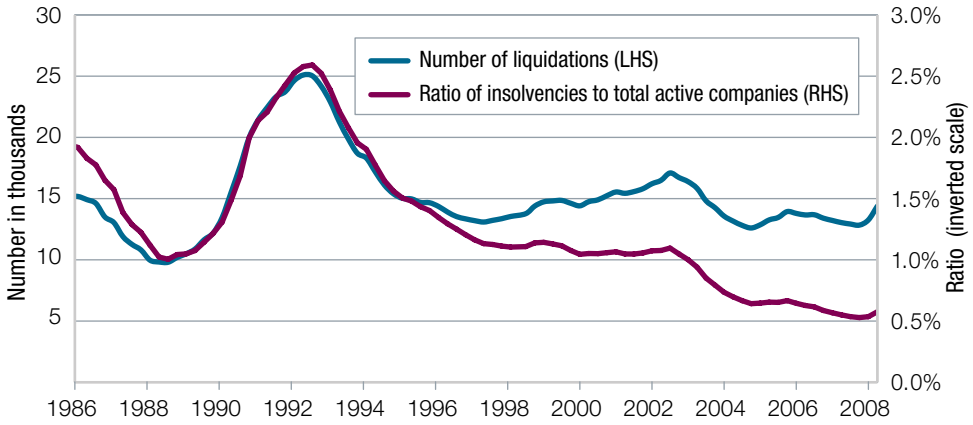
20 Corporate profitability for the UK excluding UK continental shelf (UKCS) companies. UKCS companies are those involved in the exploration for, and production of, oil and natural gas from the UK continental shelf.

21 The Office for National Statistics defines the net rate of return as the return on capital employed within a firm. That is, the value of profits (allowing for depreciation) divided by the value of fixed assets (allowing for depreciation) and inventories.

22 Income gearing is measured by the ratio of net interest payments to gross operating surplus for private non-financial corporations. The figures quoted differ from those in Purple 2007 due to revisions in the data by ONS.

Profitability is expected to decline given the global economic slowdown. Chart 6.5 shows that real GDP growth began to slow in the last quarter of 2007. GDP was broadly flat in the second quarter of 2008 and in the third quarter saw its first quarterly fall since 1992. Growth prospects in the UK and globally have been revised down significantly. In the UK, the average GDP forecast for 2009 shows a fall in GDP of 1.5 per cent.[23] Due to the bleaker economic prospects many companies have been issuing profit warnings for the coming year. Insolvency practitioners have commented on the expected increases in insolvencies due to the slowing economy.

Chart 6.6 | UK corporate insolvencies



Source: Insolvency Service

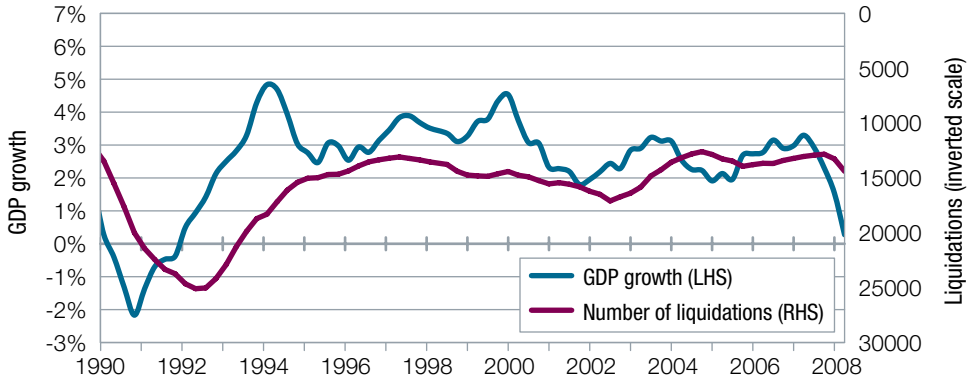
23 UK Economic Forecasts, November 2008, HM Treasury.

Insolvency Service data show that the level of insolvencies rose by 10.5 per cent quarter-on-quarter in the third quarter of 2008, up 26.3 per cent year-on-year although the insolvency rate only edged marginally higher.[24] The level of insolvencies is likely to rise further in the coming months given the recession.

The early 1990s recession, when GDP fell by 2.5 per cent from peak to trough, resulted in an approximate 150 per cent rise in both the level of insolvencies and the insolvency rate. The peak in insolvencies occurred some 12 to 18 months after the trough of the recession. A major uncertainty in the current downswing is the impact of the credit crunch on the level and timing of insolvencies (Chart 6.7). The length of this lagged effect may be shorter in the current circumstances given the impact the credit crunch has had on companies' ability to find financing and carry on trading in the short-term.

Since the mid-1990s, the insolvency rate has trended downwards while the level of insolvencies has remained broadly unchanged (Chart 6.6). In technical terms, this was because the number of companies was rising more rapidly than the liquidations. In economic terms, it probably reflected the fact that GDP growth was above trend.

Chart 6.7 | UK corporate insolvencies and GDP



Source: Insolvency Service, ONS

6.7 Implications for the PPF

The universe of sponsoring employers for PPF-eligible DB schemes is only a small part of the total universe of UK companies (16,000 compared with approximately 2.5 million). It is unclear whether the sponsors of eligible schemes will be more affected by a downswing than companies as a whole. The PPF universe is broadly made up of companies which have been operating for longer and are larger, meaning they may be less affected by economic changes and more likely to continue trading through an economic downturn. Generally, smaller and younger companies are the first to go into liquidation.

24 Statistics Release: Insolvencies in the Third Quarter, UK Insolvency Service, November 2008. The insolvency rate is the 12 month moving average of the number of liquidations divided by the total number of active companies.

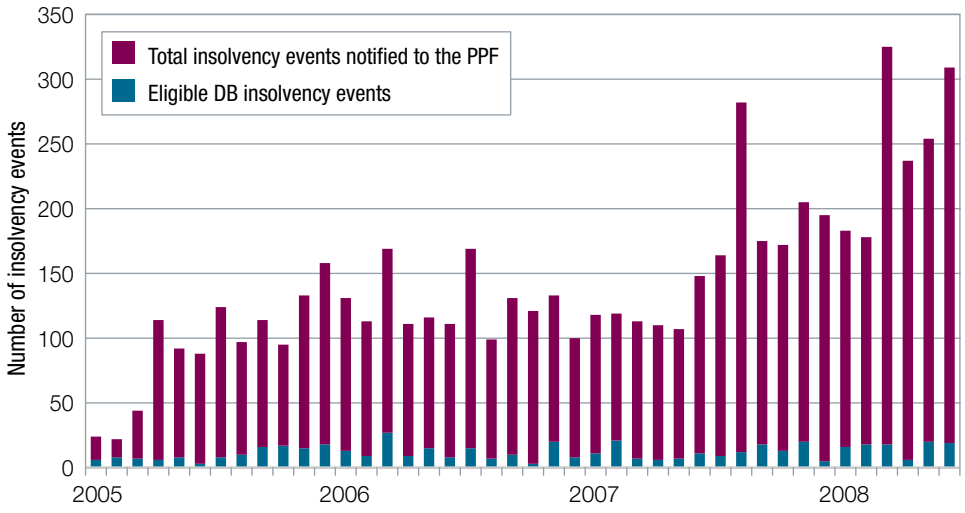
However, the PPF universe also has a higher proportion of manufacturing companies which tend to be hit more in a usual economic downturn. Due to these differences the number and rate of insolvencies in the wider economy does not directly translate into insolvencies in the PPF universe.

Chart 6.8 highlights this by showing that the number of insolvency events notified to the PPF saw a sharp increase in the third quarter of 2008. However, the number of those notifications that relate to schemes that are eligible for PPF coverage has remained broadly stable over time.[25] This information is based on when the insolvencies are notified to the PPF. However, there can often be some delay between the date of the insolvency and the date of the notification.

While an increase in liquidations by sponsoring companies of eligible DB schemes is likely, this increase will probably not be as large as experienced in the economy as a whole.

The number of insolvency events notified to the PPF has increased. However, the number that are PPF-eligible has remained steady over time.

Chart 6.8 | Insolvency events notified to the PPF



Source: PPF

25 Insolvency events are notified to the PPF by an s120 notice. All firms with occupational pension schemes have to inform the PPF in the case of insolvency. However, many of the pension schemes will be defined contribution rather than defined benefit and so ineligible for PPF compensation.

7 Asset allocation

7.1 Summary

- Equities and gilts and fixed interest continue to dominate scheme asset allocation. Scheme return data show that the joint share has, however, declined from 89.4 per cent in 2006 to 89.1 per cent in 2007 and 87.0 per cent in 2008.
- In 2008, the share of gilts and fixed interest increased to 33.1 per cent from 29.6 per cent in 2007 and 28.3 per cent in 2006. Meanwhile, the equity share dropped to 53.9 per cent in 2008 from 59.5 per cent in 2007 and 61.1 per cent in 2006.
- As in Purple 2006 and 2007, more mature schemes tend to invest more heavily in gilts and fixed interest and less in equities.
- A bigger share of total scheme equity holdings is in overseas equities (51.6 per cent) than in UK equities (48.0 per cent).[26]
- Total scheme holdings of gilts and fixed interest are spread fairly evenly between government (33.2 per cent), corporate (32.6 per cent) and index linked (33.9 per cent).
- Looking at simple averages, the share of UK equities is considerably bigger (60.4 per cent) than that for overseas equities (39.6 per cent), while the share of government fixed interest securities is considerably higher (47.2 per cent) than the index-linked average (19.8 per cent).
- This indicates that smaller schemes have a greater slant within equities to UK equities and within bonds to conventional government bonds.
- Flow data from the Office of National Statistics show a continuing disinvestment in equities and continuing investment in bonds.

7.2 Introduction

This chapter examines the asset allocation of PPF-eligible defined benefit schemes using scheme return data provided to the Pensions Regulator. The latest scheme returns provide more detailed information than in 2006 and 2007. Equities, for example, are split into UK and overseas while gilts and fixed interest is divided into government, corporate and index-linked.

These data are used to look at trends in asset allocation over the last three years. In addition, this chapter presents analysis of the impact of scheme size, maturity, insolvency probability and funding level on asset allocation. The results are generally similar to those in Purple 2006 and 2007.

This chapter also uses data from the Office of National Statistics on asset allocation of 350 large self-administered pension funds.[27] This makes possible the analysis of longer-term trends in asset allocation, and the impact of investment flows as opposed to valuation effects on asset allocation.

26 Does not sum to 100 as no UK overseas equity split provided for some schemes.

27 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), of which around 10 are not included in final calculations. It is estimated in MQ5 that pension funds have total assets of around £1000 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 is defined as an occupational pension scheme with units invested in one or more managed schemes or unit trusts. A superannuation pension fund is defined as an organisational pension programme created by a company for the benefit of its employees. The sample may also contain defined contribution schemes.

Table 7.1 | Asset split for total scheme assets [28]

	2006		2007		2008
	Purple 2006	Extended Purple 2006	Purple 2007	Extended Purple 2007	Purple 2008
Equities	61.1%	61.1%	60.0%	59.5%	53.9%
Gilts and fixed interest	27.8%	28.3%	28.8%	29.6%	33.1%
Insurance policies	0.9%	0.9%	0.7%	0.8%	1.0%
Cash and deposits	2.4%	2.3%	2.4%	2.3%	2.9%
Property	5.0%	4.3%	5.4%	5.2%	5.6%
Other investments	2.7%	3.1%	2.7%	2.5%	3.7%

Table 7.2 | Asset allocation: simple averages [28]

	Simple averages		
	2006	2007	2008
Equities	52.6%	53.5%	50.6%
Gilts and fixed interest	22.6%	24.0%	26.7%
Insurance policies	14.9%	13.7%	12.8%
Cash and deposits	3.9%	3.7%	4.4%
Property	2.1%	2.5%	2.9%
Other investments	3.6%	2.6%	2.6%

Table 7.1 shows that pension scheme assets are still concentrated in equities and gilts and fixed interest. The combined share, however, fell to 87.0 per cent in 2008 from 89.1 per cent in 2007 and 89.4 per cent in 2006. The share of 'other investments' rose to 3.7 per cent from 2.5 per cent in 2007 with smaller increases for insurance policies, cash and deposits and property.

The share of equities in total scheme assets fell to 53.9 per cent from 59.5 per cent in 2007 and 61.1 per cent in 2006 while the share of gilts and fixed investment rose to 33.1 per cent from 29.6 per cent in 2007 and 28.3 per cent in 2006.

Table 7.2 shows simple averages for asset allocation for the 6,898 schemes in the Purple 2008 sample, the 7,542 schemes in the extended 2007 dataset and the 7,751 schemes in the extended 2006 dataset. These will reflect to a better extent the asset allocation of the thousands of smaller schemes. Table 7.1 effectively weights each scheme's asset allocation by the share of its assets in total assets while in Table 7.2 the schemes are equally weighted.

In 2008, there was a big rise in the share of fixed interest assets, alongside a fall in the equity share.

28 Some columns in this table may not sum to 100 due to rounding.

The latest scheme returns give a more detailed picture of asset allocation.

In simple average terms, the insurance policy proportion has been falling: to 12.8 per cent in 2008 from 13.7 per cent in 2007 and 14.9 per cent in 2006. The 'other investments' proportion has also been falling steadily. The equity proportion also fell in 2008. Meanwhile, the gilts and fixed interest proportion has been rising steadily and in 2008 the proportions of cash and property also rose.

Overall, the asset allocation of schemes in the extended Purple 2007 database is similar to that in Purple 2007 (see Annex A).

7.3 More detailed information from new scheme return

Table 7.3 | More detail on gilts and fixed interest and equity allocations [29]

	Gilts and fixed interest			Equities	
	Government fixed interest securities	Corporate fixed interest securities	Index linked securities	UK equities	Overseas equities
Average share	47.2%	33.0%	19.8%	60.4%	39.6%
Weighted average share	33.2%	32.6%	33.9%	48.0%	51.6%

The latest scheme return gives more detailed information on asset allocation than in 2006 and 2007. In particular, it provides further breakdown of gilts and fixed interest and equity categories (Table 7.3). On a weighted basis, over half of all equity holdings are held in overseas equities (51.6 per cent) while total holdings of gilts and fixed interest holdings are spread fairly evenly across government fixed interest, corporate fixed interest and indexed linked categories.

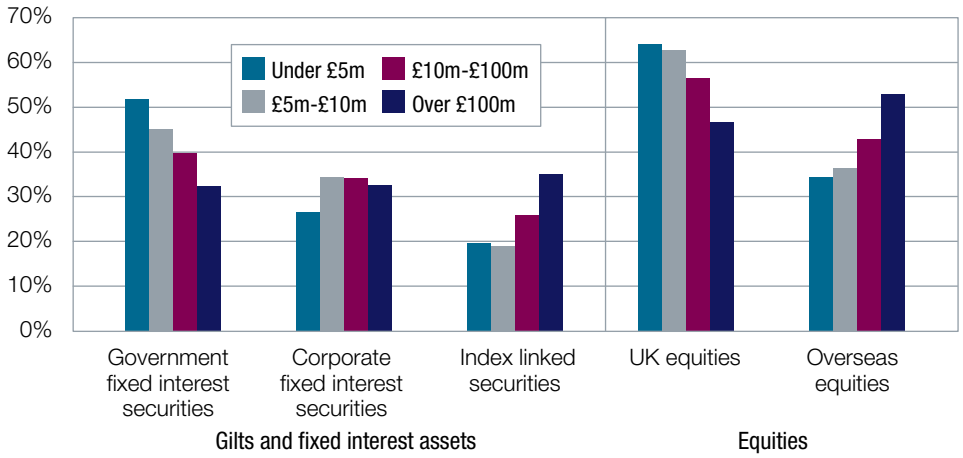
The picture is, however, very different looking at the simple average figures. On this basis, the overseas equity share is 39.6 per cent and the government fixed interest share within total gilts and fixed interest rises to 47.2 per cent with the index linked share falling to 19.8 per cent. This indicates a very different asset allocation within equities, and within gilts and fixed interest, for large and small schemes.

The share of overseas equity is now greater than the share of UK equity.

This is confirmed in Chart 7.1. Schemes with assets less than £5m have over half (51.8 per cent) of their investments in gilts and fixed interest in government fixed interest securities, and just 19.7 per cent in index linked. This is in marked contrast to the asset allocation of the largest schemes, those with assets over £100 million, where there is a broadly even spread across the three bond categories. The smallest schemes have 64 per cent of their total equity holdings in UK equities whereas the largest schemes have only 47 per cent in UK equities and 53 per cent in overseas. The holdings of overseas equities of large schemes are sufficient to push the overall share of overseas above 50 per cent.

29 Some columns do not sum to 100 per cent due to rounding. The weighted average shares of UK and overseas equities do not sum to 100 per cent as this equity split was not available for all schemes.

Chart 7.1 | Equity and gilts and fixed interest asset split by asset size



Source: PPF, The Pensions Regulator

7.4 Scheme size

Chart 7.2 | Unweighted average s179 asset allocation of schemes by asset size

Source: PPF, The Pensions Regulator

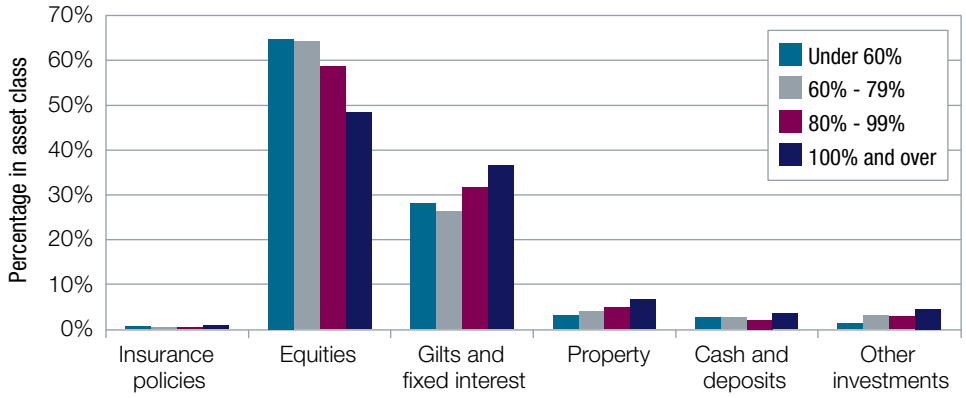
Chart 7.2 shows the average asset allocation of schemes by scheme size as measured by the value of assets. The allocation of gilts and fixed interest increases with the size of scheme while the allocation of assets in insurance policies decreases (from 27.0 per cent in schemes with under £5 million in assets to 1.1 per cent in the largest asset category). Apart from the smallest schemes (those with less than £5 million in assets), the share of equities does not vary greatly with size at around 55 per cent of assets.

Some of the schemes in the dataset are wholly insured. This is defined as those with no investments other than qualifying insurance policies specified by regulations. There are 696 of these schemes in the dataset (mainly small schemes) and they have been excluded from the remainder of this chapter's analysis.

Larger schemes tend to hold more assets in gilts and fixed interest than smaller schemes.

7.5 Funding level

Chart 7.3 | Weighted average asset allocation by s179 funding level

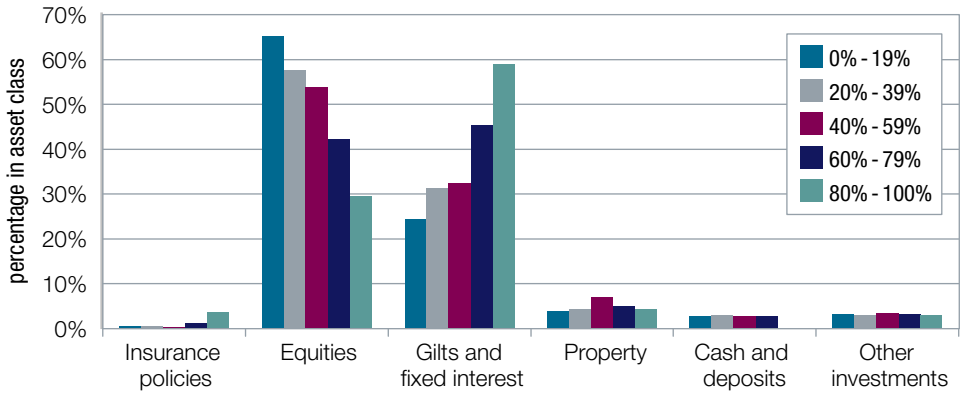


Source: PPF, The Pensions Regulator

Chart 7.3 shows the tendency for schemes to have a lower proportion of equities the less well funded they are. For example, schemes less than 80 per cent funded have on average 64 per cent of their assets in equities while schemes 100 per cent funded or better have 48 per cent. Meanwhile, as a scheme becomes better funded the proportion of assets in gilts and fixed interest increases (except in the lowest funding group). These patterns are similar to those noted in earlier Purple publications.

7.6 Scheme maturity

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



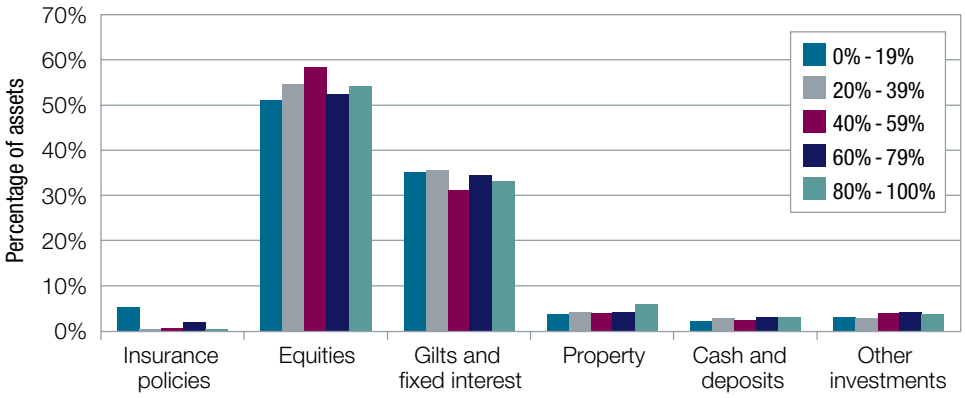
Source: PPF, The Pensions Regulator

Chart 7.4[30] shows that more mature schemes tend to hold a significantly smaller proportion in equities than less mature schemes whilst the proportion held in gilts and fixed interest is considerably higher. This reflects the need to be able to match pension payment profiles more closely and to increase liquid funds available to pay pensions as schemes mature. Scheme maturity is measured as the proportion of liabilities that relate to pensions currently in payment.

More mature schemes tend to hold fewer assets in equities.

7.7 Insolvency probability

Chart 7.5 | Weighted average asset allocation of schemes by insolvency score



Source: PPF, The Pensions Regulator

There appears to be no clear relationship between asset allocation of schemes in the Purple 2008 dataset and their sponsor's insolvency risk as indicated by D&B insolvency scores.

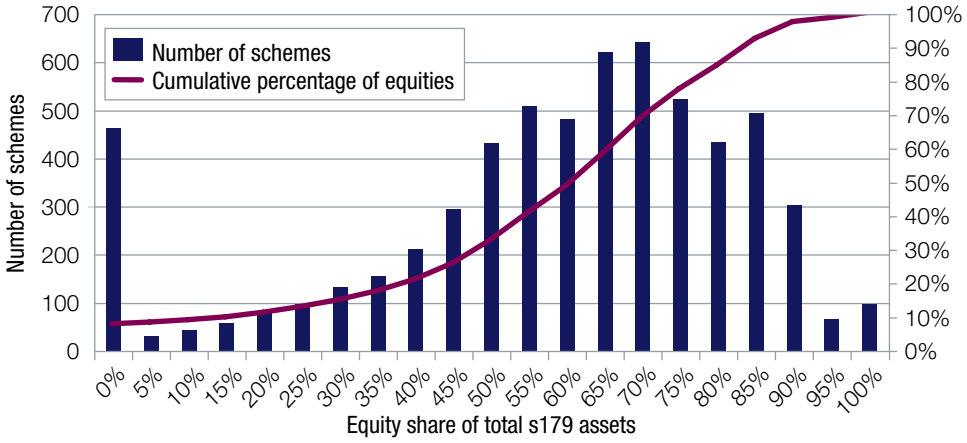
30 One scheme in the most mature group has been excluded from Chart 7.4. This scheme makes up 69 per cent of liabilities of that group. Excluding this scheme reduces the share of 'other investments' from 20.6 percent to 3.0 per cent.

7.8 Distribution of assets across schemes

It is important to consider not only the average asset allocation according to different characteristics but also whether there are many schemes that significantly differ from the average.

Chart 7.6 represents the distribution of investment held in equities in the Purple 2008 dataset. Around 7.5 per cent of schemes do not have any equities in their portfolios. Approximately half hold more than 60 per cent of their assets in equities while around 15 per cent of schemes hold more than 80 per cent and nine per cent of schemes hold 10 per cent or less.

Chart 7.6 | Histogram of equities and cumulative percentage

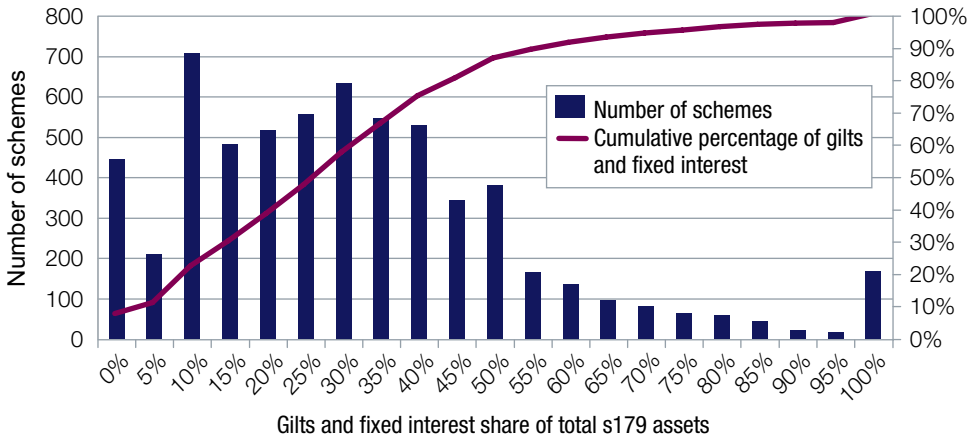


Source: PPF, The Pensions Regulator

Around half of schemes hold more than 60 per cent of assets in equities.

As in the Purple 2007 dataset, seven per cent of schemes held no investments in gilts and fixed interest assets. In the Purple 2008 dataset this amounts to 444 schemes. Around 38 per cent of schemes hold 20 per cent or less of their assets and 14 per cent of schemes hold over half their assets in gilts and fixed interest assets. Chart 7.6 shows a somewhat different picture to that of Purple 2007. In the Purple 2007 dataset there were 34 per cent of schemes with 15 per cent or less of their assets in gilts and fixed interest, while in Purple 2008 30 per cent of schemes are in this category.

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



Source: PPF, The Pensions Regulator

In the Purple 2008 dataset only 3.8 per cent of schemes hold large amounts (over 80 per cent of total assets) in either property, cash and deposits, insurance policies or other investments, and average asset allocation with respect to these assets is small for the majority of schemes.

Around 14 per cent of schemes hold over half their assets in gilts and fixed interest.

7.9 Longer term trends

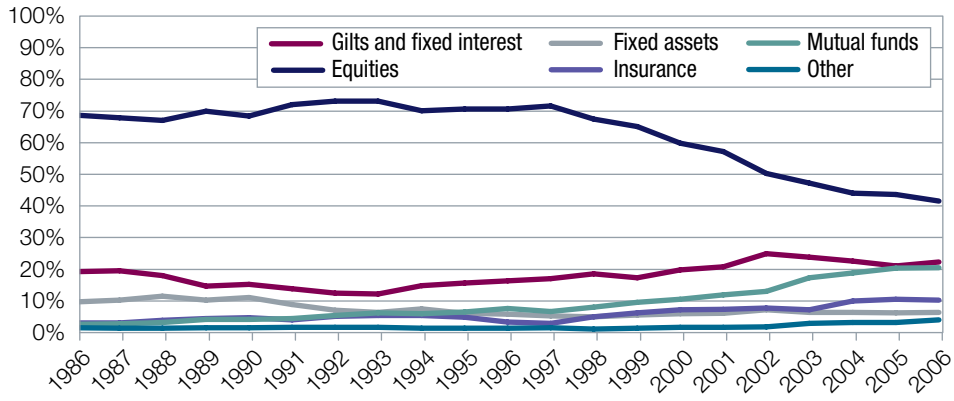
Interpreting trends in the asset allocation of DB pension schemes can be difficult given that changes in asset proportions invested can be influenced by flows between asset types, asset prices (or market conditions), or a combination of both. In order to distinguish between active and passive choices in asset allocation, the Purple Book examines flows into various asset classes as well as the share of total assets using data from the MQ5 survey from the Office of National Statistics.[31] However, it should be noted that this data includes local authorities and defined contribution schemes.

The MQ5 data in Chart 7.8 shows a shift in asset allocation away from equities over the last 10 years and towards mutual funds over the last 20, possibly reflecting the growth of defined contribution schemes. The gilts and fixed interest share rose steadily between 1993 and 2002. However, in contrast to the Purple 2008 data there is no sizeable change in gilts and fixed interest assets in recent years. The ONS data also show a continuing increase in the share of insurance policies over the last decade, from 2.5 per cent in 1996 to 9.4 per cent in 2006.

Within equities there has been a marked switch over the last nine years from UK to overseas. Meanwhile, over the same period, within gilts and fixed interest there has been a large drop in the share of government and index linked securities and a rise in the corporate bond share. These movements can be seen in charts 7.9 and 7.10.

Around half of schemes hold more than 60 per cent of assets in equities.

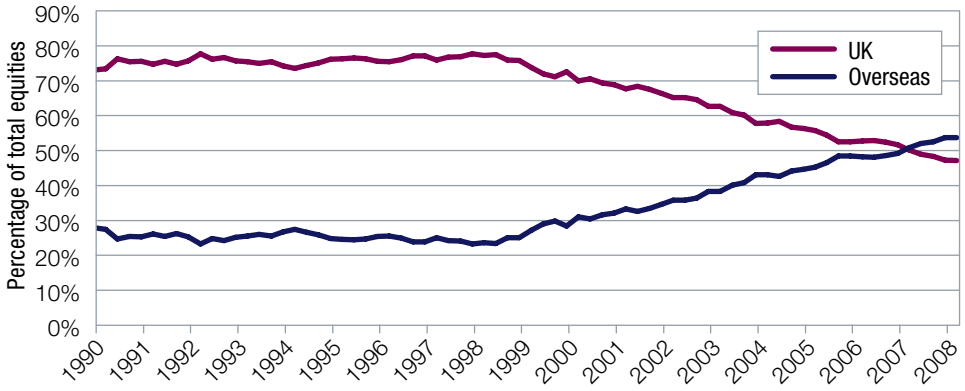
Chart 7.8 | Asset allocation by percentage share and asset class



Source: ONS

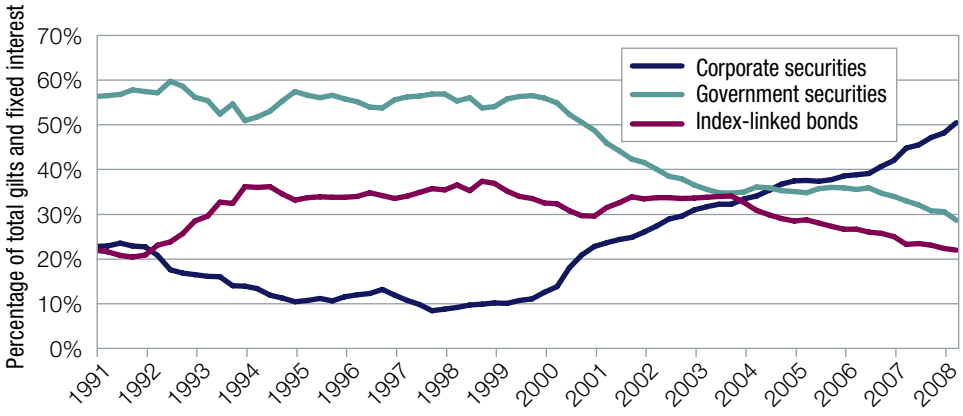
31 The data from the ONS MQ5 enquiry is based on a sample of 350 pension schemes. This is comprised of around 100 local authorities and 250 public and private corporations (the PPF database excludes local authorities and public corporations), of which around 10 are not included in final calculations. It is estimated in MQ5 that pension funds have total assets of around £1000 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 is 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 an organisational pension programme created by a company for the benefit of its' employees. The sample may also contain defined contribution schemes..

Chart 7.9 | Proportion of total equities held in the UK and overseas



Source: ONS

Chart 7.10 | Proportion of total gilts and fixed interest assets held in corporate securites, government securities and index linked bonds

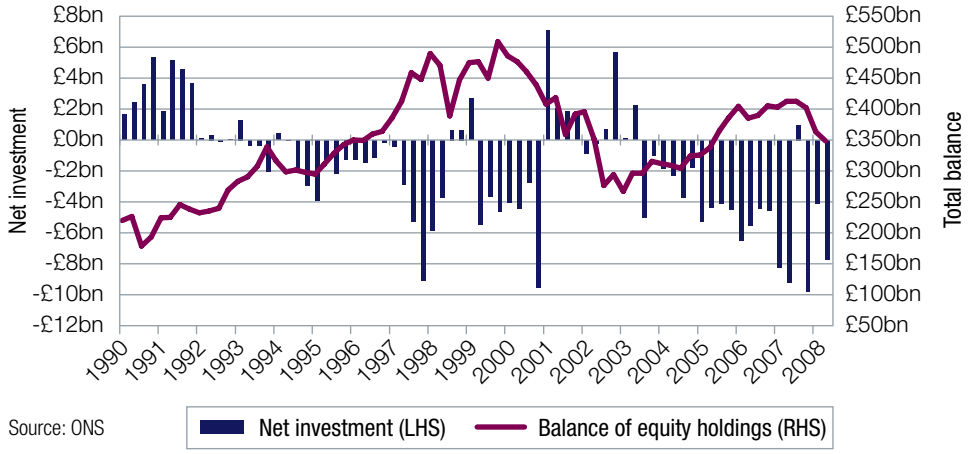


Source: ONS

The share of individual asset classes in total scheme assets can vary from year to year as a result of changes in asset prices, making it difficult to draw conclusions about pension scheme behaviour. To illuminate this issue, Charts 7.11 and 7.12 show net investment flows into equities and bonds.

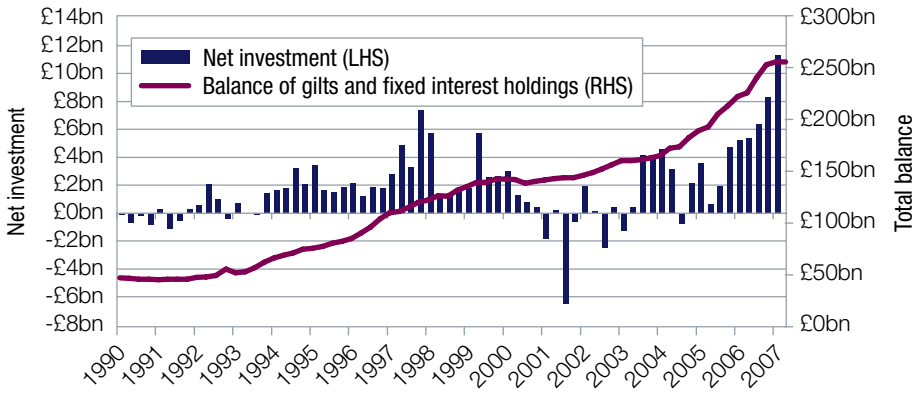
Since 1993, there have been only seven quarters of significant net inflows into equities. Four of them occurred in 2001 and 2002 when equity markets were falling sharply. This may indicate that over that period pension funds had become concerned about the equity shares in overall asset allocation falling below target levels or that funds regarded equities as being very cheap. Conversely, there has only been one quarter of significant net outflow from gilts and fixed interest holdings and this was also in 2001. The net inflows to this asset category have remained relatively constant until the fourth quarter of 2005 when they began to increase significantly. The mutual fund balances (as seen in Chart 7.13) have been sharply increasing due to the levels of net investment seeing only two quarters of net outflows since 1990. There have also been large net inflows into mutual funds in the last 10 years, possibly associated with the growth of DC schemes.

Chart 7.11 | Net investment and balance of equities



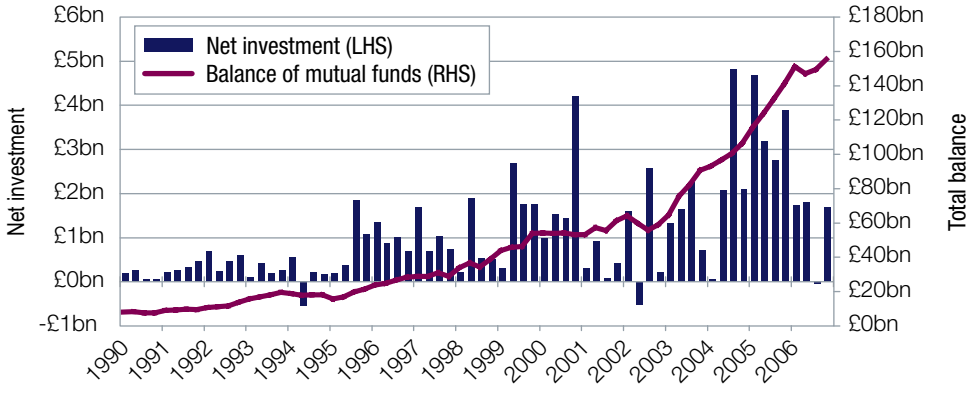
Source: ONS

Chart 7.12 | Net investment and balance of gilts and fixed interest



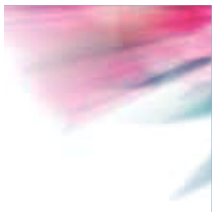
Source: ONS

Chart 7.13 | Net investment and balance of mutual funds



Source: ONS






8 Long-term risk and short-term risk concentration[32]

8.1 Summary

- The Long-Term Risk Model (LTRM) is the key tool that the PPF uses to understand and quantify the risks it faces over the long-term. It helps the PPF assess the level of resources required to meet potential future liabilities.
- A large proportion of short-term risk is from schemes with the highest insolvency probabilities (those in insolvency Group 10, with an insolvency probability of more than 3.521 per cent). This group alone is accountable for 36.1 per cent of short-term risk, with an average insolvency probability of 12.5 per cent.
- The PPF is currently consulting on the inclusion of long-term unexpected risk in the formula used to calculate individual levy bills.
- The proposed new levy formula is designed to calculate individual levies so that they more accurately reflect the degree of long-term risk each scheme poses to the PPF.
- The limited increases in the total levy estimate in 2009/10 is intended to restrict the burden of the levy at a time when sponsors are likely to face more difficult operating conditions.

8.2 Introduction

The sharp deterioration in scheme funding since June 2007 has elevated both the short-term and long-term risk facing the PPF. Despite the escalation of long-term risk, the PPF has decided against an increase in the total levy above the increase in average earnings. The levy estimate for both 2008/09 and 2007/08 was £675 million. The 2009/10 levy estimate is £700 million, the 2008/09 levy estimate indexed to expected earnings growth. Holding the levy constant in real terms is designed to avoid placing an excessive burden on scheme sponsors at a time of weakening corporate finances.

The PPF is currently consulting on the inclusion of long-term scheme risk in the calculation of individual levy bills. The proposed changes are intended to produce a levy that more closely reflects the risks – both short-term and long-term – that schemes pose. It will have the effect of shifting the burden of the levy away from schemes with high short-term risk and, hence, further reduce the impact of the PPF levy on sponsors with stressed financial positions.

8.3 Long-term risk

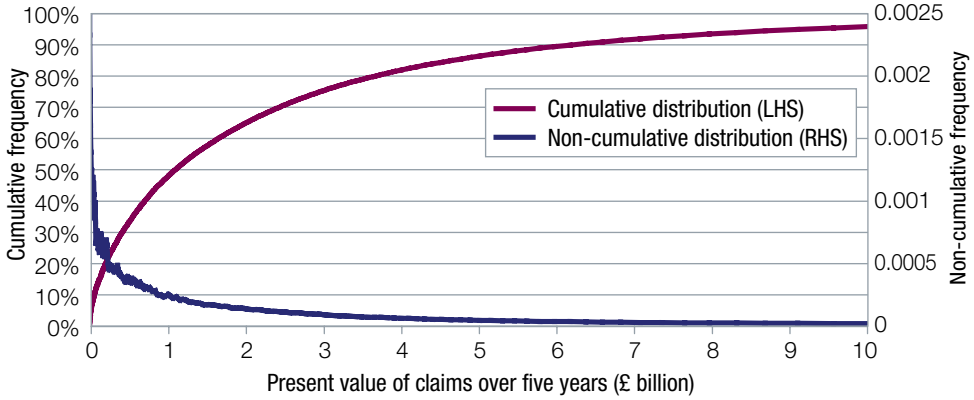
In calculating the total levy to be collected, the PPF could simply refer to the liabilities it already has and to those it is likely to accrue (on the basis of one-year insolvency probabilities) over the course of the following year. The result would be a levy which may vary significantly from year to year. The PPF has, therefore, sought to develop information about both expected risks and potential risks over a multi-year period, and to set the levy acknowledging this longer-term risk horizon.

32 This chapter analyses the Purple 2008 data set of 6898 schemes.

For a full discussion of the LTRM's processes and functions, see the PPF's information paper 'Modelling uncertainty: an introduction to the PPF Long-Term Risk Model', August 2007, at: www.pensionprotectionfund.org.uk/ltrm_paper_aug_2007.pdf

The LTRM models the full range of risk the PPF faces and indicates the probability of different, particularly adverse, outcomes. The output of the model is a probability distribution of the level of claims on the PPF over the chosen period, involving 500,000 scenarios (500 credit risk scenarios for each of the 1,000 economic scenarios). Chart 8.1 shows output from a March 2008 model run, projecting claims over a five-year period.

Chart 8.1 | Central scenario run March 2008 for five-year period



Source: PPF

Chart 8.1 shows that the distribution of claims is heavily skewed, with a significant positive impact on the average claim (the mean figure) from claims at the higher end of the distribution. Another noteworthy feature is that a significant proportion of the risk, especially in scenarios where claims are above average (adverse scenarios), relates to large, currently stable schemes. This is in marked contrast to short-term risk measures, which indicate that the overwhelming majority of risk is coming from smaller, less resilient schemes.

LTRM outputs of the sort presented in Chart 8.1 form a key consideration in establishing the levy estimate (targeted total levy collections). The policy framework used to decide the level of the 2008/09 levy was set out in the 2008/09 Levy Determination, available at: www.pensionprotectionfund.org.uk/0809_levy_determination_-_feb_19_2008.pdf

The PPF takes account of a range of information to assist with the setting of the targeted total levy collection. In deciding the 2008/09 levy, this information included the probability distribution shown above, summary information on the claims distribution of the kind shown in Table 8.1, and equivalents over a 10-year time horizon. Sensitivities in relation to a number of factors were also considered.

A significant proportion of the risk in adverse scenarios relates to large, currently stable schemes.

Table 8.1 | First year claims on the PPF (s179 basis) - March 2008 LTRM run

	Claim (annualised)[33]					
	Median	Mean	75th percentile	90th percentile	95th percentile	99th percentile
March 2008 LTRM run	£0.17 billion	£0.52 billion	£0.58 billion	£1.42 billion	£2.19 billion	£4.28 billion
March 2007 LTRM run	£0.04 billion	£0.16 billion	£0.15 billion	£0.45 billion	£0.74 billion	£1.60 billion

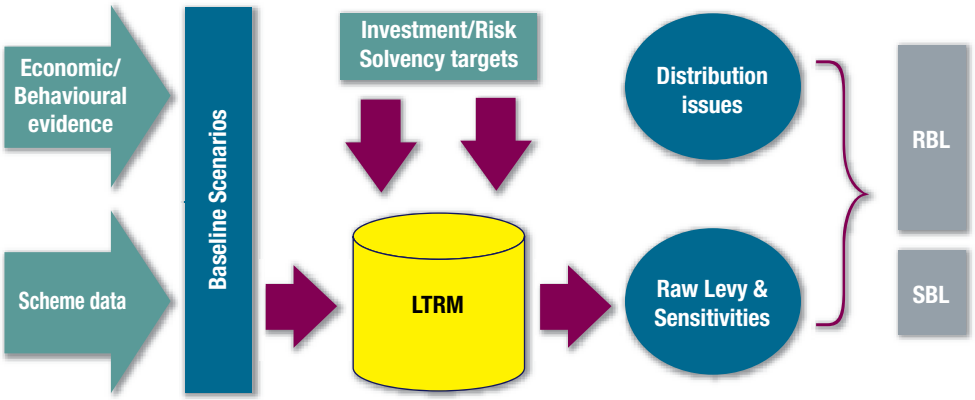
Long-term risk increased between March 2007 and March 2008.

Table 8.1 shows the extent of the increase in long-term risk as measured by the LTRM between March 2007 and 2008. Expected first-year claims more than tripled from £0.17 billion to £0.52 billion. This escalation was driven primarily by deteriorating scheme funding, with declining creditworthiness playing an ancillary role.

Among the assumptions that need to be made in producing a long-term claims distribution is the extent of deficit elimination under the scheme-specific funding regime. For the 2008 LTRM runs, the PPF has made use of the information on technical provisions and recovery plan lengths summarised in the Pensions Regulator's 'Recovery Plans: an initial analysis'. These pointed to larger annual deficit contributions than had previously been assumed, the result of higher than assumed technical provisions and shorter recovery plan lengths. The PPF's information paper on modelling uncertainty, referred to above, demonstrated that such changes to the LTRM assumptions could have appreciable effects in reducing the PPF's long-term risk.

When setting the levy estimate, the Board of the PPF also takes account of a range of factors from current economic conditions to its view of trends in the pensions environment. These wider factors, and issues around the distribution of the levy, are represented diagrammatically in Chart 8.2 below.

Chart 8.2 | Representation of the factors influencing the LTRM and the levy



33 The annualised claim shown is for year one and is not simply one-fifth of the five-year figure, as an adjustment has been made to take account of the declining populations in later years of the model run as insolvencies take effect. This prevents solvent schemes in year five facing higher charges simply because the pool of schemes across which the claim is spread has declined, and means that the year one figures shown have an element of front-end loading. The effect is most marked in the tail; thus the 95th percentile claim on the five-year graph is just under £9.6 billion, but the year one annualised equivalent is £2.2 billion, not £1.9 billion.

8.4 The allocation of the levy

The total risk of future claims is a significant consideration in setting the overall level of the levy needed to ensure that the PPF meets its future obligations. The levy charged to an individual scheme is, however, currently determined by short-term insolvency and underfunding risk. Only the levy scaling factor (LSF) in the current risk-based levy formula is set with a view to long-term risk, being determined by targeted total levy collections.

The consultation on the future development of the levy published in November 2008 sets out a levy formula in which there is a greater alignment between long-term risk and the levy's distribution. This is available at www.pensionprotectionfund.org.uk/future_development_consultation_nov_2008.pdf.

The proposed new formula is intended to more closely align each scheme's annual individual levy to the degree of long-term risk it presents (as measured by the LTRM). The LTRM allows a more detailed calculation of individual scheme's tail risk (expected claims in the event of an extreme event with low probability), which will form an important consideration in the quantification of a scheme's long-term risk. By implementing the new levy formula, the PPF intends to ensure that schemes with high short-term risk do not subsidise the levy costs of the risk of adverse claims.

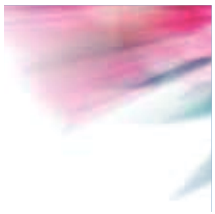
The proposed new levy formula also takes account of a scheme's investment risk in calculating its individual levy. A scheme with a high-risk investment strategy, favouring more volatile asset classes (such as equities), faces a higher risk of erosion of its funding position due to a decline in the value of its investments. Such a scheme is more likely to make a claim on the PPF and would, therefore be, charged a greater risk-based levy.

Chapter 4 looks at the funding position as at 31 March 2008 of the schemes in the Purple 2008 dataset, while Chapter 6 analyses the one year ahead insolvency risk faced by the sponsoring companies. In the following analysis, we bring together these two aspects of short-term risk. This is done by multiplying each underfunded scheme's deficit (on a s179 basis) by the probability of its sponsor(s) becoming insolvent over the next 12 months (derived from D&B failure scores). The result is a measure of a scheme's short-term risk:

Short-term risk for underfunded scheme A=
Deficit in scheme A (in £s) x Insolvency probability of sponsoring company

The proposed new levy formula is intended to more closely align each scheme's levy to its long-term risk.






8.5 Grouping of insolvency probabilities

The PPF uses the insolvency probabilities for scheme sponsors alongside an estimate of the scheme funding position to calculate the levy for individual schemes. In order to present the information in a manageable form, the insolvency probabilities and s179 funding levels have been grouped into the categories shown in Tables 8.2 and 8.3. For a fuller discussion of these categories, see Purple Book 2007.

Table 8.2 | Insolvency groups

Insolvency group	Assumed probabilities of insolvency included in the group
1	Less than or equal to 0.0740%
2	0.0740% to 0.1804%
3	0.1804% to 0.3033%
4	0.3033% to 0.4286%
5	0.4286% to 0.5548%
6	0.5548% to 0.7241%
7	0.7241% to 0.9609%
8	0.9609% to 1.3044%
9	1.3044% to 3.5210%
10	More than 3.5210%

Table 8.3 | Underfunding groups

Underfunding group	Ratio of s179 assets to liabilities
1	75% to 100%
2	50% to 75%
3	Less than 50%

8.6 Short-term risk concentration for schemes in deficit

The following analysis focuses on schemes in deficit at 31 March 2008 (on a s179 basis), since these schemes pose the main risks to both scheme members and the PPF. Section 8.7 moves on to discuss the distribution of short-term risk by industry. Please refer to Annex B for sample-wide analysis of insolvency probabilities and the distribution of funding positions by asset size.

Summing over the products of schemes' s179 deficits and insolvency probabilities gives a total short-term risk of £268.4 million for the Purple 2008 sample at 31 March 2008. The breakdown of this by insolvency and underfunding groups can be found in Table 8.4.

Table 8.4 | Short-term risk by insolvency and underfunding group

Combined risk (£ millions)	Underfunding group			
Insolvency group	1	2	3	Total
1	5.8	3.1	0.1	9.0
2	11.5	7.0	0.1	18.5
3	14.0	14.0	0.2	28.2
4	10.2	10.9	0.2	21.3
5	5.1	6.3	0.1	11.5
6	7.5	5.2	0.0	12.7
7	6.5	4.9	0.1	11.6
8	8.4	4.3	0.7	13.3
9	26.9	17.5	0.9	45.2
10	11.2	67.2	18.6	97.0
Total	107.1	140.3	21.0	268.4

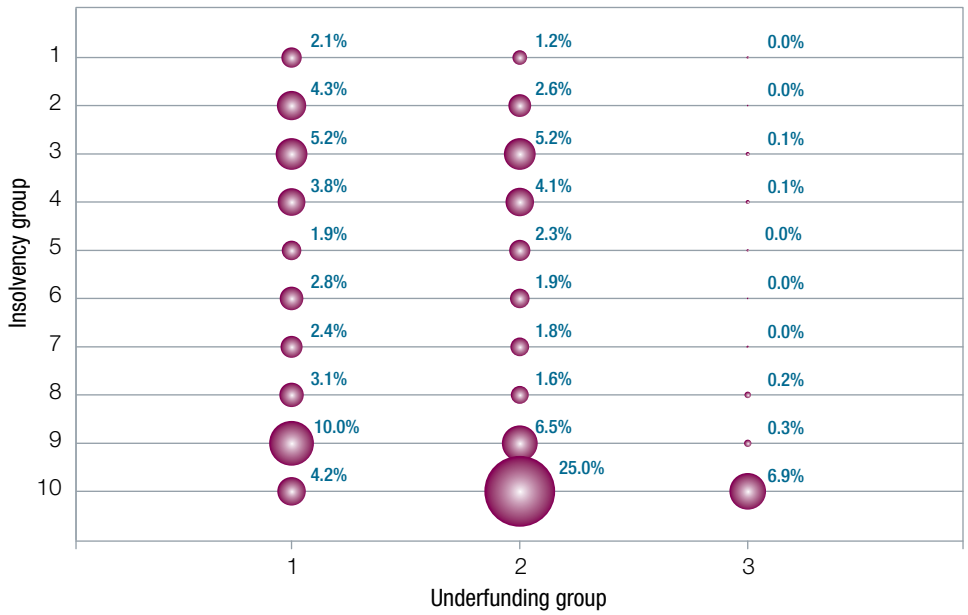
Chart 8.3 shows the distribution of short-term risk across underfunding and insolvency groups. The size of each bubble shows the total percentage the insolvency-underfunding group intersection contributes to total short-term risk.

When considering only underfunded schemes (those that represent the greatest risk to the PPF), most of the short-term risk is concentrated in the highest insolvency group, Group 10, with the group as a whole contributing 36.1 per cent of total short-term risk. There are only 2.4 per cent of schemes in this group, suggesting that the large risk represented by these schemes reflects a very high average short-term risk. The average short-term risk for schemes in group 10 is £0.84 million (see Table 8.5). This figure is seven times the average for Group 9 (£0.12 million).

The short-term risk of insolvency groups 1 and 2 is just 10.3 per cent of the total, approximately a quarter of that for Group 10. Together these three groups contain nearly half of all underfunded schemes.

Thirty six per cent of short-term risk is in the worst insolvency group.

Chart 8.3 | Short-term risk by underfunding and insolvency group as a percentage of total



Source: PPF, The Pensions Regulator

Table 8.5 | Average short-term risk per scheme (underfunded schemes)

Insolvency group	Average insolvency probability	Average funding position	Combined risk (£ millions)	Number of schemes	Average combined risk per scheme (£ milions)
1	0.0%	80.4%	9.0	1112	0.01
2	0.1%	79.6%	18.5	1002	0.02
3	0.2%	78.6%	28.2	743	0.04
4	0.4%	77.3%	21.3	432	0.05
5	0.5%	77.9%	11.5	292	0.04
6	0.6%	77.3%	12.7	220	0.06
7	0.8%	78.8%	11.6	223	0.05
8	1.1%	76.2%	13.3	203	0.07
9	2.0%	77.2%	45.2	377	0.12
10	13.6%	72.3%	97.0	116	0.84
Total			268.4	4720	0.06

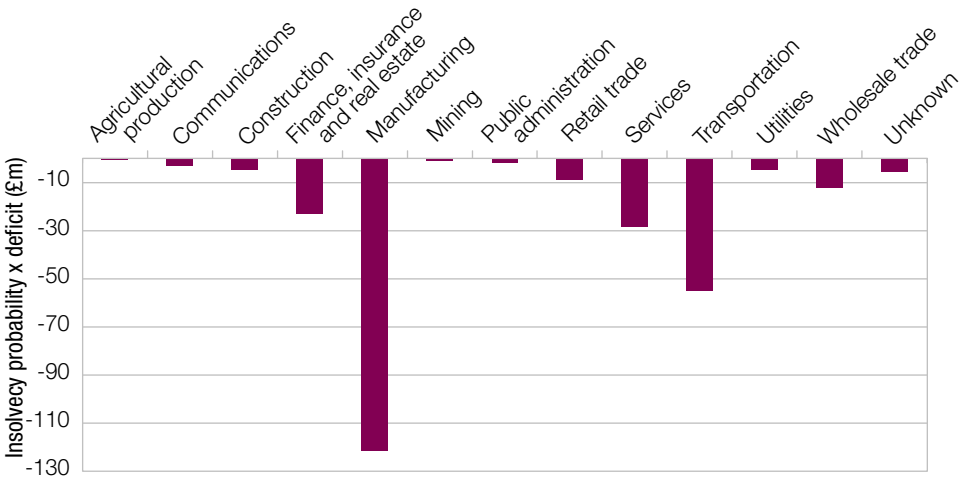
8.7 Short-term risk concentration by industry

Different industry sectors pose varying degrees of risk to the PPF. These sectors demonstrate differing trends, cyclical movements and concentrations of DB schemes. Manufacturing, for example, has experienced declining profitability for several decades while its cyclical swings tend to be greater than those for the economy as a whole. Manufacturing's share of total DB schemes is much larger than its share of total economic activity, as noted in Chapter 3.

An industry breakdown of the short-term risk posed to the PPF is presented in Chart 8.4. In line with previous years, the manufacturing sector remains the principal risk to the PPF. Other sectors presenting a high degree of risk to the PPF include finance, insurance and real estate, and the services sectors. The Purple 2008 dataset indicates a new and sizeable risk from the transportation sector.

The manufacturing sector remains the principle source of short-term risk.

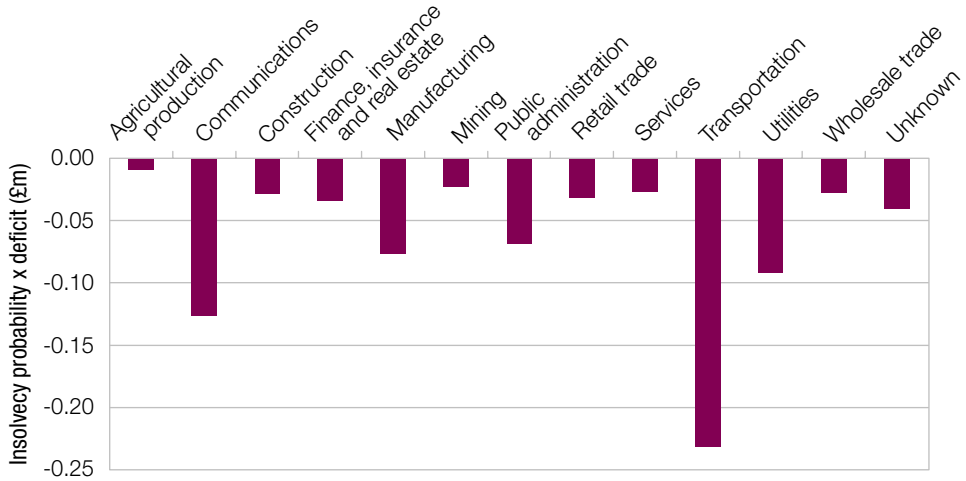
Chart 8.4 | Short-term risk by industry (excluding schemes in surplus)



Source: PPF, The Pensions Regulator

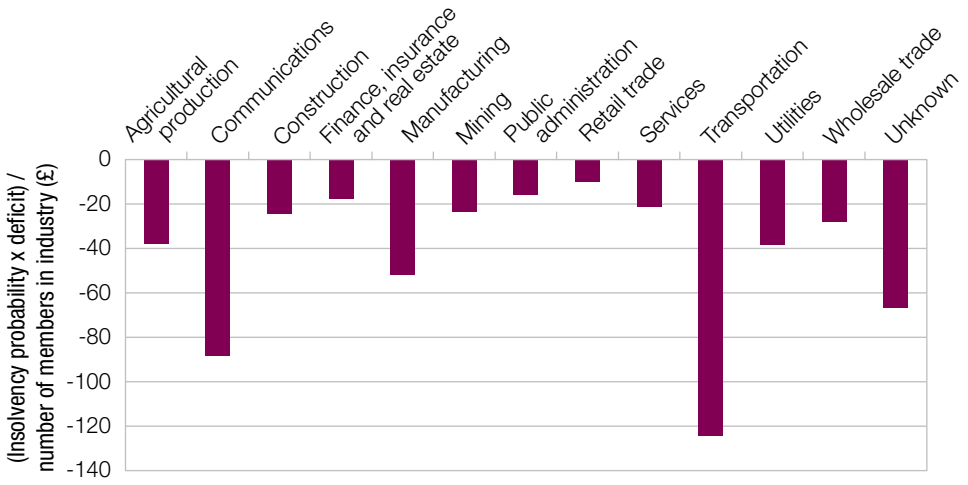
The transportation and communication sectors represent the greatest average short-term risk in 2008 (see Chart 8.5). As Chart 8.6 shows, these two sectors stand out again as having the highest average short-term risk per member in 2008.

Chart 8.5 | Average short-term risk per scheme by industry (excluding schemes in surplus)



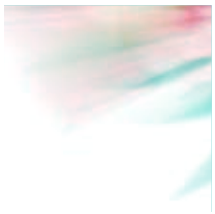
Source: PPF, The Pensions Regulator

Chart 8.6 | Average short-term risk per scheme (underfunded schemes)



Source: PPF, The Pensions Regulator






9

Levy payments

9.1 Summary

- The PPF is expecting to collect £585 million in respect of the levy in the 2007/08 levy year. This is £90 million less than the levy estimate of £675 million set out by the PPF in December 2006.
- The levy raised in 2007/08 was more than double that in 2006/07 (£271 million) when the levy estimate was £575 million.
- The amount collected for 2007/08 differed to the estimate due to deficit reduction contributions, contingent assets, and schemes or sponsoring employers challenging their insolvency probability.
- The under-collection for 2007/08 is much lower that that in 2006/07 (£304 million). The 2007/08 under-collection had mainly reflected the impact of better data becoming available.
- The number of schemes paying no risk-based levy increased from 414 to 630 in the 2007/08 levy year, while 411 schemes had their risk-based levy capped at 1.25 per cent of their s179 liabilities.
- The top 10 levy payers paid a smaller proportion of total levy in 2007/08, 11 per cent (£59.9 million) compared to 14 per cent (£35.2 million) in 2006/07.
- Levy paid in 2007/8 represented 0.08 per cent of assets up from 0.04 per cent in 2006/7.

9.2 Introduction

The PPF has been collecting a levy based on risk for two years, 2006/07 and 2007/08. This chapter looks at the levy payments for these two years for 7,193 private sector DB schemes based on invoices, and is not based on the Purple 2008 dataset described in other chapters. For this reason, information from this chapter should not be compared with the rest of Purple 2008. It describes how levy payments vary over the two levy years in terms of scheme size, insolvency probability and funding level.[34]

9.3 Long-term risk

For the 2007/08 levy year, the levy estimate was set at £675 million. An 80:20 split between estimated risk-based and scheme-based levy was again adopted for 2007/08. (The actual split in 2006/07 was 60:40 rather than the targeted 80:20 reflecting the reduction in risk between December 2005 and March 2006.)[35] The cap on the risk-based levy was increased to 1.25 per cent of liabilities from 0.5 per cent in 2006/07. The funding position and insolvency probability of schemes was measured at 31 March 2007. For more information on the 2006/07 levy payments see Purple 2007 (page 117).

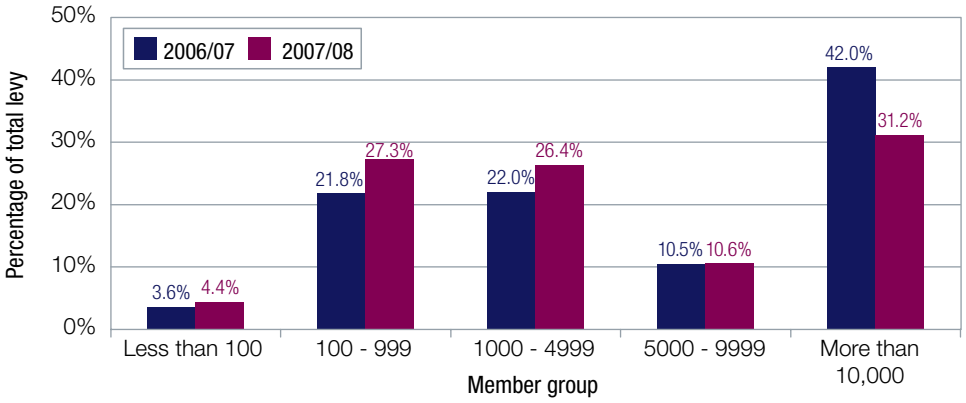
34 When comparing levy invoices over 2006/07 and 2007/08 the analysis in this chapter uses a sample of 7,193 schemes for which full scheme information was available over both years. These two years constitute £246.4 million and £555.8 million in levy invoiced respectively. When discussing 2007/08 levy year only a slightly larger sample of 7,289 schemes is used, which accounts for £565.4 million in levy.

35 It is a statutory requirement under section 177(3) of the Pensions Act 2004 that the levy must be in a form which the Board estimates will result in at least 80 per cent of the amount raised being risk-based levy

The PPF's Annual Report and Accounts show that the PPF had collected £271 million in 2006/07 and expected to have collected £585 million in respect of the 2007/08 levy year. The reasons for the 2006/07 under collection are detailed in Purple 2007. The amount of levy collected for 2007/08 differed from the estimate in December 2006 due to a combination of factors. The notification of contingent assets and deficit reduction contributions to the PPF reduced the amount to be collected in 2007/08. Schemes and sponsoring employers were able to challenge either the probability of insolvency provided to the PPF by D&B or the data held by the PPF which resulted in a number of invoices being reissued.[36]

9.4 Levy by scheme size

Chart 9.1 | Levy distribution by scheme size



Source: PPF

Between 2006/07 and 2007/08 there was a redistribution of levy paid from larger to smaller schemes. Larger schemes, those with more than 5,000 members, paid 52.5 per cent of the total levy in 2006/07, but this reduced to 41.8 per cent in 2007/08. Schemes with more than 10,000 members (representing three per cent of the total of schemes) saw a significant drop in the share of levy they paid from 42.0 per cent to 31.2 per cent over the year.

The PPF is expecting to collect £585 million for the 2007/08 levy year.

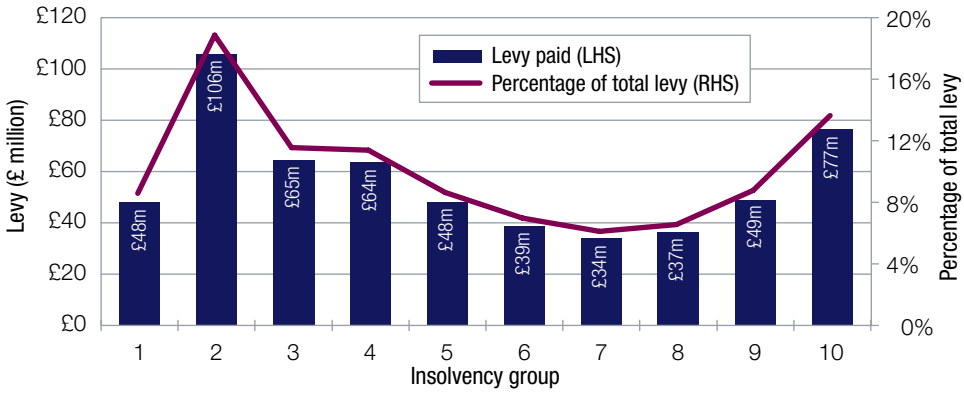
36 For more detail on levy collection see the Annual Report & Accounts 2007/08 on the PPF website at http://www.pensionprotectionfund.org.uk/ara_0708.pdf.

9.5 Levy by insolvency group

Chart 9.2 shows how in 2007/08 levy payments were distributed across all the insolvency groups. (For definitions of insolvency groups, see Chapter 8). Those schemes in insolvency Group 2 contributed the most – £106 million or 19 per cent of the total.

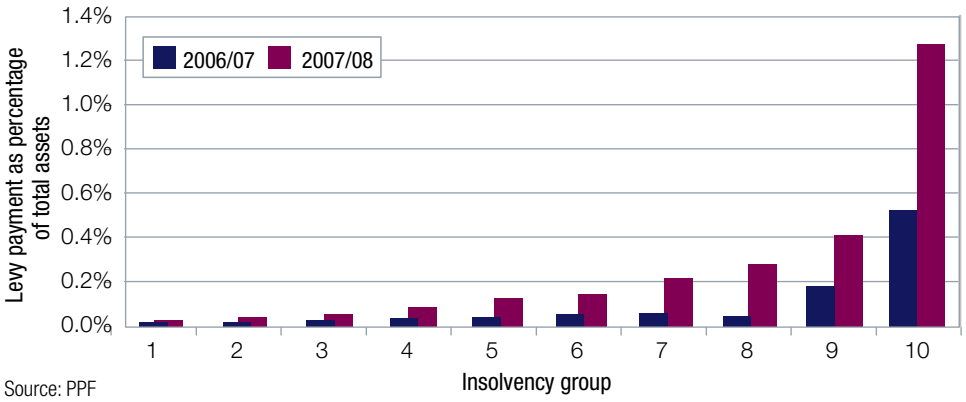
In general, levies are very small relative to total s179 assets – at around 0.08 per cent in 2007/08 (0.04 per cent in 2006/07.) Chart 9.3 illustrates the breakdown in levy payments as a percentage of s179 assets across insolvency groups. Both 2006/07 and 2007/08 levy years show a similar distribution across the insolvency groups, but with higher percentages in 2007/08 owing to a much higher levy being collected. However, even in the worst insolvency group, Group 10, the levy paid in 2007/08 amounted to only 1.3 per cent of total assets.

Chart 9.2 | Levy distribution by insolvency group[37]



37 Based on sample of 7,289 schemes for the 2007/08 levy year. See chapter 8 for definition of insolvency groups.

Chart 9.3 | Levy payments as a proportion of assets by insolvency group

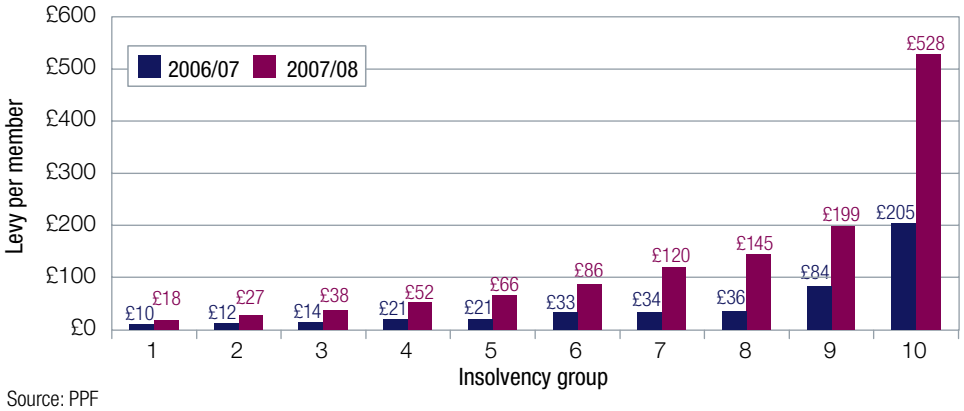


Source: PPF

Schemes in the worst insolvency group paid more in levy. However, this was still only 1.3 per cent of assets.

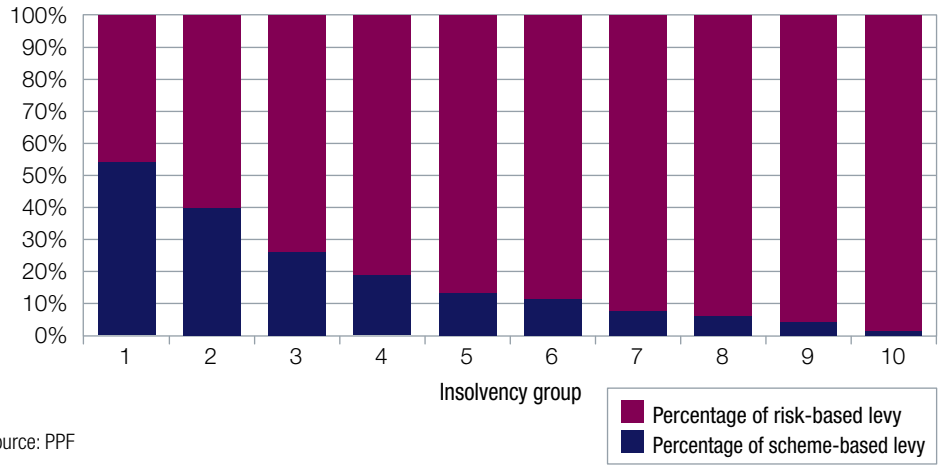
In 2007/08, as in 2006/07, levy per member increases as the insolvency risk of the sponsoring employer rises (Chart 9.4).The levy per member increased in 2007/08, especially in insolvency Group 10, because of the higher total levy collected.

Chart 9.4 | Levy per member by insolvency group



Source: PPF

Chart 9.5 | Percentage of total levy that is scheme and risk-based by insolvency group[38]



Source: PPF

Chart 9.5 shows that in 2007/08 (as in 2006/07), the share of risk-based levy increases as the insolvency risk rises, and the share of scheme-based levy falls.

9.6 Levy by funding level

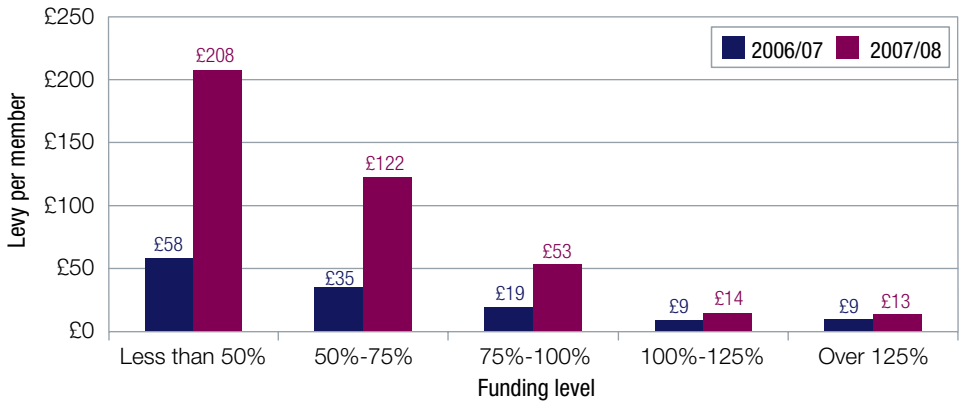
Table 9.1 | Funding groups

Funding group	Funding position on s179 basis
1	Less than 50%
2	50% to 75%
3	75% to 100%
4	100% to 125%
5	Greater than 125%

Chart 9.6 shows that better funded schemes paid less levy per member in both 2006/07 and 2007/08 levy years. Those schemes that were in funding Group 3 paid the greatest amount of levy in both years (£112 and £280 million respectively). However, schemes less than 50 per cent funded paid the highest levy per member.

38 Based on sample of 7,289 schemes for the 2007/08 levy year.

Chart 9.6 | Levy per member by funding level

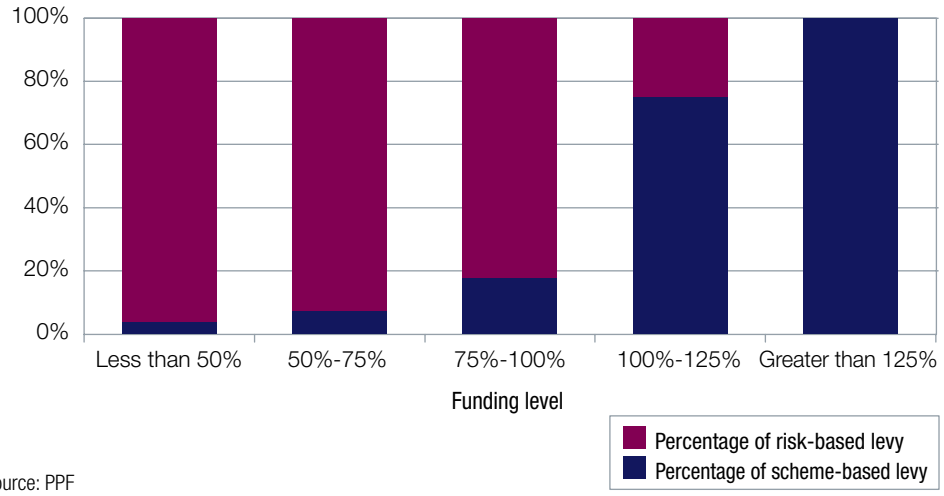


Source: PPF

Chart 9.7 shows the composition of total levy paid in the 2007/08 levy year. The proportion of risk-based levy declines as scheme funding improves. Those schemes over 125 per cent funded paid no risk-based levy in 2007/08. For the 2008/09 and 2009/10 levy years the funding level at which schemes pay no risk-based levy will be increased to 140 per cent.

Schemes less than 50 per cent funded paid the most levy per member, while schemes 75 to 100 per cent funded paid the greatest amount in total.

Chart 9.7 | Percentage of total levy that is scheme- and risk-based by funding level[39]



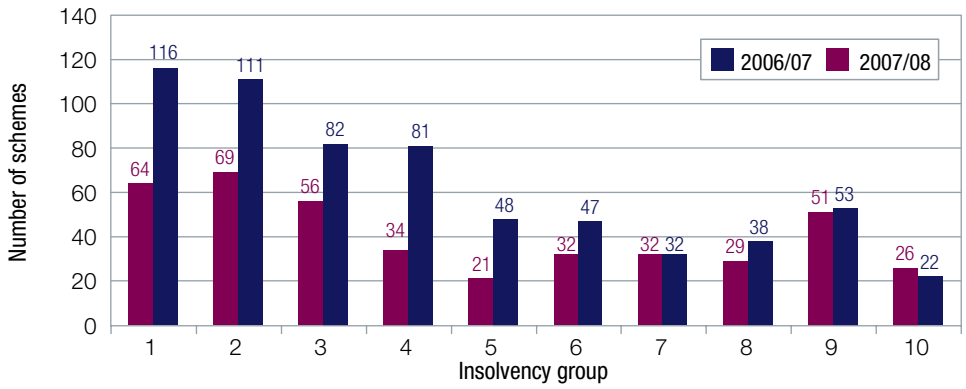
Source: PPF

39 Based on sample of 7,289 schemes for the 2007/08 levy year.

9.7 Schemes paying no risk-based levy

The number of schemes paying no risk-based levy increased to 630 in the 2007/08 levy year compared with 414 in 2006/07.[40] In the 2007/08 levy year, this represented nine per cent of total schemes and 12 per cent of total liabilities, compared with six and seven per cent for 2006/07 respectively.

Chart 9.8 | Number of schemes paying no risk-based levy

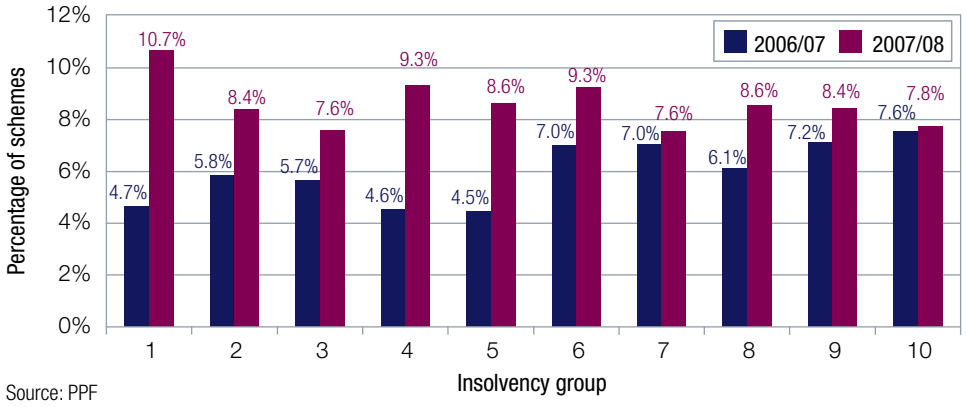


Source: PPF

A larger number of schemes than in 2006/07 in the better insolvency groups, Groups 1 to 4, paid no risk-based levy in 2007/08 as the funding position of schemes in these groups improved taking them over the 125 per cent threshold. The greatest change in per cent of schemes not paying a risk-based levy was in insolvency Group 4, while insolvency Groups 1 and 5 also saw large changes.

40 These figures are based on the comparative sample used. 641 schemes did not pay a risk-based levy in the larger Purple 2008 dataset.

Chart 9.9 | Percentage of schemes in each insolvency group paying no risk-based levy



Source: PPF

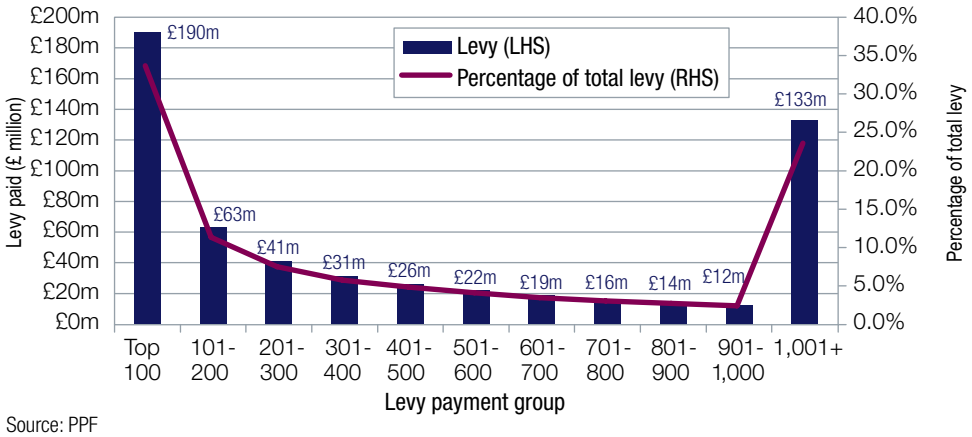
A larger number of schemes in insolvency Groups 1 to 4 paid no risk-based levy in 2007/08 than in 2006/07.

Table 9.2 | Schemes paying no risk-based levy

	Number of schemes	% of total number of schemes	s179 liabilities	s179 liabilities as % of total liabilities
2006/07	414	6%	£50.8bn	7%
2007/08	630	9%	£84.6bn	12%

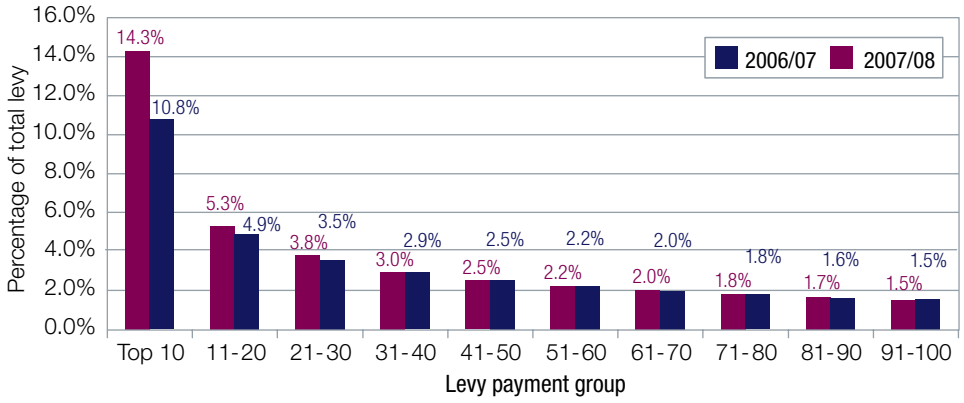
9.8 Levy paid by the largest levy payers

Chart 9.10 | Distribution of levy payments by largest levy payers[41]



Source: PPF

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



Source: PPF

41 Based on a sample of 7,289 schemes for the 2007/08 levy year.

Chart 9.10 shows that the top 100 levy payers in 2007/08 paid £190 million or 34 per cent of the total levy. These schemes account for one per cent of the total number of schemes, but 34 per cent of total s179 liabilities.

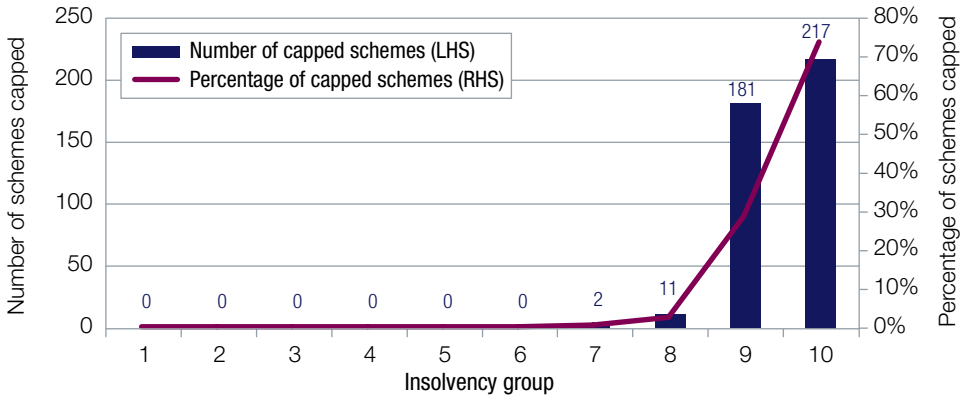
Comparing the top levy payers over 2006/07 and 2007/08, Chart 9.11 shows that the top 10 levy payers paid a lower percentage of total levy in 2007/08 –11 per cent (£59.9 million) compared to 14 per cent (£35.2 million). Schemes from 11 to 100 paid roughly the same percentage of the levy over both years.

9.9 Capped schemes

In 2007/08 the risk-based levy was capped at 1.25 per cent of a scheme's s179 liabilities compared with 0.5 per cent in 2006/07. Four hundred and eleven schemes had their risk-based levy capped in 2007/08, six per cent of the total. The liabilities of those capped schemes totalled £7.4 billion or one per cent of total liabilities.

Four hundred and eleven schemes had their risk-based levy capped in 2007/08.

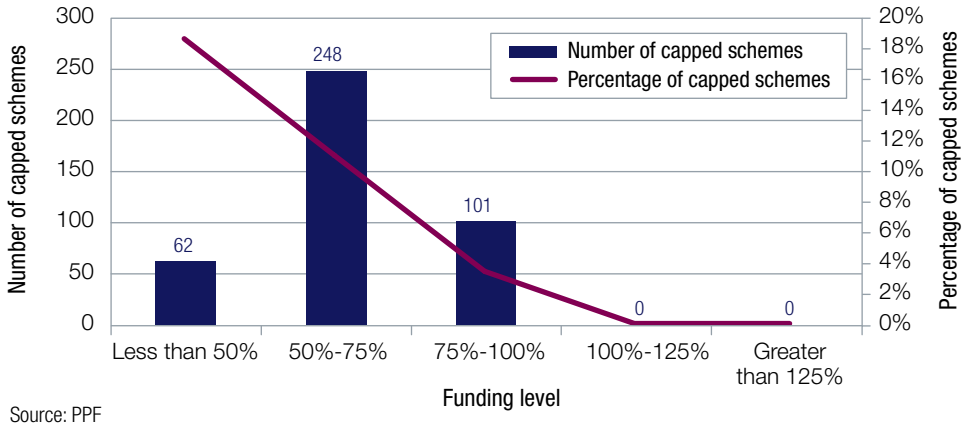
Chart 9.12 | Number of schemes with capped risk-based levies by insolvency group[42]



Source: PPF

42 Based on a sample of 7,289 schemes for the 2007/08 levy year.

Chart 9.13 | Number of schemes with capped risk-based levies by funding level



Source: PPF

Charts 9.12 and 9.13 above show that schemes with higher insolvency probabilities, or poorer funding, are most likely to have their risk-based levy capped. Three hundred and ninety eight of the 411 capped schemes were in insolvency Groups 9 and 10, while no fully funded schemes were capped.

9.10 Levy paid by industry category

Chart 9.14 shows that finance, insurance and real estate, manufacturing, and services continue to be the highest levy payers. These industries accounted for 62 per cent of the total levy in 2007/08, down from 70 per cent in 2006/07. Manufacturing saw the largest increase in levy payments from £75.4 million to £178.9 million, still around 30 per cent of the total levy.

Chart 9.14 | Total levy by industry sector

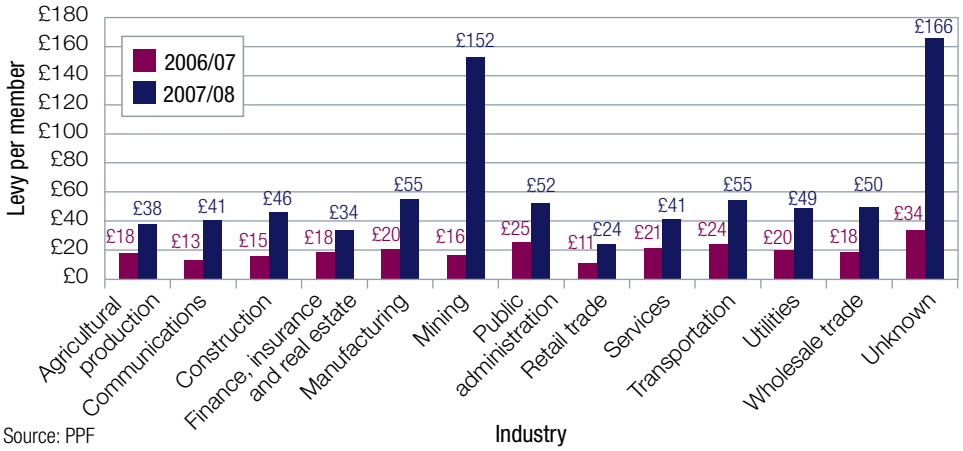
Source: PPF

Chart 9.15 shows that the levy paid per member increased across all sectors in 2007/08. The mining sector had the biggest increase in levy per member from £16 to £152, while the retail trade sector continued to pay the lowest.

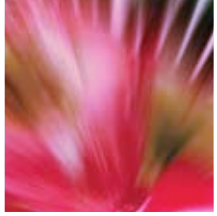
The increase in the mining industry reflects both an increase in the levy paid by this sector and a fall in the number of members. The mining sector contributed one per cent to the total levy collection in both 2006/07 and 2007/08.

The amount of levy collected increased across all industries. Manufacturing saw the biggest increase but its share of the total levy collected was little changed at 30 per cent.

Chart 9.15 | Levy per member by industry



Source: PPF

10

Schemes in assessment

10.1 Summary

- There were 217 schemes (123,000 members) in a PPF assessment period as at 31 March 2008, compared with 179 (115,000 members) a year earlier.[43]
- The rise reflects 93 new schemes entering and remaining in assessment, 32 schemes transferring into the PPF and 23 being rescued, deemed to be ineligible or withdrawn.
- Where the industry is known, just under half the schemes in assessment came from manufacturing (48.1 per cent) while 15.3 per cent came from services.
- On a s179 basis, as at 31 March 2008 the aggregate assets of schemes in assessment totalled £4.2 billion and their liabilities, £5.4 billion. Liabilities averaged £24.8 million per scheme and assets averaged £19.4 million.
- Over 40 per cent of the schemes in assessment have liabilities below £5 million although schemes this small make up only 30 per cent of the Purple 2008 dataset.
- The aggregate funding level (total assets divided by total liabilities) of the schemes in assessment as at 31 March 2008 was 78.3 per cent, well below both the aggregate funding levels of the schemes in the Purple 2008 dataset (99.4 per cent) and the aggregate funding level of the schemes in assessment a year earlier at 30 March 2007 market prices of 84.6 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 84.5 per cent. Those with less than £50 million in assets have an average funding level of 72.0 per cent.
- The asset allocation of schemes in assessment from the scheme return prior to their entering the assessment period showed the largest shares of their assets in equities (43 per cent) and gilts and fixed interest assets (29 per cent). This equity share is lower than that for the Purple 2008 dataset share of 54 per cent of assets. Once in assessment, schemes tend to follow an investment strategy that is more oriented towards gilts and fixed interest holdings.
- Between end-March and end-September 2008, a further 20 schemes in the schemes in assessment dataset transferred into the PPF, out of a total of 61 transferred since April 2005.

43 Note that the figures printed here may not exactly match those published elsewhere by the PPF due to the separate treatment of scheme sections.

10.2 Introduction

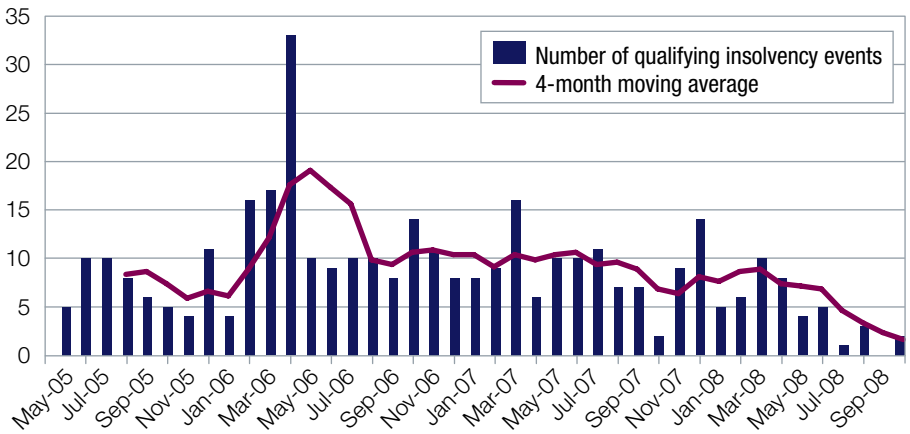
This chapter looks at the 217 schemes in the PPF assessment period as at 31 March 2008. An assessment period is triggered by a qualifying insolvency event[44] of an employer of an eligible scheme. The purpose of an assessment period is to ascertain whether the pension scheme can be rescued, or whether it can afford to secure benefits at least equal to the compensation the PPF would pay if it assumed responsibility for the scheme. For schemes likely to transfer the assessment period must last at least a year. However, this could be longer depending on the size and complexity of the scheme. During the assessment period a thorough review of each scheme is taken, with the main aim being to clean scheme data.

These 217 schemes have been removed for the purpose of analysing short-term risk in Chapter 8.

Chart 10.1 shows that the number of qualifying insolvency events was relatively subdued over the 12 months to end-March 2008 at only 99 events. The four-month moving average line shows a slight downwards trend in the number of qualifying insolvency events since November 2006, steepening in the period after March 2008. The average insolvency rate over the year to March 2008 of 0.6 per cent (99 insolvencies as a percentage of 16,000, the estimated number of company sponsors in the PPF universe) corresponds to the unweighted average of the one-year ahead D&B insolvency probability of 0.7 per cent in March 2007.

The number of qualifying insolvency events is subdued up to September 2008.

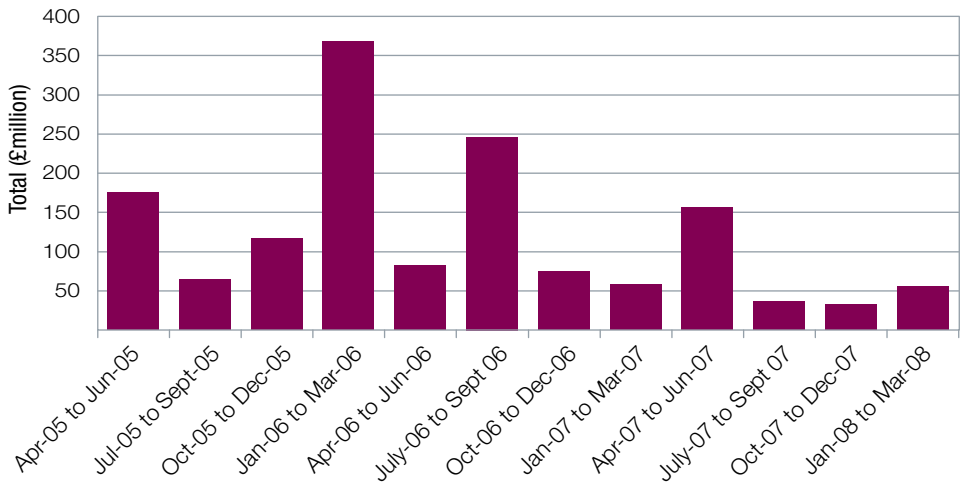
Chart 10.1 | Number of qualifying insolvency events by date of insolvency



44 A qualifying insolvency event is defined in legislation as any insolvency event occurring on or after the 6 April 2005. For more information see the PPF's website at http://www.pensionprotectionfund.org.uk/index/who-is-eligible/qualifying-conditions/insolvency-events.htm.

The s179 deficits of the schemes that have entered into assessment between April 2005 and March 2008 on a quarterly basis are shown in Chart 10.2. The deficit of schemes entering assessment per quarter is £122.1 million on average, although there is significant variation between quarters. Lower total deficits in recent quarters reflect a lower frequency of relevant insolvency events. The monthly deficit of schemes entering assessment is around £40.7 million over the period since the PPF's inception. This monthly average has been falling over time. In the year to end March 2008, the monthly average deficit fell to £23.4 million.

Chart 10.2 | Total s179 deficits for schemes entering an assessment period



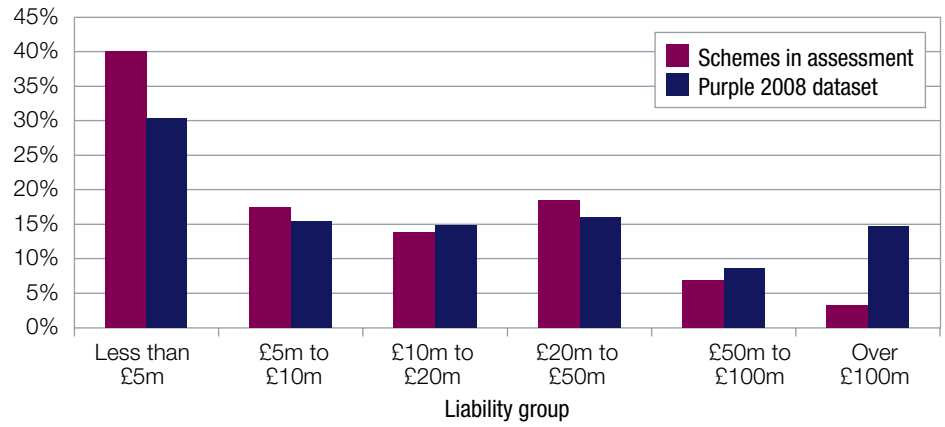
Over the year to end March 2008, the monthly average deficit of schemes entering assessment was £23.4 million.

All assets and liabilities in this chapter have been calculated at 31 March 2008 and have been determined from the latest available historical valuation results and trustee reports and accounts for the schemes. As a result, these figures are indicative only and should not be regarded as the true state of funding for schemes in assessment. This will only be known at an individual scheme or segregated part level once the section 143 valuation (determining whether the scheme enters the PPF) has become binding.

10.3 Scheme demographics

There are some instances where an insolvency event will lead to the segregation of the scheme, where only the insolvent segregated part(s) enter into an assessment period. For the remainder of the analysis all segregated parts of a scheme have been re-aggregated and treated as a single scheme.

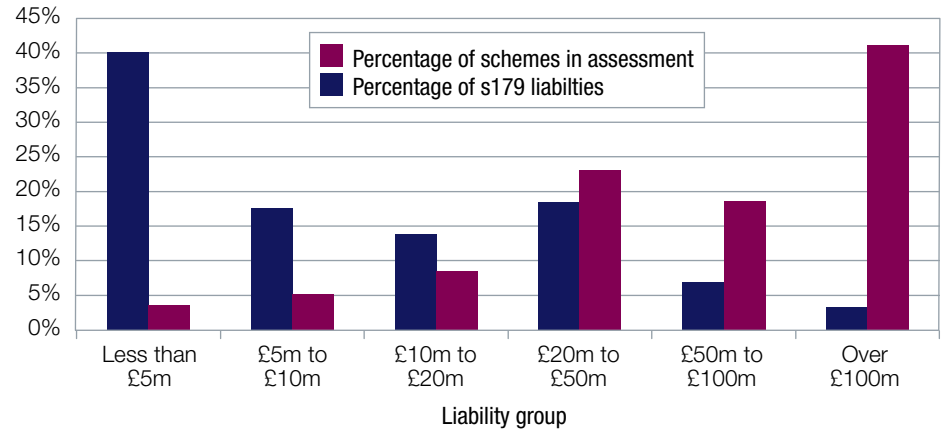
Chart 10.3 | Percentage of schemes in assessment in each liability group



The majority of schemes in assessment are small; 40 per cent of schemes (87 in total) have liabilities of less than £5 million (see Chart 10.3). This is much greater than the proportion of small schemes in the Purple 2008 dataset as a whole (30 per cent). The percentage of the schemes in assessment in the largest size category of over £100 million is just three per cent compared with the 15 per cent share of the largest schemes in the Purple 2008 sample. For schemes in assessment by asset size there is a similar picture; 46 per cent of schemes have assets of less than £5m.

Most schemes in assessment are small schemes.

Chart 10.4 | Percentage of schemes and percentage of s179 liabilities by liability group for schemes in assessment



The impact that these schemes will have on transferring to the PPF can be seen in Chart 10.4. The largest burden on the PPF is from the three per cent of schemes in assessment with over £100 million in liabilities. These schemes account for 33 per cent of the total deficit and have total liabilities of £2.2 billion. The smallest schemes make up just four per cent of the total liabilities and four per cent of total deficits of schemes in assessment, despite representing 40 per cent of the total number.

Members

Chart 10.5 | Number of schemes in assessment by membership size

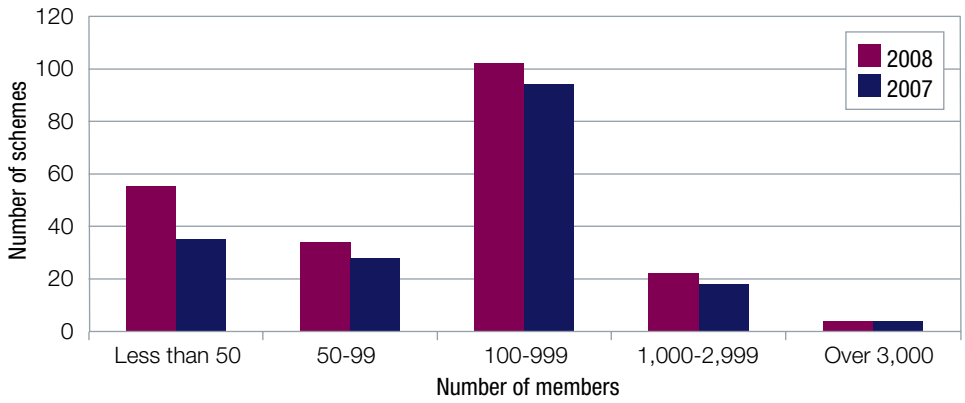
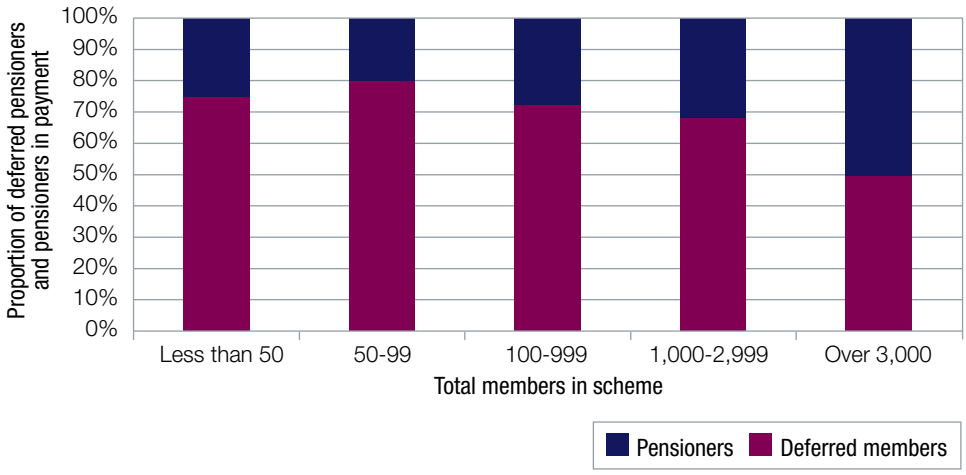


Chart 10.5 shows that 102 out of the 217 schemes in assessment (47 per cent) are in the middle (100-999 members) membership size band, and that the breakdown by members follows a similar pattern to that in 2007.

Chart 10.6 | Maturity of schemes in assessment by membership size



The maturity of schemes in assessment tends to increase as size by membership increases (Chart 10.6). For schemes in assessment with over 3,000 members, 50 per cent of the members are pensioners in payment whereas for those with between 50 and 99 members, only 20 per cent are pensioners (although for the smallest membership category the proportion of pensioners is 25 per cent). This may be a reflection of the different insurance practices of such schemes, in particular annuity purchase compared to self-insurance of pensions in payment. The maturity pattern by size was similar for schemes in assessment in Purple 2007.

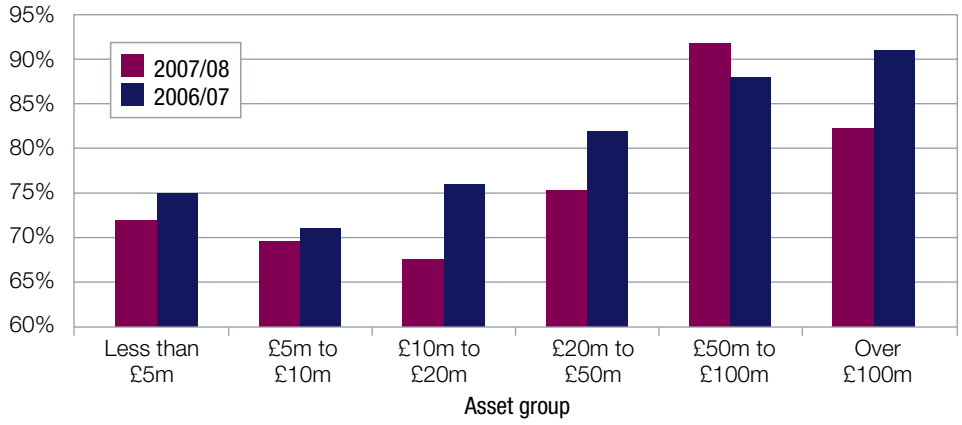
10.4 Funding level

On a s179 basis, schemes in assessment had total assets of £4.2 billion and total liabilities of £5.4 billion as at 31 March 2008, giving an aggregate deficit of £1.2 billion and funding ratio of 78 per cent. The comparable figures for 2007 were £4.0 billion of assets, £4.7 billion of liabilities, an aggregate deficit of £0.7 billion and 85 per cent funding level. There were 195 schemes in assessment in deficit on a s179 basis in March 2008 and 22 in surplus. The total surplus for the schemes in assessment in surplus was £52.0 million and the total deficit for those in deficit was £1.2 billion.

The best funded schemes in assessment, in terms of average funding ratio, are in the two largest asset groups, from £50 million to £100 million and over £100 million (Chart 10.7). These two groups have average funding ratios of 92 per cent and 82 per cent respectively. The least well funded schemes are those in the £10 million to £20 million group with an average funding ratio of 68 per cent. The gap in the funding ratio between the best and the least well funded asset group is 24 percentage points.

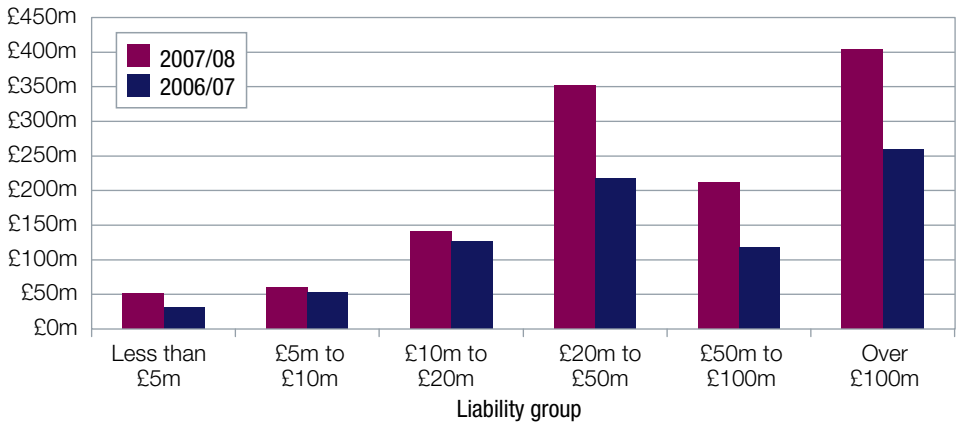
As at March 2008, schemes in assessment were 78 per cent funded.

Chart 10.7 | Average funding level of schemes in assessment on a s179 basis by asset size



If the analysis is restricted to those schemes in deficit at 31 March 2008, excluding the 22 schemes in surplus, then the total grouped deficit is highest across schemes in the largest size category. Schemes with liabilities of more than £100 million represent 33 per cent of the total deficit. Schemes in the smallest size category make up four per cent of the total (see chart 10.8).

Chart 10.8 | Total s179 deficit of schemes in assessment in deficit by liability size

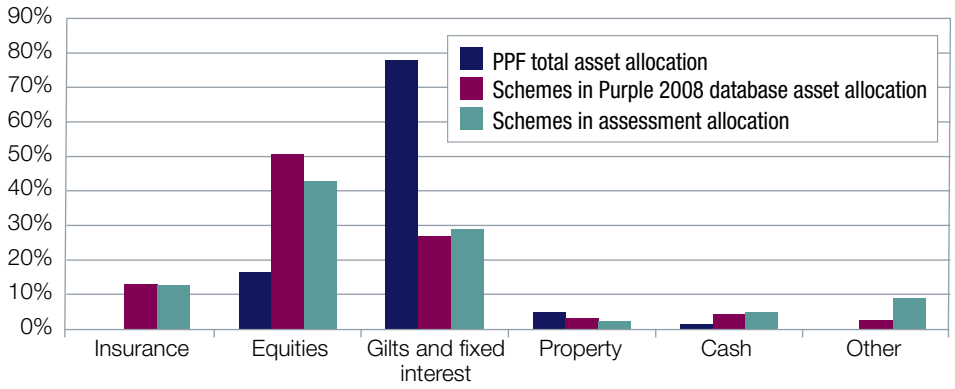


10.5 Asset allocation

In assessing the risk posed to the PPF by the schemes in assessment it is important to consider the schemes' asset allocation. The PPF Board takes into account the asset allocation of schemes in assessment when monitoring the asset strategy of the PPF as a whole. When schemes transfer to the PPF, their assets are subsumed into the PPF's asset allocation.

In contrast to the typical pension fund asset allocation (see Chapter 7), as at 31 March 2008, the PPF held the greatest proportion (78 per cent) of its assets in gilts and fixed interest holdings and only 16 per cent in equities. This is to ensure a low level of correlation between the PPF's assets and those of a typical pension scheme, thereby mitigating the risk of assets underperforming in times of increasing deficits and weak equity markets. The PPF's approach to asset allocation is given in the Statement of Investment Principles, which is reviewed annually.[45]

Chart 10.9 | Simple averages of asset allocations for schemes in assessment, the Purple 2008 dataset and the PPF



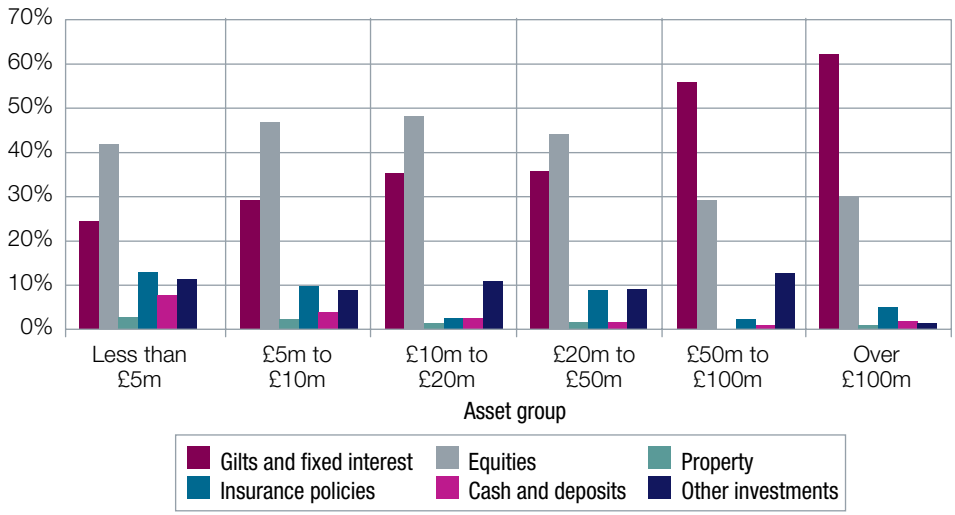
The asset allocation of schemes in assessment (taken from the scheme return prior to their entering the assessment period) shows that there is a lower level of investment in equities (43 per cent) and a higher level of investment in gilts and fixed interest (29 per cent) than for the schemes in the Purple 2008 dataset (Chart 10.9). The proportion of assets held in insurance policies is similar for the two. The asset allocation of the schemes in assessment follows a similar pattern to that for schemes in assessment in Purple 2007. Once in assessment, schemes tend to follow an investment strategy that is more bond-orientated.

45 See http://www.pensionprotectionfund.org.uk/sip2006.pdf.

Chart 10.10 shows the asset allocation of schemes in assessment by asset size. The most striking trends are the rise in gilt and fixed interest holdings and the decline in equity allocation as scheme size increases. Schemes in assessment with assets of £50 million to £100 million and of over £100 million tend to hold a greater proportion of their assets in gilts and fixed interest holdings than in equities (with the largest group holding 61.9 per cent and 29.8 per cent respectively). The opposite is true for the smaller schemes, with the smallest asset group holding 41.5 per cent of assets in equities and 24.3 per cent in gilts and fixed interest.

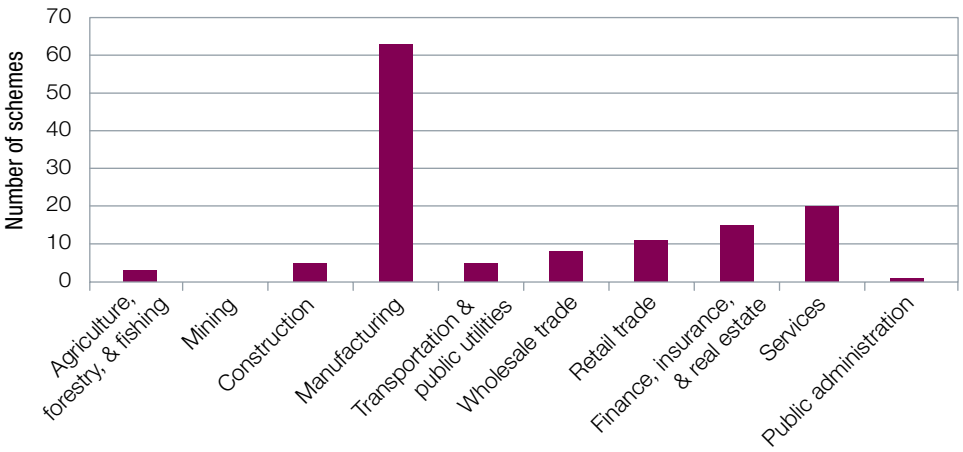
Larger schemes in assessment hold a greater proportion of assets in gilts and fixed interest than smaller schemes.

Chart 10.10 | Asset allocation of schemes in assessment by asset size



10.6 Industry classification

Chart 10.11 | Distribution of schemes in assessment by industry classification



Most sponsors of schemes in assessment are in the manufacturing sector.

Of the 217 schemes in assessment, industry information is available for 131 schemes. These schemes are mapped from their US 1972 standard industrial classification (SIC) codes. In Chart 10.11 it can be seen that 63 of the sponsors are in manufacturing, representing 48.1 per cent of the schemes in assessment where industry information is available. This is around 20 percentage points higher than the proportion of manufacturing companies in the Purple 2008 dataset (31.1 per cent). After manufacturing, the services, and finance, insurance and real estate industries have the largest share of schemes in assessment, with 15.3 per cent and 11.5 per cent respectively.

Table 10.1 | Distribution of schemes in assessment by industry classification

Industry	Number of schemes per industry (schemes in assessment)	Percentage of schemes (schemes in assessment)	Percentage of schemes (schemes in assessment with industry data available)	Percentage of schemes per industry (Purple 2008)
Agricultural production	3	1.4%	2.3%	0.9%
Construction	5	2.3%	3.8%	3.2%
Manufacturing	63	29.0%	48.1%	31.1%
Transportation	5	2.3%	3.8%	4.7%
Wholesale trade	8	3.7%	6.1%	9.4%
Retail trade	11	5.0%	8.4%	5.5%
Finance, insurance and real estate	15	6.9%	11.5%	16.9%
Services	20	9.2%	15.3%	22.4%
Utilities	0	-	-	1.2%
Communications	0	-	-	0.5%
Mining	0	-	-	0.8%
Public administration	1	0.5%	0.8%	0.5%
Unknown	86	39.6%	-	2.9%

11

PPF Compensation

The PPF paid out total compensation of £1.4 million in 2006/07, rising to £17.3 million in 2007/08.

11.1 Summary

- When a scheme transfers, the PPF pays up to 90 per cent of scheme compensation to defined benefit schemes' members who are yet to reach normal pension age. The PPF will generally pay 100 per cent compensation to those already over normal pension age.
- 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.
- Over the financial year 2007/08, 3,596 members received PPF compensation. Average compensation in payment stood at £4,609 per annum. The number of members with compensation not yet in payment (deferred members) as at 31 March 2008 totalled 8,577. In these cases, the average compensation accrued was £4,648 per annum.
- As at 31 March 2008, males constitute more than 75 per cent of both pensioner and deferred members and receive more than 85 per cent of compensation in both categories.
- Spouses and dependents account for 13 per cent of those currently in receipt of compensation, receiving eight per cent of compensation in payment.
- More than 85 per cent of compensation is attributable to former employees of the manufacturing sector.
- As at 31 March 2008, only nine pensioners were affected by the compensation cap (£27,770.72 per annum for age 65 in 2008/09 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.

11.2 Introduction

Over the financial year 2007/08, 3,596 members received PPF compensation.

The purpose of the PPF is to provide compensation to DB pension scheme members in cases where their employer experiences a qualifying insolvency event and there are insufficient scheme assets to secure benefits at PPF levels of compensation. The transfer of the first scheme took place in November 2006, leading to the first compensation payments being made in the 2006/07 financial year. A total of £1.4 million was paid out in 2006/07 by the PPF, rising to £17.3 million in 2007/08.

In the event that an eligible DB pension scheme transfers to the PPF, compensation will be provided to scheme members on the following basis:

- The PPF will generally pay 100 per cent of scheme compensation to scheme members that are over normal pension age at the time the scheme enters assessment.

- For members below their normal pension age at the date of assessment, the PPF provides up to 90 per cent of scheme benefits. This compensation is subject to an overall cap, which, from 1 April 2008, stood at £27,770.72 per annum for age 65 allowing for the 90 per cent scaling. A lower cap is applied in cases where compensation is drawn before this age. Conversely, the cap is more generous if compensation payments commence after 65.

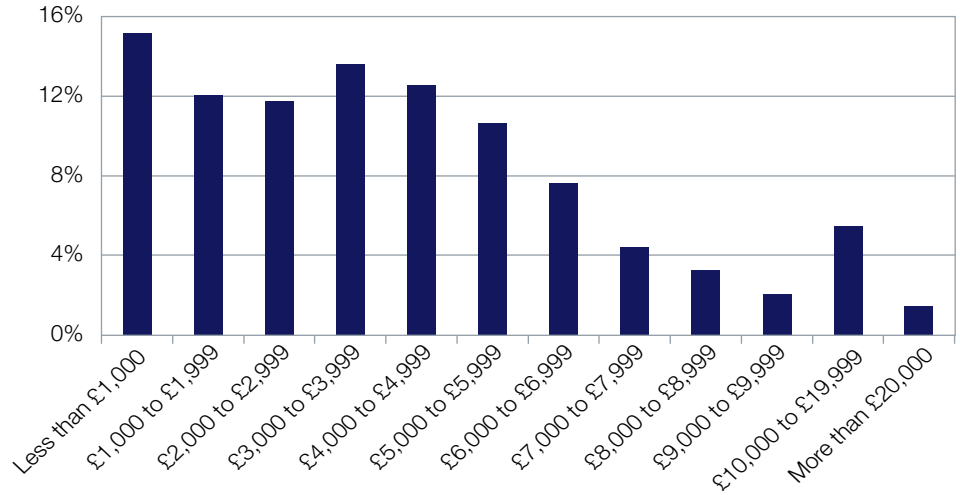
In both cases, only compensation accrued on or after 6 April 1997 is subject to RPI indexation (capped at 2.5 per cent per annum) once it has come into payment.

The following discussion analyses the compensation attributable to deferred (those having accrued, but not yet in receipt of, compensation) and current pensioners as at 31 March 2008 according to age, gender and industry.

11.3 Distribution of compensation

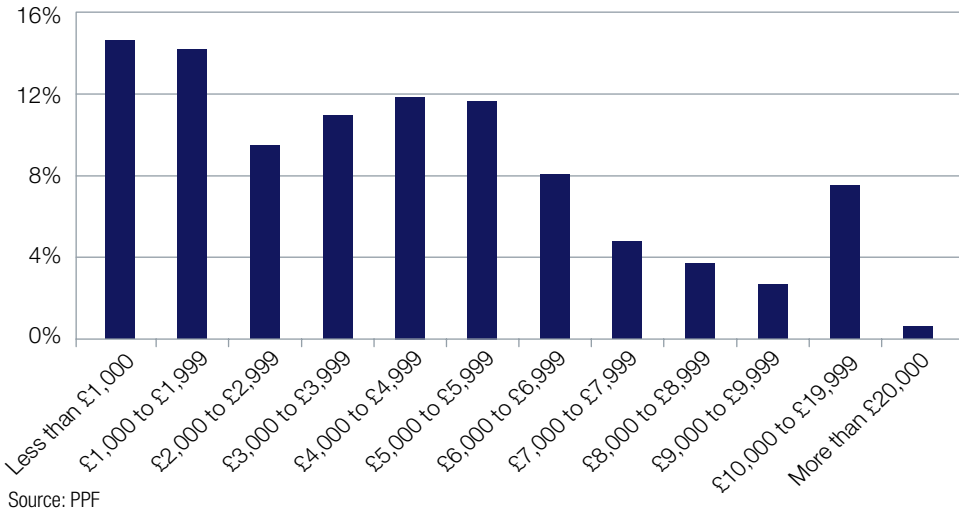
Charts 11.1 and 11.2 show that the distribution of pensioner and deferred compensation follow a similar pattern. In both cases, around 30 per cent of members receive compensation of less than £2,000. A further cluster is observable in the £3,000 to £5,000 range before the distribution tails off in higher compensation brackets.

Chart 11.1 | Distribution of pensioner compensation by share of members



Source: PPF

Chart 11.2 | Distribution of deferred compensation by share of members

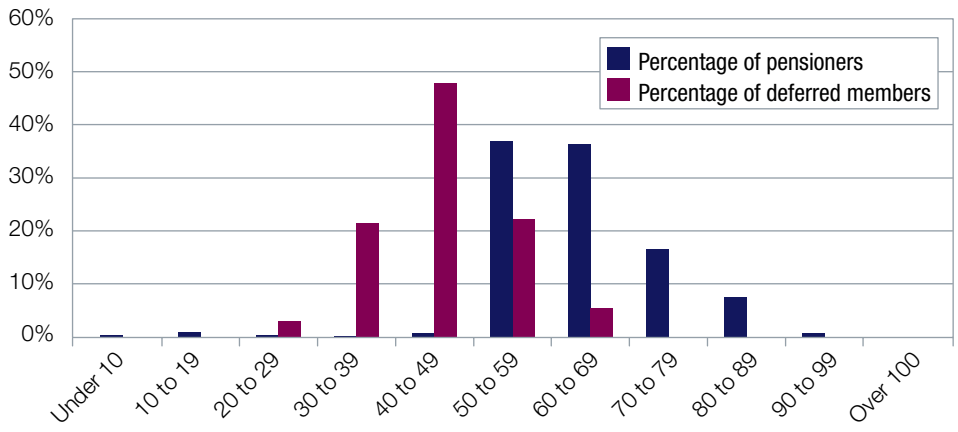


Source: PPF

11.4 Age and gender

Chart 11.3 shows the distribution of pensioners and deferred members by age. As would be expected, pensioners are concentrated in the 50 to 70 year brackets. Compensation in the zero to 30 year brackets consists primarily of payments to spouses and dependents. Almost half of deferred members are in the 40 to 49 age range.

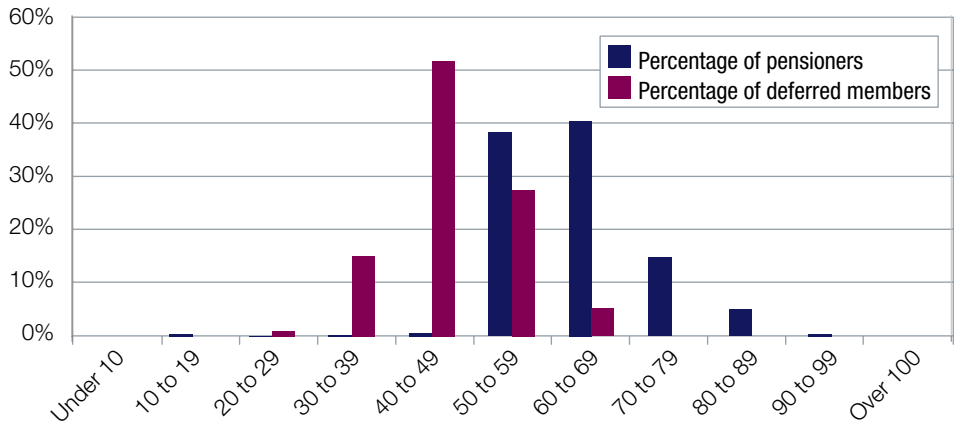
Chart 11.3 | Distribution of pensioner and deferred members by age



Source: PPF

Chart 11.4 shows the distribution of pensioner and deferred compensation by age. It closely follows that observed in Figure 11.3, albeit with a slight skewing of the deferred distribution towards the higher age brackets.

Chart 11.4 | Distribution of pensioners and deferred compensation by age



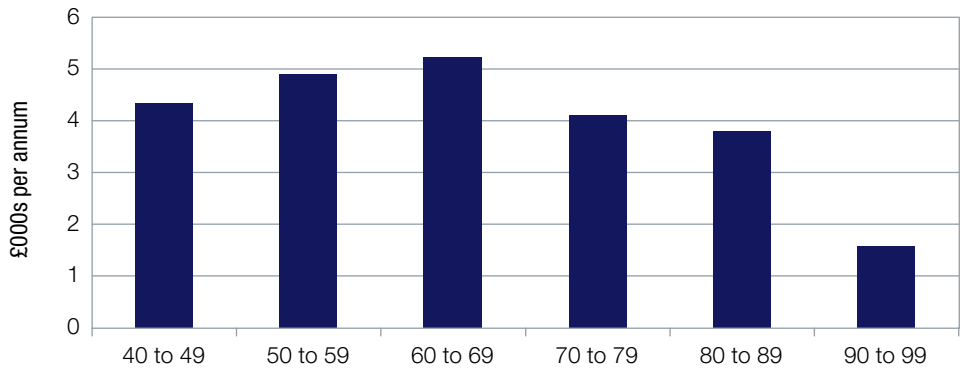
Source: PPF

Average compensation paid to current pensioners for 2007/08 stood at £4,609 per annum. For deferred members, average compensation accrued to 31 March 2008 was £4,648 per annum.

Charts 11.5a and 11.5b show the levels of average compensation for pensioners and deferred members by age. Chart 11.5a only includes member pensioners and excludes dependents and spouses. The picture is as expected, with average pensioner compensation peaking at between 60 and 70, while deferred member compensation is highest between 50 and 60.

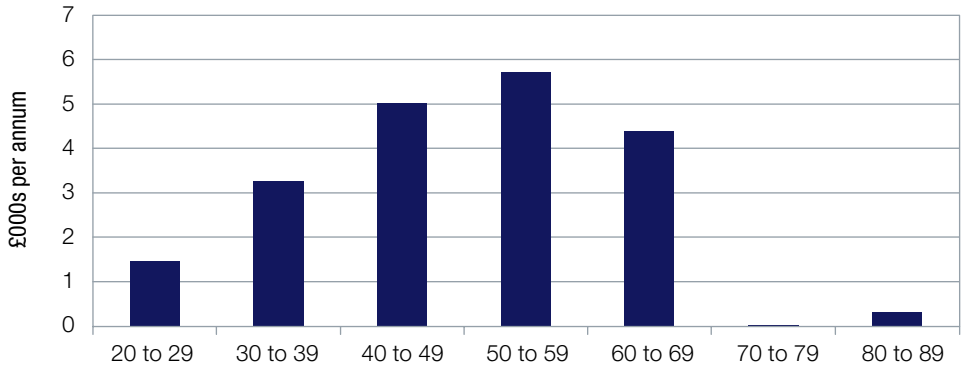
Average compensation paid to current pensioners for 2007/08 stood at £4,609 per annum.

Chart 11.5a | Average pensioner compensation by age



Source: PPF

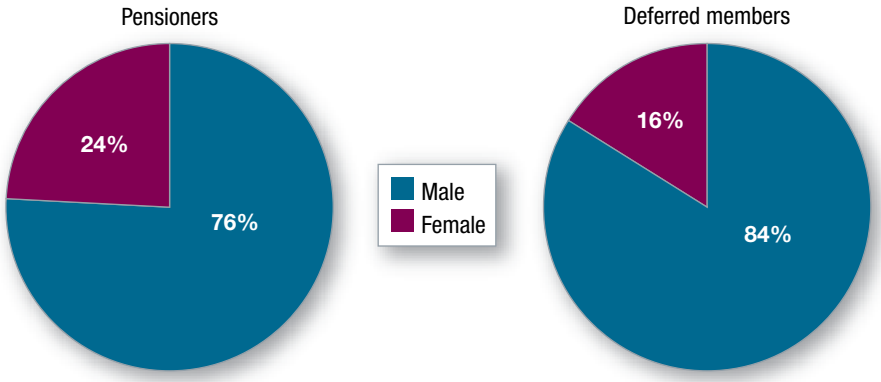
Chart 11.5b | Average deferred members compensation by age



Source: PPF

As Chart 11.6 shows, males greatly outnumber females in both the pensioner and deferred categories. Overall, males make up 82 per cent of members of transferred schemes. Males receive 87 per cent of pensioner compensation and 91 per cent of deferred compensation. Average male compensation stands at £5,254 per annum for pensioners and £5,031 per annum for deferred members. This is around double the £2,576 and £2,579 per annum average compensation paid to (and accrued by) female pensioners and female deferred members respectively.[46]

Chart 11.6 | Gender composition of pensioners and deferred members



Source: PPF

11.5 Spouses and other dependents

On the death of a scheme member, compensation payments may be made to a spouse, partner or dependent depending on the conditions of the scheme. Table 11.1 shows the proportion of dependents and members within the PPF pensioner population. Dependents constitute only a minor fraction of total pensioners and compensation.

Spouses and dependents account for 13 per cent of those currently in receipt of compensation.

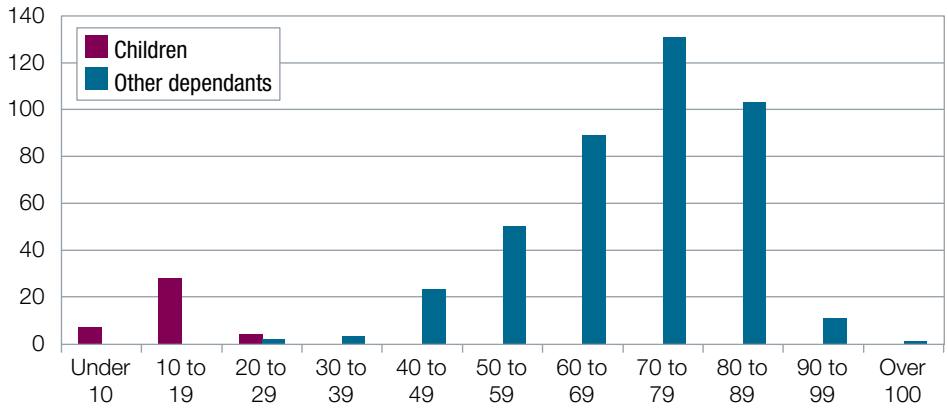
Table 11.1 | Proportions of dependents and members within the PPF current pensioner population

	Number within pensioner population	Percentage of total population	Compensation	Percentage of total compensation
Dependents	453	13%	£1,383,068	8%
Members	3143	87%	£15,191,619	92%
Total	3596	100%	£16,574,688	100%

46 The female pensioners figure inculdes female dependents.

Chart 11.7 shows the distribution of children and other dependents by age. Children are concentrated in the 10 to 19 age bracket while the majority of other dependents (largely spouses, unmarried partners and civil partners) are between 60 and 89 years of age.

Chart 11.7 | Distribution of children and other dependents by age

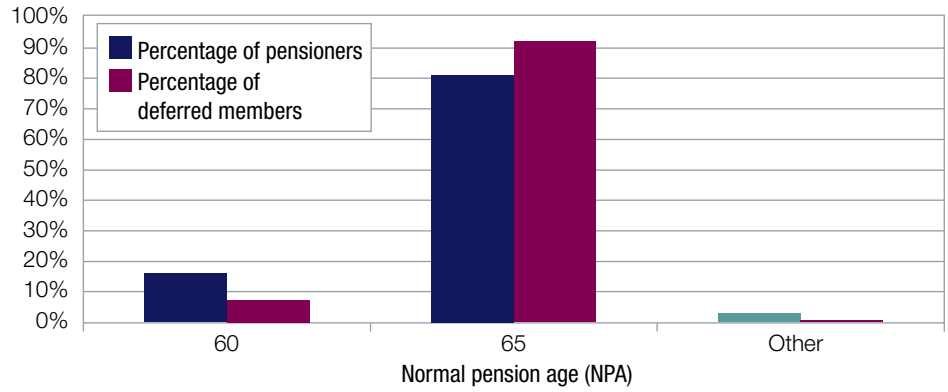


Source: PPF

11.6 Normal pension age

Each tranche of compensation for pensioners and deferred members has its own normal pension age (NPA). The NPA specifies the age at which a member may draw their pension without it being reduced for early payment. Chart 11.8 shows the distribution of compensation by NPA.

Chart 11.8 | Distribution of compensation by normal pension age (NPA)

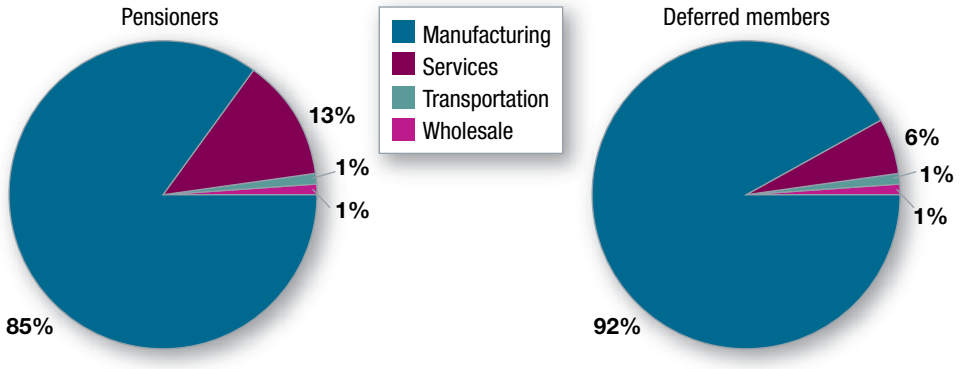


Source: PPF

11.7 Industry

Figure 11.9 shows the division of pensioner and deferred member compensation by industrial sector, as defined by the industry of his or her former employer. The vast majority of PPF compensation is directed towards former employees of the manufacturing sector. This reflects both the disproportionately large manufacturing constituency within the PPF sponsor universe and the relative vulnerability of the UK manufacturing sector.

Chart 11.9 | Pensioner and deferred member compensation by industry



Source: PPF

More than 85 per cent of compensation is attributable to former employees of the manufacturing sector.

11.8 Period of service

Compensation accrued on or after 6 April 1997 is subject to RPI indexation in payment capped at a rate of 2.5 per cent per annum. Compensation accrued prior to this point is not subject to indexation. Table 11.2 shows the levels of PPF compensation for pensioners and deferred members by date of accrual.

Table 11.2 | Pre-and post-April 1997 compensation for pensioners and deferred members

	Pensioners		Deferred members	
	Compensation (£s pa)	Percentage of total	Compensation (£s pa)	Percentage of total
Pre-April 1997	£12,844,930	77%	£22,221,353	56%
Post-April 1997	£3,729,758	23%	£17,640,236	44%
Total	£16,574,688	100%	£39,861,589	100%

Table 11.3 shows the value of PPF liabilities to pensioners and deferred members by date of accrual. Note that whereas pre cut-off compensation exceeds post cut-off compensation, the opposite is true in the case of the value of liabilities. This is largely due to indexation swelling the value of post-April 1997 liabilities.

Table 11.3 | Value of liabilities attributable to pre- and post-April 1997 compensation for pensioners and deferred members

	Pensioners		Deferred members	
	Compensation (£s pa)	Percentage of total	Compensation (£s pa)	Percentage of total
Pre-April 97	£182,064,737	69%	£299,346,759	49%
Post-April 97	£81,135,684	31%	£313,364,751	51%
Total	£263,200,421	100%	£612,711,510	100%

11.9 Compensation cap

For pension scheme members below their NPA, as the scheme enters assessment, compensation is subject to capping. The level of the cap is determined by the age at which compensation comes into payment. As of April 2008, the cap for members first drawing PPF compensation at age 65 is £27,770.72 per annum after the 90 per cent scaling. PPF compensation coming into payment at a later age is subject to a higher cap (e.g. £31,398.78 per annum at 70) while that drawn earlier is capped at a lower level (e.g. £25,150.73 per annum at 60). Only nine members currently in receipt of compensation were affected by the cap as at 31 March 2008. This represents 0.25 per cent of all those receiving compensation.

Tables 11.4a and 11.4b show the distribution of members by the size of their compensation as a percentage of the cap. The distribution of compensation is also provided. For both pensioners and deferred members, the vast majority of members and compensation lie in the range below 25 per cent of the cap.

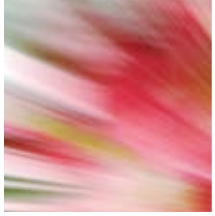
Table 11.4a | Distrubution of pensioners and current compensation by size of compensation relative to cap

Compensation as a percentage of the cap	Number of pensioners	Percentage of total pensioners	Compensation (£s p.a.)	Percentage of total compensation
Less than 25%	2984	83%	£9,519,694.90	57%
25% to 50%	505	14%	£4,610,727.20	28%
Greater than 50%	107	3%	£2,444,265.71	15%
Total	3596	100%	£16,574,687.81	100%

Table 11.4b | Distribution of deferred members and deferred compensation by size of compensation relative to cap

Compensation as a percentage of the cap	Number of deferred members	Percentage of total deferred members	Compensation (£s p.a.)	Percentage of total compensation
Less than 25%	6894	80%	£22,109,914.67	55%
25% to 50%	1439	17%	£13,367,003.79	81%
Greater than 50%	244	3%	£4,384,670.96	26%
Total	8577	100%	£39,861,589.42	163%

As at 31 March 2008, only nine pensioners were affected by the compensation cap.




12 Risk reduction

12.1 Summary

- The total number of contingent assets in place has risen by approximately 75 per cent, from around 260 for the 2007/08 levy year to 450 for 2008/09.
- The contingent assets in place for 2008/09 reduced the respective schemes' levies by around £70 million.
- Schemes in the Purple 2008 dataset had certified approximately £16.6 billion of special contributions to reduce deficits by 7 April 2008.
- Deficit reduction contribution certificates were submitted by schemes to the PPF for the purpose of enabling a more up-to-date assessment of the scheme funding position and, hence, mitigate their levy bill.
- The deficit reduction contributions were not only paid by companies sponsoring the largest schemes; some 53 per cent of the £16.6 billion was paid by employers sponsoring schemes with fewer than 10,000 members.
- Data from the Office for National Statistics' (ONS) MQ5 survey, covering 350 large pension schemes, including 100 local authorities, suggest that special contributions have dropped since 2007 but are still well above the levels seen between 1990 and 2004.
- The scheme specific funding requirements introduced by the Pensions Act 2004 (and regulated by the Pensions Regulator) have played, and continue to play, a key role in DB risk reduction. This is taken into account in the PPF's long-term risk modelling.
- Schemes are reducing investment risk through diversification (moving into alternative asset classes such as insurance, private equity and hedge funds), by shifting from equity to fixed income securities, and through the use of derivatives to hedge inflation and interest rate risk.
- Liability-driven investment (LDI) strategies are becoming increasingly popular. The National Association of Pension Funds (NAPF) survey data indicate that 23 per cent of schemes had implemented an LDI strategy on or before 2008, up from 17 per cent in 2006.

12.2 Contingent assets

A contingent asset is one that will produce cash for a pension scheme if certain events occur, in particular when the sponsoring employer experiences an insolvency event. For the purpose of the 2008/09 risk-based levy calculation, the Board of the PPF decided only to take account of those contingent assets for which all required documentation was submitted before midnight on 31 March 2008.

The PPF recognises three types of contingent assets:

- Type A contingent assets are guarantees given by an undertaking associated with the employer(s) e.g parent or other group company. Such guarantees generally consist of an obligation for the guarantor, if called upon, to fund the scheme to a pre-arranged percentage of liabilities.

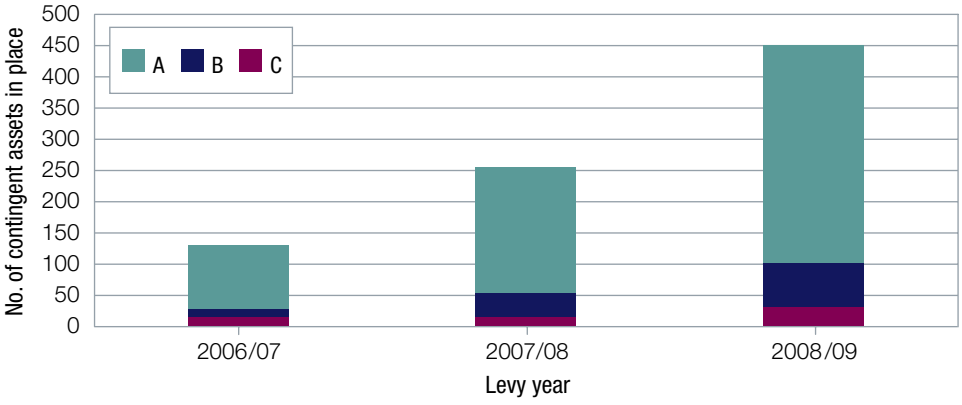
- Type B contingent assets comprise security over holdings of cash, real estate and/or securities.
- Type C contingent assets consist of letters of credit and bank guarantees.

The three types of contingent assets affect a scheme's risk-based levy in different ways. If a scheme puts in place a Type A contingent asset which always guarantees 105 per cent of s179 liabilities (or full section 75 debt), the insolvency score of the guarantor is substituted for the insolvency score applied to the scheme in the risk-based levy calculation. Assuming that the insolvency score of the guarantor is stronger than that of the scheme employer(s), the substitution will reduce the scheme's risk-based levy. The value of Type B and C contingent assets are added to the value of scheme assets where applicable, reducing the scheme's underfunding risk and hence cutting its risk-based levy.

Chart 12.1 shows the number of contingent assets in place for each levy year. There is a clear upward trend in the number of contingent assets of each type. Total contingent assets in place rose by approximately 75 per cent from around 260 in place for the 2007/08 levy year to around 450 for 2008/09. Such growth can largely be considered as a response to the PPF levy, as contingent assets have the potential to substantially reduce a scheme's bill. The contingent assets in place for 2008/09 reduced the respective schemes' levies by around £70 million.

The total number of contingent assets in place rose by around 75 per cent from 2007/08 to 2008/09.

Chart 12.1 | Contingent assets by type[47]



Source: PPF, The Pensions Regulator

12.3 Deficit reduction contributions

Schemes in the Purple 2008 dataset had certified approximately £16.6 billion of special contributions to reduce deficits by 7 April 2008. Deficit reduction contribution certificates were submitted by schemes to the PPF for the purpose of enabling a more up-to-date assessment of the scheme funding position and, hence, mitigate their levy bill. The deficit reduction contributions were not only paid by companies sponsoring the largest schemes; some 53 per cent of the £16.6 billion was paid by employers sponsoring schemes with fewer than 10,000 members.

47 These figures are approximations only.

At any point in time, only payments certified after the most recent actuarial valuation are counted as deficit reduction contributions. Once a new valuation is completed, deficit reduction contributions are subsumed as part of the scheme's asset values. The estimates of deficit reduction contributions are, therefore, sensitive not only to the volumes of certificates submitted but also to changes in valuation dates. For example, consider two schemes where the sponsoring employer had made the same special contributions between 2005 and 2008. If the first sponsoring company had a relatively old valuation while the second had a recent valuation, then the certified deficit reduction contributions would be larger for the first than the second.

12.4 Special contributions

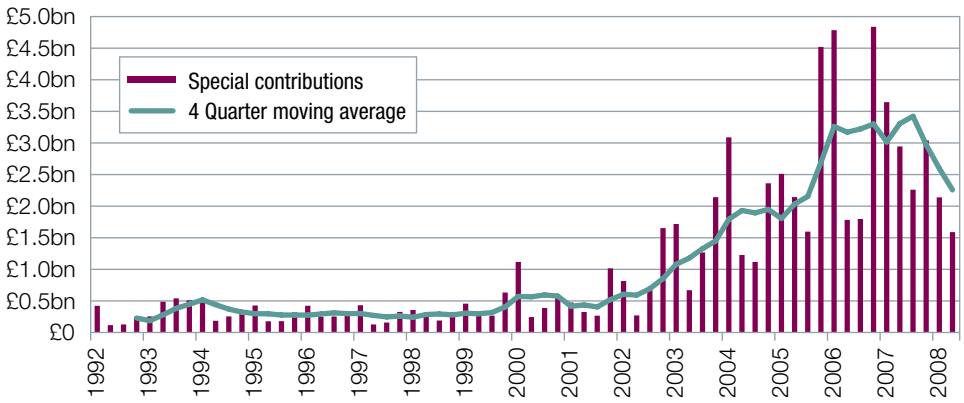
Schemes in the Purple 2008 dataset had certified approximately £16.6 billion of special contributions by 7 April 2008.

A time series of special contributions is produced by the ONS based on the MQ5 dataset (Chart 12.2). This dataset is constructed from a survey of 350 pension schemes, covering both private and public sponsors and potentially including DC as well as DB schemes.[48]

The MQ5 data show special contributions to have increased significantly since 2002 as schemes attempted to repair their deficits. There was a further big increase after 2004, possibly reflecting requirements set out in the Pensions Act 2004 for schemes to set technical provisions and draw up recovery plans. Efforts to reduce PPF levy bills may also have played a role.

Since late 2007, this trend has been reversed. The decline in special contributions can be viewed, at least in part, as a response to successful deficit reduction on the back of strong performance in the equity markets. Weakening corporate cash flows post mid-2007 may also have contributed. The four quarter moving average dropped (by 34 per cent) from a peak of £3.4 billion in the third quarter of 2007 to £2.3 billion in the second quarter of 2008.

Chart 12.2 | Special contributions



Source: ONS

48 See Chapter 7

12.5 The scheme specific funding regime

The scheme specific funding requirements introduced by the Pensions Act 2004 (and regulated by the Pensions Regulator) have played, and continue to play, a key role in DB risk reduction. Trustees are required to obtain actuarial valuations of their scheme at least every three years, and they must put in place a recovery plan showing how any funding shortfall will be eliminated. This plan must be agreed with the sponsoring employer.

The regulator is sent the details of the recovery plan which may be investigated by the regulator if it "triggers" on various criteria such as its length being greater than 10 years. The subsequent discussion between the regulator and the other parties may result in the recovery plan being amended.

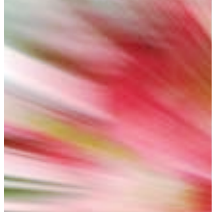
The recovery plans have to be revisited every three years but the plans can be renegotiated earlier if, for example, the sponsoring employer is having difficulty making the agreed contributions because of serious deterioration in its finances. In this example, recovery plan payments are likely to be renegotiated downwards. Renegotiation can also lead to increased recovery plan payments, particularly when sponsors are adjudged to have undercontributed despite being financially strong.

The regulator's recently published 'Scheme Funding: An analysis of Recovery Plans and Clearance Applications' showed that while schemes were making positive steps to address deficits, the recovery plans were for the most part set in economically benign circumstances.[49] The key findings of this document were that, among other points:

- Technical provisions increased from 107 per cent to 119 per cent of s179 liabilities. The average technical provisions funding level also increased, from 86 per cent to 90 per cent.
- Longevity assumptions have strengthened. Average assumed expected age at death for a 65-year old increased for men from 85.3 to 86.0 years for current pensioners, and 86.5 years to 87.6 years for future pensioners currently aged 45.
- Weighted by scheme size, average recovery plan period reduced from 9 to 6 years. The unweighted average fell from 7.7 to 7 years.

The Pension Protection Fund uses this information as input into its LTRM runs.

49 For more information, see http://www.thepensionsregulator.com/pdf/SchemeFundingAnalysis2008.pdf.




12.6 Asset allocation

Schemes can reduce the risk of developing a deficit by increasing their portfolio diversity and shifting their investment into less volatile asset classes. MQ5 data from the Office for National Statistics (discussed in detail in Chapter 7) suggests that schemes have pursued both of these strategies over recent years.

MQ5 data suggest that schemes' investment allocations are becoming more diverse and less weighted toward volatile assets.

Alternative asset classes have become more widely held since 2003, helping to improve the diversity of scheme portfolios. In support of this, a 2008 survey of 294 defined benefit pension schemes by the National Association of Pension Funds (NAPF) points to private equity allocations having increased from 1.7 per cent to 2.5 per cent from 2006 to 2008.[50] Hedge fund investments rose from 1.0 per cent to 1.9 per cent of total assets over the same period.

Portfolio diversity has also been improved by investment trends within the equity and fixed income asset classes (see Chapter 7). Schemes have become less reliant on the UK market for their equity investments, increasingly channelling such funds abroad. Simultaneously, fixed income investment has become less focussed on conventional UK gilts due to diversification into corporate and index-linked paper.

There also exists evidence of de-risking, with a long-term investment trend away from equities and towards gilts and fixed income holdings. As discussed in Chapter 7, equity investment accounted for 61 per cent of scheme assets in Purple 2006, falling to 54 per cent in 2008. The proportion of scheme assets invested in gilts and fixed income, however, rose from 28 per cent to 33 per cent over the same period. Market turbulence since summer 2007 may have added impetus to this trend. In both the equity and fixed income cases, the larger part of the shift occurred in the second of the two financial years. The MQ5 data show that this movement from equities to bonds has been taking place for over a decade.

The PPF is currently consulting on changes to the risk-based levy formula that would lead to investment risk entering as a factor in the determination of schemes' individual levies. It is expected that this change, if implemented, would reinforce the recent trend of schemes investment shifting towards safer asset classes, such as bonds. However, the extent of this effect is predicted to be limited as, for larger schemes at least, the potential benefit of outperformance from return-seeking assets is likely to greatly outweigh reductions in levy arising from de-risking.[51]

50 'The NAPF National Survey 2008', National Association of Pension Funds, October 2008.

51 See http://www.pensionprotectionfund.org.uk/future_development_consultation_nov_2008_-_annex.pdf, Annex E.

12.7 Liability Driven Investment

Another notable trend in pension scheme investment is the increasing popularity of liability driven investment (LDI) strategies. LDI is interpreted differently by different schemes. For example, for some LDI is taken to refer to a wholesale shift into fixed income assets, while for others it is interpreted as an intentional approach to de-risking as schemes become more mature. Broadly speaking, LDI can be defined as a strategy whereby a scheme constructs its investment portfolio with some consideration for the nature of its liabilities. Such strategies typically rely on fixed income and derivative products for the purposes of hedging inflation and interest rate risk.

A study commissioned by the PPF in January 2008 surveyed 95 large pension schemes with total assets of approximately £191 billion in an effort to, among other things, shed light on attitudes towards certain elements of LDI strategy.[52] Twenty-four per cent of respondent schemes confirmed that they currently hedged more than 50 per cent of their liabilities through bonds and/or derivative overlays. Forty per cent responded that they employ swaps as part of their investment portfolio, with 13 per cent reporting that they used swaps specifically to hedge inflation and interest rate risks. Twenty-six per cent said they had put in place plans to use swaps in this way.

From a more general perspective, the 2008 NAPF survey reports that 23 per cent of their sample of 294 schemes had implemented an LDI strategy during or before 2008, up from 17 per cent in 2006. A further 41 per cent of schemes have considered implementing LDI this year, compared with only 30 per cent considering such a strategy in 2006.

A recent survey of derivatives trading desks at major investment banks by F&C Asset Management suggests that the growth in popularity of LDI strategies is continuing.[53] Total risk traded using derivatives in the UK during the third-quarter of 2008 was £23 million of interest rate risk and £13 million of inflation risk. These figures, which would hedge an estimated £9 billion of pension scheme liabilities on an FRS17 basis, mark a substantive increase on expected volumes for the quarter.

Survey findings suggest that LDI strategies continue to grow in popularity.

52 http://www.pensionprotectionfund.org.uk/ppf_investment_strategy_and_ldi_survey.pdf.

53 'Liability Driven Investment Survey', F&C Asset Management, October 2008.

A

Annex A: Comparing Purple 2007 and extended Purple 2007 datasets

A.1 Summary

In comparison with the original dataset used in the production of last year's Purple Book, the extended Purple 2007 dataset forms a fuller representation of the DB universe as at 31 March 2007. The extended dataset benefits from additional scheme information being made available over the 2007/08 financial year.

The original and extended Purple 2007 datasets appear broadly similar in terms of scheme characteristics. There is, however, one significant point of difference. The level of short-term risk in the extended dataset has more than doubled from its original level. This is primarily the result of more schemes being in the weakest funding and insolvency groups in the extended dataset.

A.2 Introduction

The analysis of schemes in the Purple Book 2007 was mostly based on a sample of 5,892 schemes. Since the Purple 2007 calculations, complete information on another 1,650 schemes has become available, bringing the number of schemes in the extended dataset to 7,542. This sample represents the PPF's best estimate of the universe of eligible schemes for the 2007/08 levy year.

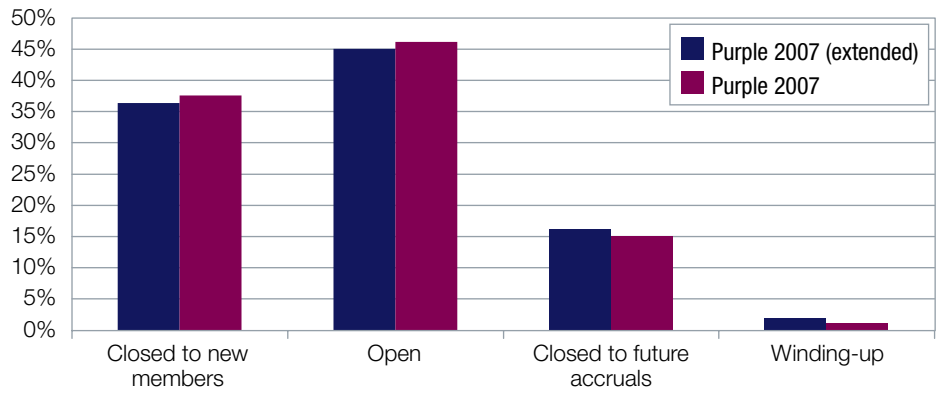
The analysis in this section compares the two datasets and highlights any significant differences in key indicators caused by the expansion of the sample.

A.3 Scheme demographics

The original Purple 2007 dataset contained 5,892 schemes and 10.7 million memberships while the extended Purple 2007 dataset now consists of 7,542 schemes and 12.4 million memberships. The average scheme size falls by 171 members from 1,819 in the original dataset to 1,648 in the extended one.

There is a small shift in all the scheme status categories when comparing the distribution of schemes by scheme status in the extended Purple 2007 dataset to the original Purple 2007 dataset (see Chart A.1 below), partially as a result of adjusting open hybrid statuses as discussed in Chapter 3 (page 17). In the extended Purple 2007 dataset the proportion of schemes 'winding–up' and 'closed to future accruals' increases (by 1 percentage point in each case).

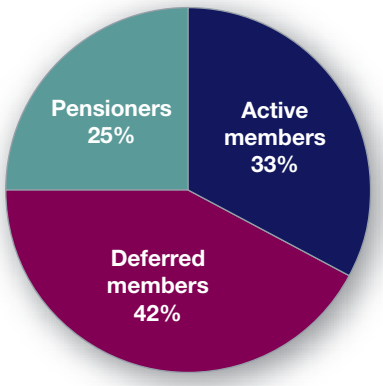
Chart A1 | Distribution of schemes by scheme status



Source: PPF, The Pensions Regulator

The extended Purple 2007 dataset shows no substantive change in the distribution of members by member type. Chart A.2 shows the distribution in the extended dataset. In the original dataset, 25 per cent of members were pensioners, 33 per cent were active and 42 per cent were deferred members.

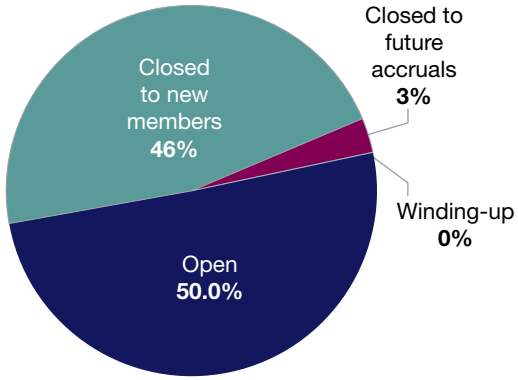
Chart A2 | Distribution of member types in extended Purple 2007 dataset



Source: PPF, The Pensions Regulator

The inclusion of the 1,650 extra schemes in the extended Purple 2007 dataset has had a more substantial effect on the distribution of scheme statuses by members. Chart A.3 shows the distribution for the extended dataset. The proportions of schemes 'closed to future accruals' and 'winding up' remain the same. The proportion of members in open schemes has fallen 13 per cent from 63.1 per cent, while the percentage of members in schemes closed to new members has grown by a similar margin from 34.0 per cent.

Chart A3 | Distribution of members by scheme status in the extended Purple 2007 dataset



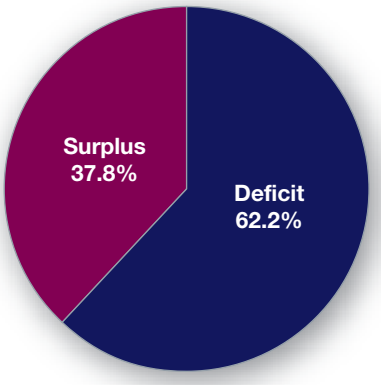
Source: PPF, The Pensions Regulator

A.4 Scheme funding

The total of s179 assets including deficit reduction contributions (DRCs) for schemes in the extended Purple 2007 dataset is £837.7 billion. This is a 16 per cent increase on the original Purple 2007 dataset (£725.0 billion), despite a 28 per cent increase in the number of schemes. Hence average assets per scheme are lower in the extended dataset at £111.1 million (£123.0 million in the original dataset). Total s179 liabilities now amount to £769.9 billion (up from £672.1 billion in Purple 2007), giving an aggregate surplus of £67.8 billion, compared with £52.9 billion in the original Purple 2007 dataset.

The proportion of schemes in deficit (62.2 per cent) is 2.3 percentage points lower in the extended dataset. The aggregate funding level has increased from 107.9 per cent by 90 basis points to 108.8 per cent.

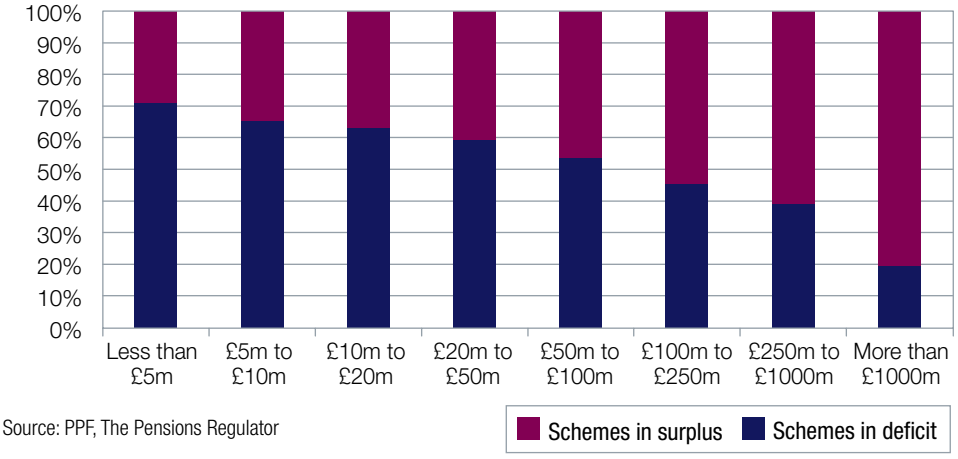
Chart A4 | Distribution of schemes in surplus and deficit on a s179 basis in the extended Purple 2007 dataset



Source: PPF, The Pensions Regulator

There has been little change in the distribution of s179 deficit schemes by asset size (see Chart A.5). Smaller schemes continue to be much more likely to have a s179 deficit than larger schemes.

Chart A5 | Percentage of schemes in surplus and deficit on a s179 basis by asset size in the extended Purple 2007 dataset

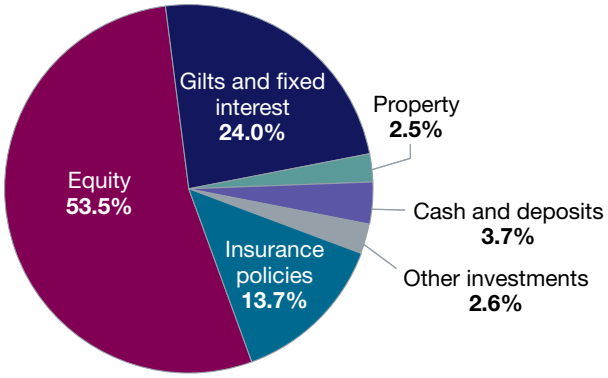


Source: PPF, The Pensions Regulator

A.5 Asset allocation

The simple average of schemes in the extended Purple 2007 dataset is shown in Chart A.6. This asset allocation is very different from that seen in the original Purple 2007 dataset. Although there are sizeable shifts in the allocation of equities (60 per cent in the original dataset to 54 per cent in the extended one) and of gilts and fixed interest (from 29 per cent to 24 percent), the biggest shift is in insurance policies. The original dataset contained 0.7 per cent of assets in insurance policies, however, this shifts to 13.7 per cent in the extended dataset.

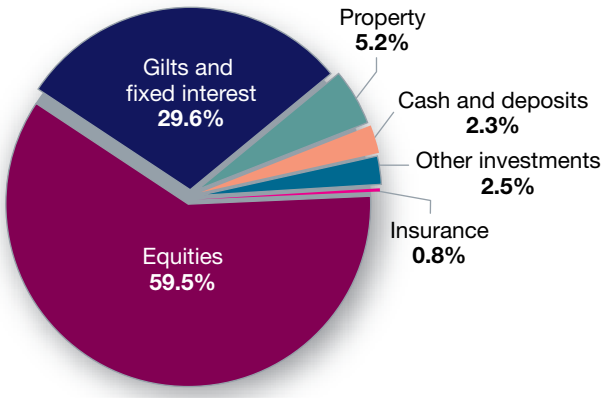
Chart A6 | Average asset allocation for all schemes in the extended Purple 2007 dataset



Source: PPF, The Pensions Regulator

Chart A.7 shows a weighted average allocation by total scheme assets that is almost identical to that of the original Purple 2007 dataset. All differences from the original allocation are less than one percentage point.

Chart A7 | Weighted average asset allocation for schemes in the extended Purple 2007 dataset



Source: PPF, The Pensions Regulator

A.6 Short-term risk concentration

As shown in Table A.1, the extended dataset exhibits more than double the short-term risk of the Purple 2007 dataset (£361.3 million compared with £157.7 million). This sharp increase in combined risk is overwhelmingly derived from schemes in underfunding Groups 1 and 2 and insolvency Group 10. A dramatic rise in the number of schemes in this bracket, from 48 to 194, is the primary cause of this upturn in short-term risk. Average deficits and insolvency probabilities also rose within these groups. The average deficit across these schemes is £4.6 million in the extended dataset, up 6 per cent from £4.4 million in Purple 2007. The average insolvency probability for these groups is 23.1 per cent in the extended dataset, significantly greater than the 13.3 per cent average in Purple 2007.

A degree of increase in combined risk from the original to the extended dataset is to be expected. A large proportion of the schemes introduced in the extended dataset are smaller schemes, which are more likely to have weak funding and high insolvency probabilities.

Table A1 | Short-term risk of schemes in deficit by insolvency group and funding group in the extended Purple 2007 dataset

Short-term risk (£millions)	Underfunding group			
Insolvency group	1	2	3	Total
1	2.7	1.5	0.1	4.2
2	8.5	6.2	0.5	15.1
3	7.1	3.6	0.7	11.4
4	6.5	6.9	0.4	13.8
5	4.7	3.9	0.2	8.8
6	5.3	3.0	0.3	8.7
7	4.1	3.7	0.2	7.9
8	5.6	3.4	0.1	9.1
9	8.9	8.9	2.9	20.7
10	81.3	161.4	18.8	261.5
Total	134.6	202.5	24.1	361.3

Table A2 | Short-term risk of schemes in deficit by underfunding and insolvency groups in the extended Purple 2007 dataset as percentage of total

Short-term risk (As a percentage of total)	Underfunding group			
Insolvency group	1	2	3	Total
1	0.7%	0.4%	0.0%	1.2%
2	2.3%	1.7%	0.1%	4.2%
3	2.0%	1.0%	0.2%	3.2%
4	1.8%	1.9%	0.1%	3.8%
5	1.3%	1.1%	0.1%	2.4%
6	1.5%	0.8%	0.1%	2.4%
7	1.1%	1.0%	0.0%	2.2%
8	1.6%	0.9%	0.0%	2.5%
9	2.5%	2.5%	0.8%	5.7%
10	22.5%	44.7%	5.2%	72.4%
Total	37.3%	56.1%	6.7%	100.0%




Chapter 3 data tables

Scheme Status by number of memberships	Purple 2007 (Extended)					Purple 2008				
	Open	Closed to new members	Closed to future accruals	winding up	Total[54]	Open	Closed to new members	Closed to future accruals	Winding up	Total
Number of schemes										
5 to 99 members	861	1189	605	91	2746	674	1121	572	101	2468
100 to 999 members	1196	1598	549	39	3382	904	1643	542	43	3132
1,000 to 4,999 members	463	402	51	7	923	385	443	52	-	884
5,000 to 9,999 members	96	89	6	-	191	82	104	-	-	191
Over 10,000 members	109	115	-	-	228	82	134	6		222
Total number of schemes	2725	3393	1215	137	7470	2127	3445	1177	148	6897
Total percentage of schemes	36%	45%	16%	2%	100%	31%	50%	17%	2%	100%
Number of memberships										
5 to 99 members	32706	52997	27651	2638	115991	26750	51622	26111	2991	107474
100 to 999 members	436374	574055	161365	10713	1182507	338031	592962	152450	13729	1097172
1,000 to 4,999 members	1042249	863540	100803	12906	2019498	888041	944692	106674	6442	1945849
5,000 to 9,999 members	672000	664374	41942	-	1378315	567631	772731	40578	-	1380940
Over 10,000 members	4053645	3590947	73144	-	7717736	3655412	4121222	115944	-	7892578
Total number of memberships	6236973	5745913	404905	26257	12414048	5475865	6483229	441757	23162	12424013
Total percentage of memberships	50%	46%	3%	0%	100%	44%	52%	4%	0%	100%

55, 56

54 Total number of schemes and/or memberships may differ from elsewhere due to incomplete scheme status data for a small number of schemes.

55 Where hyphenated, numbers have been supressed for confidentiality.

56 Columns and rows may not sum to total due to rounding.

Member types by number of members	Purple 2007 (Extended)				Purple 2008			
Number of memberships	Active	Pensioner	Deferred	Total	Active	Pensioner	Deferred	Total
5 to 99 members	42735	32606	71288	146630	21391	29147	56935	94300
100 to 999 members	348982	302280	592253	1243515	251828	289561	555782	1027163
1,000 to 4,999 members	584848	562117	918613	2065579	472996	577061	895791	1825568
5,000 to 9,999 members	366142	444610	606847	1417598	324288	456748	599904	1259101
Over 10,000 members	1825622	2875282	3078039	7778943	1667368	3084877	3140333	7418825
Total number of memberships	3168330	4216895	5267040	12652265	2737871	4437394	5248745	12424010
Total percentage of memberships	25%	33%	42%	100%	22%	36%	42%	100%

57, 58

57 Where hyphenated, numbers have been supressed for confidentiality.

58 Columns and rows may not sum to total due to rounding.




Industry classification	Purple 2007 (Original)												
	Public administration	Agriculture	Mining	Utilities	Construction	Wholesale	Transportation	Communications	Manufacturing	Finance, insurance and real estate	Retail	Services	Total
Number of schemes													
Total number of schemes	34	60	48	79	212	625	323	33	2098	1148	373	**1493**	**6526**
Total percentage of schemes	1%	1%	1%	1%	3%	10%	5%	1%	32%	18%	6%	23%	100%
Liabilities													
Total s179 liabilities (£billion)	7.41	0.95	3.02	24.47	23.90	28.19	40.02	44.27	201.23	175.83	47.70	**130.52**	**727.51**
Total percentage of s179 liabilities	1%	0%	0%	3%	3%	4%	6%	6%	28%	24%	7%	18%	100%

59, 60

59 Total number of schemes and/or scheme liabilities may differ from those quoted elsewhere due to incomplete industry classification data for a small number of schemes

60 From a base of 6526 schemes with available data columns and rows may not sum to total due to rounding

Industry classification	Purple 2008												
	Public administration	Agriculture	Mining	Utilities	Construction	Wholesale	Transportation	Communications	Manufacturing	Finance, insurance and real estate	Retail	Services	Total
Number of schemes													
Total number of schemes	34	61	52	84	220	646	326	37	2146	1164	382	1546	**6698**
Total percentage of schemes	1%	1%	1%	1%	3%	10%	5%	1%	32%	17%	6%	23%	100%
Number of memberships													
Total number of memberships	112189	39058	41770	294687	386662	557579	620455	491566	3632630	2605489	1354610	2128782	**12265477**
Total percentage of memberships	1%	0%	0%	2%	3%	5%	5%	4%	30%	21%	11%	17%	100%
Liabilities													
Total s179 liabilities (£billion)	8.09	1.56	3.72	28.41	28.68	33.68	45.93	52	227.19	198.27	60.11	149.13	**836.77**
Total percentage of s179 liabilities	1%	0%	0%	3%	3%	4%	5%	6%	27%	24%	7%	18%	100%

61, 62

61 Total number of schemes and/or scheme liabilities may differ from those quoted elsewhere due to incomplete industry classification data for a small number of schemes

62 From a base of 6698 schemes with available data columns and rows may not sum to total due to rounding




Chapter 4 data tables

s179 funding						
	Schemes in sample	"Market value of assets (£billion)	Total s179 liabilities (£billion)	Balance (£billion)	Weighted average funding level	Simple average funding level
Scheme size measured by number of members						
2008						
5 to 99 members	2,468	9.9	9.7	0.2	102%	101%
100 to 999 members	3,132	73.0	79.5	-6.5	92%	88%
1,000 to 4,999 members	884	122.8	133.4	-10.6	92%	89%
5,000 to 9,999 members	191	89.6	94.9	-5.4	94%	93%
Over 10,000 members	222	542.0	524.8	17.2	103%	100%
Total	6,897	837.2	842.3	-5.1	99%	94%
2008 rolled back to 2007						
5 to 99 members	2,468	9.8	8.8	1.1	112%	110%
100 to 999 members	3,132	73.2	71.9	1.2	102%	98%
1,000 to 4,999 members	884	123.1	120.7	2.4	102%	99%
5,000 to 9,999 members	191	89.9	86.0	3.9	105%	103%
Over 10,000 members	222	542.5	476.9	65.6	114%	109%
Total	6,897	838.5	764.3	74.2	110%	103%

63

63 From a base of 6698 schemes with available data columns and rows may not sum to total due to rounding

s179 funding... continued						
	Schemes in sample	”Market value of assets (£billion)	Total s179 liabilities (£billion)	Balance (£billion)	Weighted average funding level	Simple average funding level
Proportion of liabilities that are pensions in payment						
2008						
25% and less	3,161	127.6	154.1	-26.6	83%	86%
Between 25% and 50%	2,725	455.7	462.9	-7.2	98%	95%
Between 50% and 75%	835	231.3	206.7	24.5	112%	111%
Between 75% and 100%	176	22.6	18.5	4.1	122%	132%
Total	6,897	837.2	842.3	-5.1	99%	94%
2008 rolled back to 2007						
25% and less	3,076	123.2	131.9	-8.7	93%	95%
Between 25% and 50%	2,765	450.3	414.0	36.3	109%	104%
Between 50% and 75%	870	238.1	198.2	39.9	120%	118%
Between 75% and 100%	186	26.9	20.1	6.8	134%	140%
Total	6,897	838.5	764.3	74.2	110%	103%




Buyout funding						
	Schemes in sample	"Market value of assets (£billion)	Total s179 liabilities (£billion)	Balance (£billion)	Weighted average funding level	Simple average funding level
Scheme size measured by number of members						
2008						
5 to 99 members	2,468	9.9	15.5	-5.6	64%	63%
100 to 999 members	3,132	73.0	127.2	-54.2	57%	55%
1,000 to 4,999 members	884	122.8	213.5	-90.7	58%	56%
5,000 to 9,999 members	191	89.6	152.0	-62.4	59%	59%
Over 10,000 members	222	542.0	847.7	-305.7	64%	63%
Total	6,897	837.2	1355.8	-518.6	62%	59%
Proportion of liabilities that are pensions in payment						
2008						
25% or less	3,161	127.6	245.6	-118.0	52%	53%
Between 25% - 50%	2,725	455.7	749.2	-293.5	61%	59%
Between 50% - 75%	835	231.3	332.1	-100.8	70%	70%
Between 75% - 100%	176	22.6	28.9	-6.3	78%	86%
Total	6,897	837.2	1355.8	-518.6	62%	59%
Scheme status						
2008						
Open	2126.0	364.5	577.5	-213.0	0.6	60%
Closed to new entrants	3446.0	446.7	734.2	-287.5	0.6	58%
Closed to future accrual	1177.0	24.7	41.8	-17.1	0.6	57%
Winding up	148.0	1.3	2.3	-1.0	0.6	63%
Total	6897	837.2	1355.8	-518.6	0.6	59%
Total	6,897	838.5	764.3	74.2	110%	103%

64

64 Columns and rows may not sum to total due to rounding

Industry classification	Purple 2008												
	Public administration	Agriculture	Mining	Utilities	Construction	Wholesale	Transportation	Communications	Manufacturing	Finance, insurance and real estate	Retail	Services	Total[N]
Number of schemes by industry classification and s179 funding level													
Expanded 2007													
Low to 50%	-	-	-	-	-	18	9	-	54	23	9	53	166
50 to 75%	-	19	11	15	51	145	60	9	449	204	78	315	1356
75 to 100%	18	23	18	26	92	232	142	10	963	442	176	616	2758
Greater than 100%	11	16	15	38	64	230	112	14	632	479	110	509	2230
Total													6510
2008													
Low to 50%	-	-	-	-	-	9	-	-	39	14	7	25	94
50 to 75%	-	21	15	14	45	162	78	12	579	212	101	353	1592
75 to 100%	21	25	20	35	107	267	154	11	978	438	164	671	2891
Greater than 100%	9	14	17	35	65	208	89	14	550	500	110	497	2108
Total													6685
s179 liabilities by industry classification (£billion)													
Expanded 2007													
Expanded 2007													
Liabilities	7.41	0.94	3.02	24.47	23.90	28.20	40.02	44.26	201.23	175.82	47.70	130.52	727.49
Assets	7.07	0.95	2.79	26.62	28.89	26.55	43.29	53.92	202.54	194.51	51.95	139.99	779.07
2008													
Liabilities	8.09	1.56	3.72	28.41	28.68	33.68	45.93	52.01	224.1	198.27	60.11	149.13	833.69
Assets	7.17	1.76	3.36	29.19	30.52	30.07	45.87	54.18	212.87	204.5	61.94	147.34	828.77

65, 66

65 Total number of schemes and/or scheme liabilities may differ from those quoted elsewhere due to incomplete industry classification data for a small number of schemes

66 From a base of 6698 schemes with available data columns and rows may not sum to total due to rounding

B Annex B: Long-term risk and short-term risk concentration

B.1 Summary

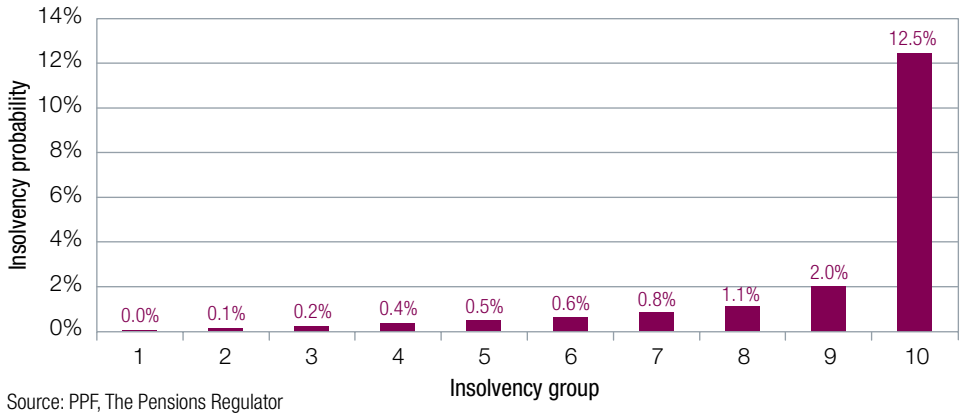
- The weighted average insolvency probability (by s179 liabilities) for schemes is 0.23 per cent in the Purple 2008 dataset.
- The estimated total deficit on an s179 basis for all underfunded schemes in the Purple 2008 dataset is £67.7 billion as at 31 March 2008, up from £31.6 billion a year earlier.[67]
- The total estimated s179 surplus for all surplus schemes in the Purple 2008 dataset is £62.6 billion as at 31 March 2008, down from £115.3 billion in 2007.

B.2 Insolvency risks of schemes in the sample

The average insolvency probability on an unweighted basis for the Purple 2008 sample as a whole is 0.68 per cent. The weighted average insolvency probability (by s179 liabilities) for schemes in the Purple 2008 dataset is 0.23 per cent. Detail on scheme insolvency can be found in Chapter 6.

Chart B1 shows a relatively high average insolvency probability (12.5 per cent) for schemes in insolvency Group 10. The other nine groups have relatively low average insolvency probabilities in comparison with Group 10, with the next highest average insolvency probability being 2.0 per cent.

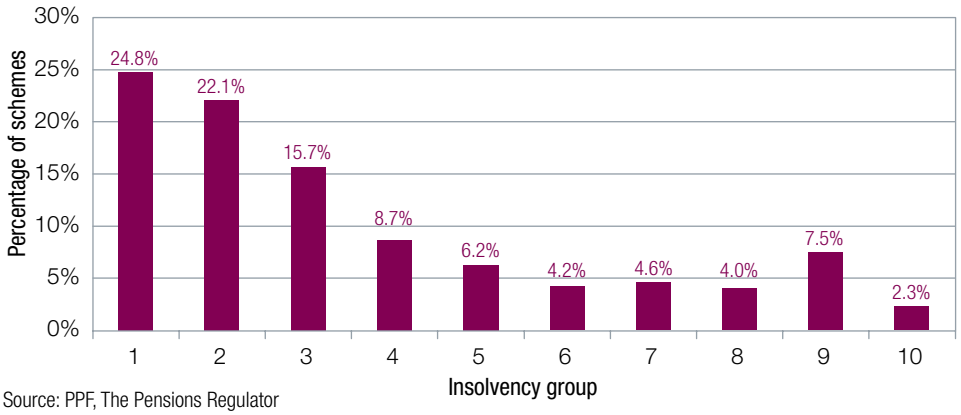
Chart B1 | Average implied Insolvency probability by insolvency group



Source: PPF, The Pensions Regulator

67 The figures quoted here use the PPF7800 calculation method. Despite this, funding levels will not appear as in the PPF7800 monthly release or as in Chapter 4. They are derived using actual proportionate changes from the extended Purple 2007 dataset (used to calculate the PPF7800 index) to the Purple 2008 dataset as at 31 March 2008 in s179 assets and liabilities,

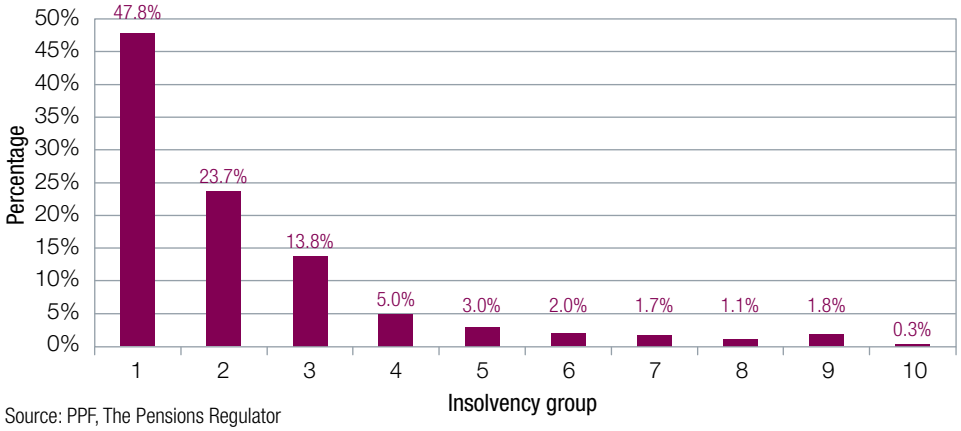
Chart B2 | Percentage of schemes by insolvency group



Source: PPF, The Pensions Regulator

On average, the larger schemes tend to inhabit the lower insolvency risk groups, with 47.8 per cent of liabilities in insolvency Group 1 and 85.3 per cent in Groups 1, 2 and 3. This can be seen in Chart B3, which shows the distribution of liabilities across insolvency groups and is in line with previous editions of Purple.

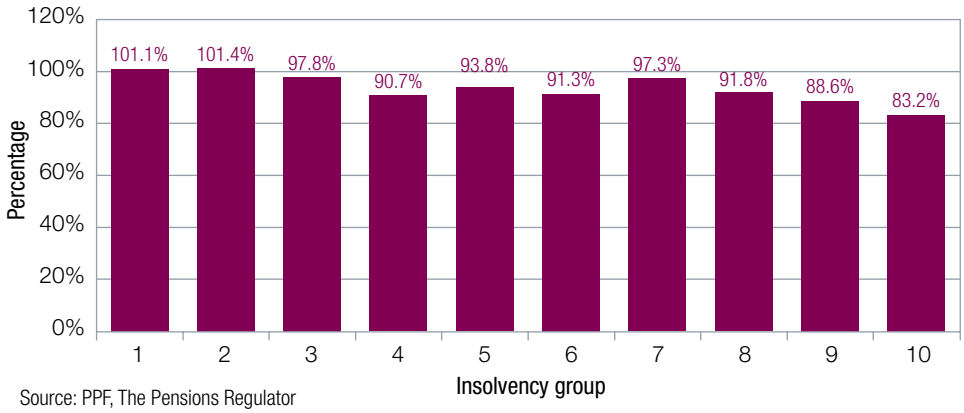
Chart B3 | Percentage of total scheme s179 liabilities by insolvency group



Source: PPF, The Pensions Regulator

A scheme's funding position is calculated as the ratio of its assets (including deficit reduction contributions) to liabilities. Broadly speaking, for the Purple 2008 dataset, the funding positions of schemes in the higher insolvency groups is weaker than that for those in the lower groups (see Chart B4).

Chart B4 | Funding position on a s179 basis by insolvency group

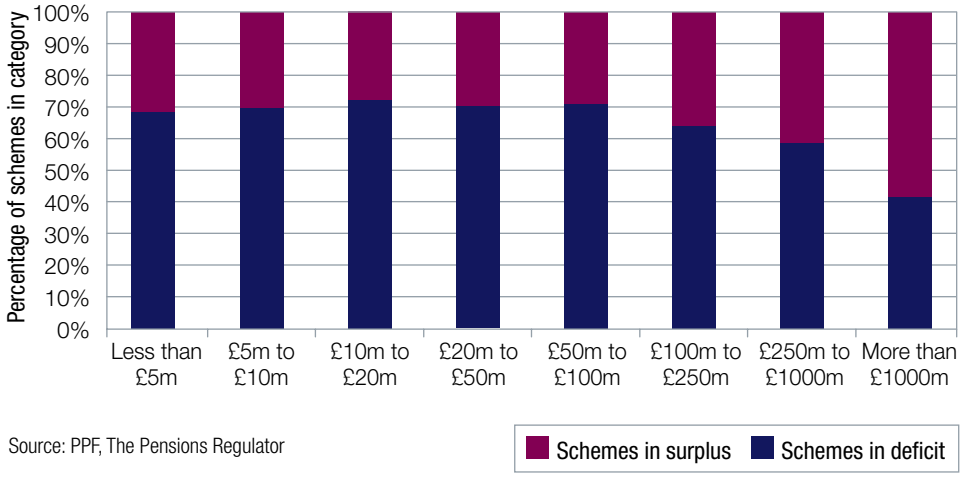


Source: PPF, The Pensions Regulator

B.3 Schemes in deficit and surplus

Schemes in deficit numbered 4720 in March 2008, accounting for 68.4 per cent of the sample. The estimated total s179 deficit in the Purple 2008 dataset for all underfunded schemes was £67.7 billion as at 31 March 2008. This has deteriorated considerably from 2007, when the deficit for underfunded schemes was £31.6 billion. This is primarily the result of movements in equity and gilt markets (see Chapter 5 for more details). The overall funding position of schemes in deficit for the Purple 2008 dataset was 85.0 per cent in March 2008.

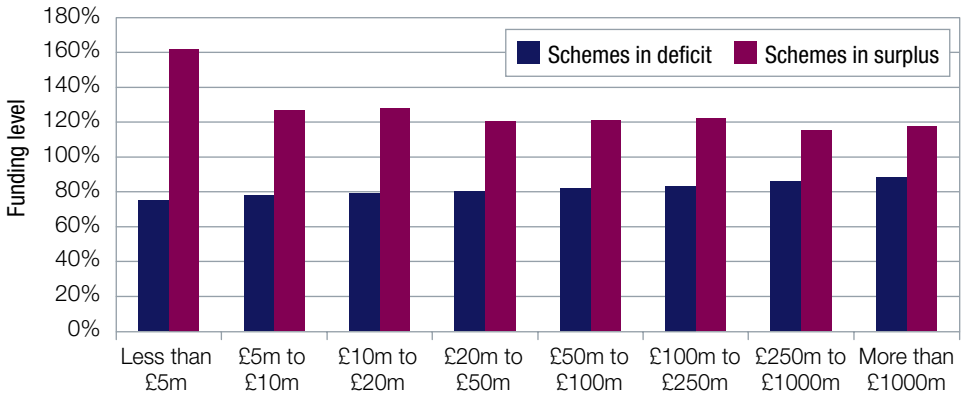
Chart B5 | Funding position on a s179 basis by asset size



Source: PPF, The Pensions Regulator

Chart B5 shows that the percentage of deficit schemes is relatively flat across schemes with assets of up to £100 million, before falling back as larger schemes are considered. Turning to Chart B6, the average funding ratio rises gradually for schemes in deficit with assets of more than £5 million. Average funding ratios for schemes in surplus and with assets of more than £5 million fluctuate between around 115 and 128 per cent. The £0 to £5 million asset range has the largest average funding position for surplus schemes (162.1 per cent) and displays the largest disparity in average funding levels between deficit and surplus schemes.

Chart B6 | s179 funding position by asset size



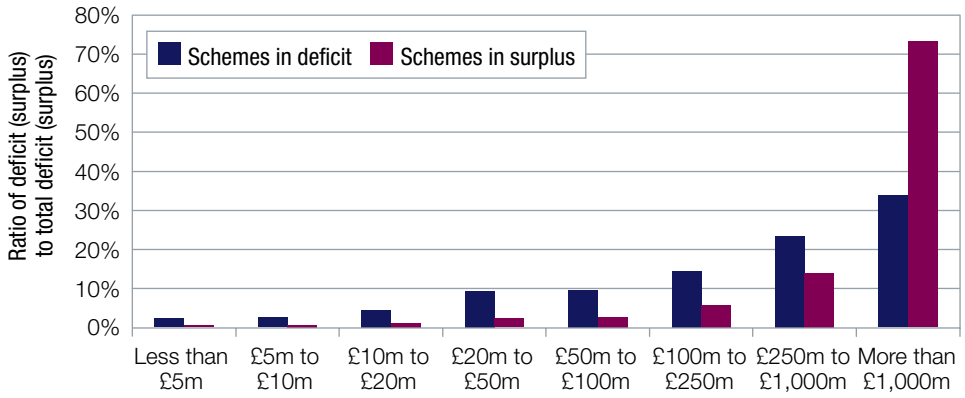
Source: PPF, The Pensions Regulator

One outlier was excluded from the data for this graph

There were 2,178 schemes in surplus on an s179 basis in March 2008, accounting for 31.6 per cent of the sample. The total s179 surplus for these schemes is lower at £62.6 billion, compared with the 2007 surplus of £115.3 billion.[68] The funding ratio of schemes in surplus in March 2008 was 116.0 per cent.

Dividing schemes by size of assets, Chart B7 shows that s179 surpluses in the largest asset group represent 73.3 per cent of the total surplus, and s179 deficits represent 33.8 per cent of total deficits. Outside this category, all asset size groups contain significantly larger percentages of total deficit than of total surplus.

Chart B7 | Share of s179 surplus and s179 deficit by asset size



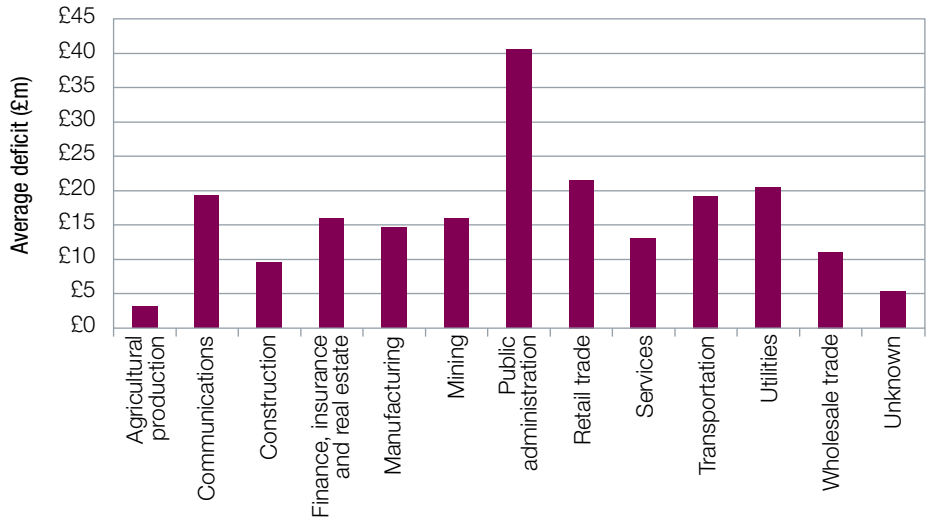
Source: PPF, The Pensions Regulator

68 The figures quoted here use the PPF7800 calculation method. Despite this, funding levels will not appear as in the PPF7800 monthly release or as in Chapter 4. They are derived using actual proportionate changes from the extended Purple 2007 dataset (used to calculate the PPF7800 index) to the Purple 2008 dataset as at 31 March 2008 in s179 assets and liabilities, which are in turn used to estimate the effect that market conditions would have on the funding levels of schemes in the Purple 2008 dataset at all points in the time series.

B.4 Short-term risk concentration by industry

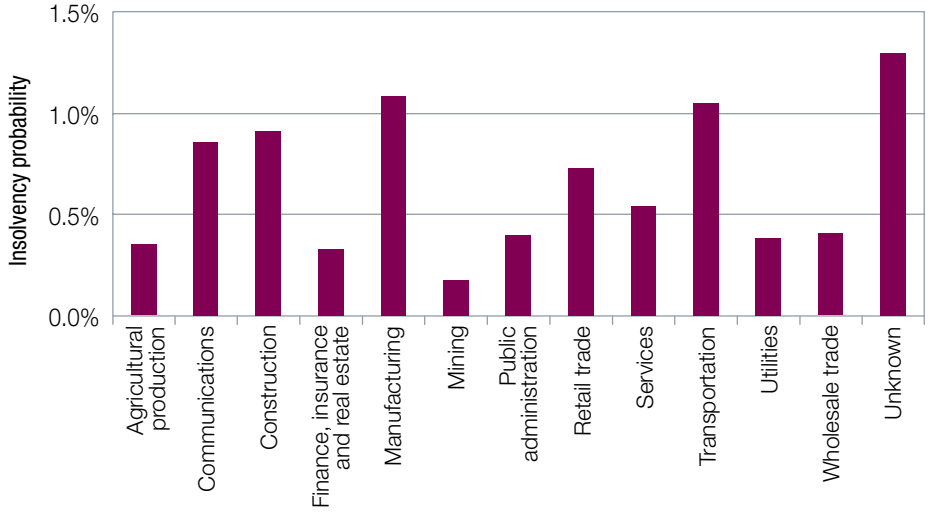
The following charts show average scheme s179 deficits and insolvency probabilities by sponsor industry. Retail, communication and transportation are notable for having relatively high average deficits and insolvency probabilities.

Chart B8 | Average s179 deficit by industry (excluding schemes in surplus)



Source: PPF, The Pensions Regulator

Chart B9 | Average insolvency probability by industry (excluding schemes in surplus)



Source: PPF, The Pensions Regulator




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
- SSF
  Scheme specific funding
- NAPF
  National Association of Pension Funds

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.

Minimum funding requirement/valuation (MFR)

The MFR valuation was introduced to provide a uniform funding floor for defined benefit schemes. Schemes were required to be funded to a given level or, if they were not already at that level, to achieve it within a set period.

MFR roll-forward

Estimate of a section 179 liability derived from a Minimum Funding Requirement (MFR) calculation.

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.