

Recovery plans

Scheme funding and other security arrangements



The Pensions
Regulator

Preface

This publication is the second part to The Pensions Regulator's ('the regulator') December 2010 report **Recovery plans: Assumptions and triggers**¹. It is released in accordance with the UK Statistics Authority Code of Practice for Official Statistics.

The document presents an analysis of recovery plans with valuation dates up to and including 21 September 2009 that were submitted to the regulator before 1 February 2011. Specifically, this report considers the funding aspects of these plans, where the December 2010 report covered the technical assumptions underlying funding targets and statistics relating to the regulator's triggers. These plans include the fourth tranche of submissions beginning the second triennial cycle of scheme valuations.

The report studies all those tranche 4 plans that were included in the December 2010 report, with the addition of 373 plans submitted after 31 August 2010.

Of the 1,849 tranche 4 plans analysed, 1,455 had submitted tranche 1 recovery plans 3 years earlier. This high coverage of schemes that submitted recovery plans in both tranches supports further comparison of scheme funding positions in tranche 4 versus those in tranche 1.

The report also discusses the prevalence of scheme contingent assets, which have become increasingly common. Where present, these assets serve as additional security held in support of a given scheme's funding position, and can also contribute to a lower Pension Protection Fund (PPF) risk-based levy. Economic conditions during the tranche 4 valuation periods placed pressure on trustees to consider longer recovery plans, and in addition many schemes have strengthened their sponsor covenant through the adoption of contingent assets.

¹ www.thepensionsregulator.gov.uk/docs/recovery-plans-assumptions-triggers-2010.pdf

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Executive summary

Introduction

This publication provides an overview of the funding of defined benefit (DB) and hybrid pension schemes that were in deficit on a technical provisions basis, and had valuation dates falling between 22 September 2008 and 21 September 2009 (referred to in this report as tranche 4).

Scheme security and contingent assets

Since tranche 1, contingent assets have become a significantly more prominent tool for improving scheme security arrangements. A total of 321 tranche 4 schemes reported some form of contingent asset (191 of these schemes held at least 1 form of PPF-compliant contingent asset in the 2010-2011 levy year. This contrasts with the 21 tranche 1 schemes that held PPF-compliant contingent assets in the 2006-2007 levy year).

Volatility and deficits

Market conditions (including poor equity market performance and falling gilt yields) over the period in which tranche 4 valuations were typically conducted, contributed to an increase in both the number of schemes in deficit, and the median scheme deficit over the previous tranche. At the end of March 2009, around 85% of all PPF-eligible schemes were in deficit on a section 179 (s179) basis. These market conditions would also have significantly contributed to scheme deficits under the technical provisions measure.

Key funding ratios

The average assets to liability funding ratio in tranche 4 was 71.3% on a technical provisions basis, 76.9% on an s179 basis, and 51.6% on a buyout basis. On average, technical provisions as a proportion of s179 stood at 102.0% over this period, while technical provisions as a proportion of buyout stood at 72.2%.

Comparison of funding in tranches 1 and 4

Among schemes that have submitted recovery plans in both tranche 1 and tranche 4, the average level of technical provisions has increased by 15.4%, while the average value of assets has decreased 2.6%.

Funding and other security arrangements

Key points

- There is more than 1 measure of scheme funding. The most commonly used measures include technical provisions, section 179 (s179), buyout, and FRS17 (see glossary for definitions). The regulator is focused on ensuring that the assumptions chosen for calculating the technical provisions are prudently chosen. Trustees are required to submit a recovery plan to the regulator when a scheme's assets are less than a scheme's liabilities on a technical provisions basis at the point of a scheme funding valuation.
- 321 (17.4%) tranche 4 schemes have at least 1 contingent asset (PPF-compliant or non PPF-compliant). 191 tranche 4 schemes have at least 1 PPF-compliant contingent asset (in respect of PPF levy year 2010-2011) and 130 tranche 4 schemes have at least 1 contingent asset which is not PPF-compliant.
- 21 tranche 1 schemes hold at least 1 PPF-compliant contingent asset (in respect of PPF levy year 2006-2007).
- The average (unweighted) funding ratio on a technical provisions basis declined from 79.8% to 71.3% in tranche 4.
- The tranche 4 average (unweighted) funding ratio on an s179 basis fell from 84.8% in tranche 1 to 76.9% in tranche 4.
- Technical provisions target 72.2% of tranche 4 buyout liabilities on average (unweighted). This represents an increase of 5.0 percentage points over the tranche 1 average. This reflects improvements in the mortality assumptions between the 2 tranches.
- On average, technical provisions as a proportion of s179 liabilities amount to 102.0% in tranche 4. This represents a decline of 3.2 percentage points from the tranche 1 average, but a decline of 8.9 percentage points from tranche 3.

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1.1 Second valuations

There were 1,849 tranche 4 recovery plans submitted to the regulator compared to 1,928 tranche 1 plans (see Table 1.1 below. For the purposes of this publication, a plan's tranche is based on the effective date of valuation). 1,455 recovery plans submitted in tranche 1 were from schemes that had also submitted recovery plans in tranche 4. In some cases, however, schemes with recovery plans in tranche 1 did not submit tranche 4 recovery plans. The reasons for submitting a recovery plan in tranche 1 but not tranche 4 are several. One reason is where a scheme was in surplus at the point of its tranche 4 valuation. Other reasons are that the scheme may have wound up or be in the process of doing so; the scheme may have transferred to the PPF, or is in a position of 'failure to agree' between trustees and sponsor. Also, some schemes have had their most recent valuations less than 3 years from their previous valuation.

Table 1.1 below shows the number of recovery plans received by the regulator up to tranche 4 as at 31 January 2011.

Table 1.1
Summary of recovery plan activity

	Tranche	Number of plans analysed
Cycle 1 (up to 31.01.2011)	1	1,928
	2	1,829
	3	1,787
Cycle 2 (up to 31.01.2011)	4	1,849 (includes 1,455 schemes from tranche 1)

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The distribution of schemes across tranches by the number of members; size of technical provisions; maturity; and insolvency risk (Table 1.2 below) has not changed materially since the previous tranche 4 report, which had been based on recovery plans that had been submitted up to 31 August 2010.²

The size profiles of tranche 1 and tranche 4 schemes are similar both in terms of the number of members and the size of technical provisions. As noted in the previous report, tranche 4 has a more mature profile (based on the ratio of pensioner technical provisions to total technical provisions) than tranche 1. This was to be expected since the majority of schemes are not open to new members.

In addition, the proportion of tranche 4 schemes in PPF insolvency groups 9 and 10 (with the highest estimated insolvency probability) is greater compared to the corresponding proportion in tranche 1.

Table 1.2
Scheme demographics

Tranche	Tranche 1	Tranche 2	Tranche 3	Tranche 4
Number of members				
< 100 members	30.2%	32.2%	32.2%	27.9%
100 to 499 members	35.3%	36.5%	35.5%	34.1%
500 to 999 members	12.3%	10.0%	12.6%	13.2%
1,000 to 4,999 members	14.7%	13.3%	13.8%	15.9%
5,000 + members	7.5%	8.0%	5.9%	8.9%
Size of technical provisions				
< £5m	28.3%	30.2%	25.1%	23.3%
£5m to less than £20m	29.9%	32.1%	32.0%	29.2%
£20m to less than £100m	26.7%	23.3%	27.5%	27.4%
£100m to less than £300m	8.0%	7.2%	8.7%	10.3%
£300m +	7.1%	7.2%	6.7%	9.8%
Maturity (% of pensioner technical provisions)				
< 25%	46.7%	46.7%	39.1%	36.4%
25% to less than 50%	38.5%	38.2%	43.8%	41.6%
50% to less than 75%	13.3%	13.3%	15.5%	19.8%
75% to 100%	1.5%	1.9%	1.6%	2.2%
Insolvency group (as defined by The Purple Book 2010)				
Insolvency groups 1 and 2	51.2%	43.1%	41.3%	50.8%
Insolvency groups 3 to 8	40.3%	46.4%	48.0%	35.6%
Insolvency groups 9 and 10	8.5%	10.5%	10.7%	13.7%

² Insolvency groups 1 to 10 (as defined in The Purple Book 2010) are based on insolvency probabilities which correspond to Dun & Bradstreet failure scores. The mapping of failure scores to insolvency probabilities underlying this analysis is that used by the PPF for the purposes of the 2011-2012 levy. This mapping is the third of three versions and reflects an updated methodology from the second (ie that used for the previous levy year). The 2009 scheme funding publication used the first version and as such should not be compared with this publication.

1.2 Scheme security and contingent assets

The regulator's November 2010 'Guidance on monitoring employer support,' highlights a number of strategies that trustees and employers may undertake when they wish to increase the strength of the employer covenant or security of the pension scheme.³ These strategies include:

- Agreements to abide by certain performance thresholds and to inform trustees when certain thresholds are breached.
- Providing other improvements in priority, such as the subordination of other creditors, to improve the outcome for the scheme on insolvency.
- Offering negative pledges, whereby an employer makes a commitment not to do something, such as grant new security without the agreement of trustees, or not to increase dividends.
- Committing to increased funding on certain events, for example if profitability should improve (eg step payments in a recovery plan with 'true-up') or if investments perform badly.
- Scheme rule changes, whereby making an amendment to the scheme's trust deed and rules can change the balance of power to give the scheme greater security.
- The granting of specific contingent assets.

Contingent assets are assets on which a claim by the pension scheme would exist on the occurrence of 1 or more specified future events ('the contingent event') such as movements in corporate asset holdings, increased employer borrowing, employer insolvency, or the failure to achieve a specified funding level. Unless the events occur, these assets are not available to the trustees to meet members' benefit payments. They are not included as scheme assets for the purpose of assessing whether a scheme meets its funding objective until they are transferred to the scheme.

There are a range of circumstances in which taking security over an asset can affect scheme-specific funding and the recovery plan. These circumstances include: allowing the scheme to invest in a higher proportion of return-seeking assets; increasing scheme security should future experience prove adverse; supporting long recovery plans where it becomes difficult to forecast the strength of employer covenant when it may be needed; and indicating the support of the wider group in safeguarding the integrity of the scheme.

This report differentiates between 2 forms of contingent assets: PPF-compliant contingent assets and non PPF-compliant contingent assets. PPF-compliant contingent assets are arrangements recognised by the PPF in the levy calculation. These assets have to satisfy requirements of the determination (rules for calculating the PPF levy) and must be certified correctly and on time.

The PPF-compliant contingent assets fall into 3 categories:

- 'Type A' contingent assets – These are guarantees provided by the parent/group companies to fund the scheme, most commonly guarantees to cover a pre-arranged percentage of liabilities.
- 'Type B' contingent assets – There are 3 categories of Type B contingent assets: Category (i) comprising of security over holdings of cash; Category (ii) covering real estate; and Category (iii) covering other forms of security.
- 'Type C' contingent assets – There are 2 categories of 'Type C' contingent assets: Type C (i) consist of letters of credit and bank guarantees with evergreen duration; and Type C (ii) consist of letters of credit and bank guarantees with fixed duration.

There are some cases in which a contingent asset that is reported within a scheme's valuation summary is not PPF-compliant ie has not been formally approved by the PPF in support of a scheme's levy calculation. These contingent assets, which may also take the form of security over property, escrow accounts or parental/group guarantees are referred to here as non PPF-compliant.

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³ www.thepensionsregulator.gov.uk/guidance/monitoring-employer-support.aspx

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Table 1.3 below reports a breakdown of these assets by type with the corresponding number and percentage of schemes that hold them.

It suggests that:

- 17.4% of tranche 4 schemes hold contingent assets (10.3% hold PPF-compliant contingent assets and 7.0% held non PPF-compliant).
- The most common form of PPF-compliant contingent asset is Type A (parent/group guarantees), which is held by 9.0% of tranche 4 schemes. A further 1.1% of schemes hold security over real estate.
- Among non PPF-compliant contingent assets, the most common was the holding of parental/group guarantees (3.2% of schemes held such assets).

Although the number of schemes with escrow account-based contingent assets is low, these are often large schemes and case evidence indicates that their contribution to supporting the sponsor's covenant is significant.

Table 1.3

Use of contingent assets

	Number of schemes	% of schemes
Tranche 4 schemes with at least 1 PPF-compliant contingent asset	191*	10.3%
Tranche 4 schemes with at least 1 non PPF-compliant contingent asset	130*	7.0%
Tranche 4 schemes with at least 1 contingent asset	321	17.4%
PPF-compliant assets		
Type	Number of schemes	
A	166	9.0%
B(i)	**	**
B(ii)	21	1.1%
C(ii)	**	**
Non PPF-compliant assets		
Property-related asset or property in combination with another asset	22	1.2%
Guarantee or guarantee in combination with other asset	60	3.2%
Escrow	10	0.5%
Cash-related or charge over other asset (excludes property)	18	1.0%
Other (eg letter of credit)	20	1.1%

* Mutually exclusive

**References to 5 or fewer schemes are not shown for reasons of disclosure

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There has been a substantial increase in the use of contingent assets over the past few years. The Purple Book 2010 reports that the number of PPF-compliant contingent assets for all PPF eligible DB schemes was around 720 in respect of the 2010-2011 levy year, which represents an increase of approximately 16% over the previous levy year (this covers all tranches and schemes in surplus on a technical provisions basis).

Comparisons between tranche 1 and tranche 4 reveal an even greater relative increase in the use of contingent assets than that observed over the previous year. The number of tranche 4 schemes with at least 1 PPF-contingent asset in respect of the 2010-2011 levy is 191. This compares with the 21 tranche 1 schemes that held PPF-compliant contingent assets in respect of the 2006-2007 (the majority of which were PPF Type A contingent assets).

Table 1.4 below shows size, maturity and risk profile of those schemes in tranche 4 with at least 1 contingent asset. Columns 2 and 3 report the number and percentage of schemes with PPF-compliant contingent assets; columns 4 and 5 report the number and percentage of schemes with non PPF-compliant contingent assets; while the final 2 columns highlight the total number and percentage of schemes using either PPF-compliant or non PPF-compliant contingent assets.

Table 1.4
Contingent assets in tranche 4 by scheme characteristics

	PPF-compliant		Non PPF-compliant		All contingent assets	
	Number of schemes	% of schemes	Number of schemes	% of schemes	Number of schemes	% of schemes
Number of members						
< 100 members	13	2.5%	10	1.9%	23	4.5%
100 to 499 members	59	9.4%	43	6.8%	102	16.2%
500 to 999 members	33	13.6%	19	7.8%	52	21.4%
1,000 to 4,999 members	53	18.1%	29	9.9%	82	28.0%
5,000 + members	33	20.0%	29	17.6%	62	37.6%
Size of technical provisions						
< £5m	7	1.6%	6	1.4%	13	3.0%
£5m to less than £20m	43	8.0%	32	5.9%	75	13.9%
£20m to less than £100m	67	13.2%	42	8.3%	109	21.5%
£100m to less than £300m	38	19.9%	21	11.0%	59	30.9%
£300m +	36	19.8%	29	15.9%	65	35.7%
Maturity (% of pensioner technical provisions)						
< 25%	46	6.8%	29	4.3%	75	11.1%
25% to less than 50%	96	12.5%	62	8.1%	158	20.5%
50% to 100%	49	15.6%	39	15.1%	88	30.7%
Insolvency group* (as defined by The Purple Book 2010)						
Insolvency groups 1 and 2	75	9.3%	62	7.7%	137	17.0%
Insolvency groups 3 to 8	51	9.0%	28	5.0%	79	14.0%
Insolvency groups 9 and 10	30	13.8%	14	6.5%	44	20.3%

*Base is smaller due to data coverage

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Table 1.4 suggests that there is a positive association between scheme size (measured either in terms of number of members or size of technical provisions) and the use of contingent assets, eg although only 4.5% of schemes with fewer than 100 members hold some form of contingent asset, the proportion of schemes with 5,000 or more members holding such assets is 37.6%. A similar pattern is observed when reviewing separately the relationship between PPF-compliant and non PPF-compliant contingent assets against scheme size.

Table 1.4 also suggests that there is a positive association between scheme maturity and the holding of contingent assets, ie more mature schemes are relatively more likely to hold such assets.

Schemes in the highest PPF insolvency risk group were, relative to the other 2 PPF insolvency groups, the most likely to hold some form of contingent asset (20.3% of these schemes did so). However, the pattern of contingent asset usage by type of asset against PPF insolvency scores was mixed. While schemes in the highest PPF insolvency risk group were more likely than those in lower groups to hold PPF-compliant contingent assets, the pattern was not observed when comparing PPF insolvency scores against the use of non PPF-compliant contingent assets.

Finally, the report considers the relationship between contingent assets and the degree of apparent prudence employed in the setting of technical provisions and recovery plans (as proxied by the initial recovery plan trigger).

In keeping with a risk-based approach to regulation, the regulator employs triggers, which generally determine whether the recovery plan or technical provisions will prompt further investigation. This is a general approach: the regulator may still examine further schemes that do not trigger, where appropriate.

The regulator's guidance emphasises 3 main points: triggers are not targets; technical provisions should be robust; and there exists flexibility on recovery plans where needed⁴

There are 4 primary triggers. There is a trigger for technical provisions, which is set at a point between the value of FRS17 liabilities and the value of s179 liabilities. The precise point is scheme specific and depends on both the scheme maturity and the employer covenant. There are an additional 3 triggers for recovery plans. These are based around whether the duration of the plan exceeds 10 years; whether the recovery plan appears excessively back-end loaded; and whether the investment assumptions over the life of the plan appear inappropriate.

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⁴ For further information, refer to: <http://webarchive.nationalarchives.gov.uk/20121204114714/http://www.thepensionsregulator.gov.uk/pdf/schemeFundingStatement.pdf>

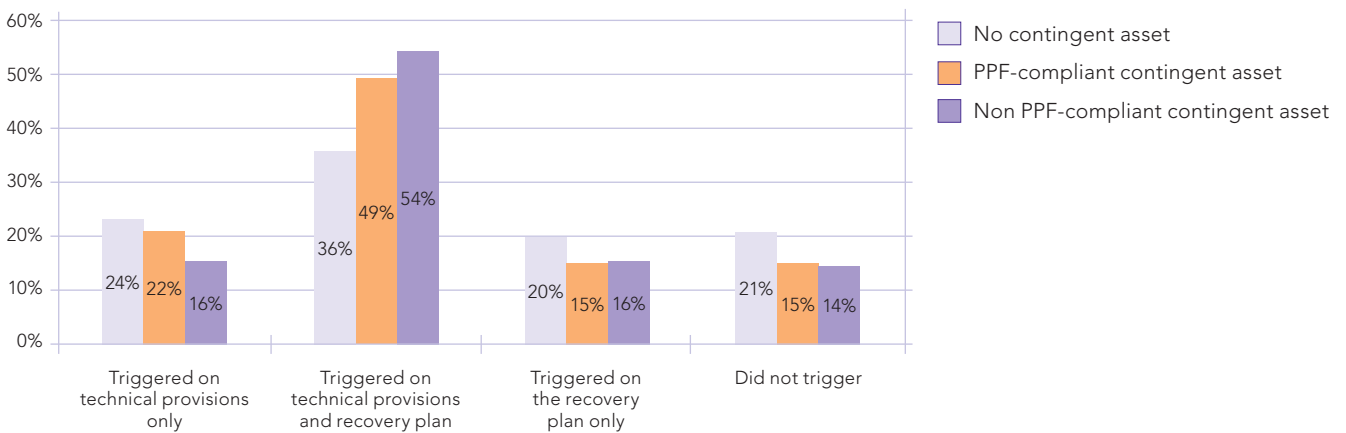
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Trigger statistics presented in this section, report on plans as they were when initially submitted to the regulator, and the trigger does not take into account the existence of any contingent assets. Figure 1.1 below shows a breakdown of the trigger status of recovery plans submitted in tranche 4 by whether the scheme had a PPF-compliant contingent asset, a non PPF-compliant contingent asset or no contingent assets. For the purposes of presentation, the statuses reported here are mutually-exclusive categories and comprise of: plans triggered on technical provisions only; plans triggered on both technical provisions and at least 1 recovery plan trigger; plans triggered on at least 1 recovery plan trigger only; and plans not triggered at all.

The analysis suggests that contingent assets have been used to support recovery plans where the technical provisions and/or recovery plan length, loading or investment assumptions were more likely to have been subject to further investigation from the regulator. In particular:

- Schemes that reported having contingent assets were more likely than those not reporting contingent assets to initially trigger on technical provisions and/or recovery plans: 85.3% of schemes with PPF-compliant contingent assets and 86.3% of schemes with non PPF-compliant contingent assets triggered on either or both technical provisions and/or recovery plans. This compares with 79.0% of schemes that did not hold contingent assets but triggered.
- 53.8% of schemes with PPF-compliant contingent assets and 49.2% of schemes with non PPF-compliant contingent assets triggered on both technical provisions and recovery plans, compared to 35.5% of schemes that did not hold contingent assets.

Figure 1.1
Percentage of recovery plans in tranche 4 triggering split by contingent assets held



1.3 Volatility and scheme deficits

There is more than 1 measure of scheme funding. The most commonly used measures include technical provisions, section 179 (s179), buyout, and FRS17 or IAS19 (see glossary for definitions). The regulator is focused on ensuring that the chosen assumptions for calculating the technical provisions are prudently chosen. Trustees are required to submit a recovery plan to the regulator when a scheme’s assets are in deficit relative to its technical provisions at a scheme funding valuation. Both assets and liabilities are influenced by prevailing financial market conditions at the valuation date and as such reflect day-to-day volatility. Liabilities are sensitive to changes in the assumed discount rate, inflation, and mortality assumptions, among other factors.

Figure 1.2 below highlights the 20 year UK GILT yields and the FTSE All Share Index.

Figure 1.2
20 year UK gilt yield and FTSE All Share Index



Source: FTSE Group

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The aggregate funding deficit of all PPF-eligible schemes on an s179 basis increased steadily from around September 2008 and grew to a deficit of £208.6bn at the end of March 2009, compared to a surplus of £9.9bn a year earlier, and a surplus of £38.3bn a year later. At the end of March 2009, an estimated 85% of all PPF-eligible schemes were in deficit. The aggregate deficit of all schemes in deficit at the end of March 2009 was £221bn compared to an aggregate deficit of £56.9bn at the end of March 2008, and £49.1bn at the end of March 2010⁵

The decline in s179 funding over the March 2008 to March 2009 period coincides with a time of falling equity values and gilt yields (see Figure 1.2 on page 13). Average scheme funding levels on an asset to s179 basis were lower in tranche 4 than for any other point in previous 3 tranches but have generally improved since (see Figure 1.3 below). Although deficits on an s179 basis and deficits on a technical provisions basis do not have an exact 1-on-1 relationship, and the PPF figures are based on all schemes including those in surplus, the factors affecting the volatility of the s179 deficit measure also affect the volatility of the technical provisions measure.

Figure 1.3 below reports the funding ratio on an s179 basis for schemes in the PPF 7800 index.

Figure 1.3
PPF 7800 funding ratio



Source: The Pension Protection Fund

⁵ http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/PPF_7800_November_10.pdf

1.4 Key funding ratios

Table 1.5

Key funding ratios

Tranche	Unweighted average				Weighted average			
	T1	T2	T3	T4	T1	T2	T3	T4
Assets as a proportion of:								
Technical provisions	79.8%	82.0%	80.9%	71.3%	86.1%	88.8%	83.8%	74.3%
s179	84.8%	95.0%	91.0%	76.9%	91.5%	106.7%	96.4%	79.9%
Buyout	53.7%	58.5%	60.3%	51.6%	61.5%	67.5%	67.2%	55.5%
Technical provisions as a proportion of:								
s179	105.2%	114.2%	110.9%	102.0%	106.9%	119.2%	114.9%	106.2%
Buyout	67.2%	71.1%	74.5%	72.2%	71.3%	75.5%	80.3%	74.5%

Note: weighted figures above have been weighted on technical provisions

Table 1.5 above shows funding ratios on the technical provisions, s179 and buyout bases as well as the proportion of technical provisions that cover s179 and buyout liabilities for each tranche. The averages are for schemes in deficit within a given tranche, and are calculated on a technical provisions basis. As schemes in surplus on a technical provisions basis are not included in this analysis (as they would not have submitted a recovery plan), funding levels here are lower on average than for schemes as a whole.

Some observations from table 1.4 above include:

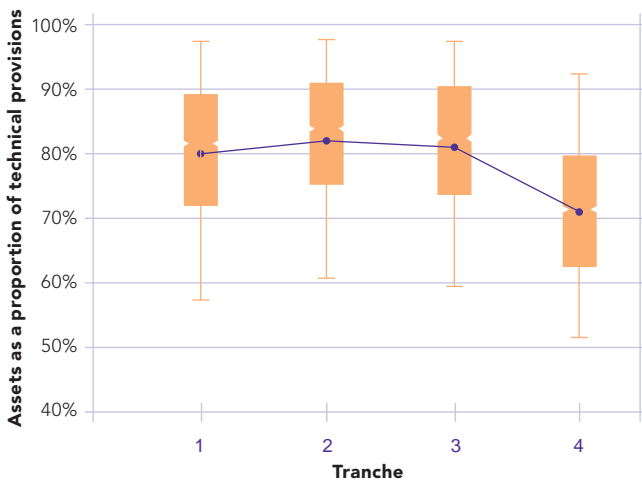
- Tranche 2 schemes showed the highest average funding levels on the technical provisions and s179 bases.
- The average funding ratio on an s179 basis in tranche 4 is 76.9% (just under 78.6%, the estimated aggregate s179 funding ratio of all PPF-eligible schemes at 31 March 2009 according to data published by the PPF).
- The buyout funding level has decreased for the first time since tranche 1.
- Technical provisions as a proportion of s179 liabilities have fallen between tranche 3 and tranche 4.
- Technical provisions as a proportion of buyout liabilities rose from tranche 1 to tranche 3. This may have been influenced by a closer alignment of mortality assumptions to those used by insurers, however this improvement does not continue from tranche 3 into tranche 4.

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Figure 1.4 below is a box plot of the distribution of funding levels in each tranche on a technical provisions basis. This funding level will be influenced by discount rate assumptions, mortality assumptions, and asset prices among other factors⁶. It is worth noting that as recovery plans only apply to schemes in deficit, the 100th percentile by definition represents the maximum funding level in our data.

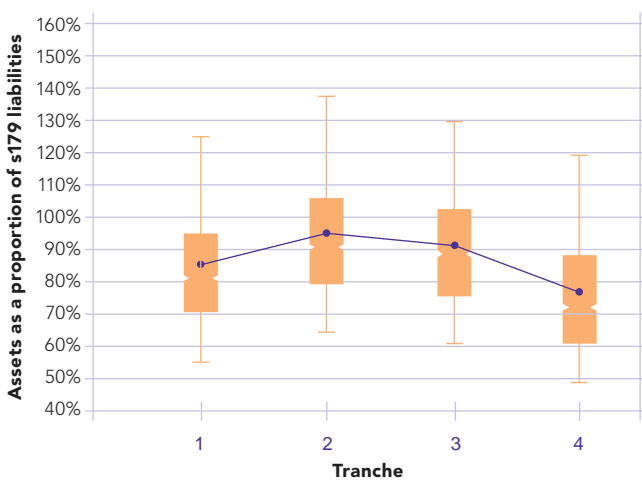
Figure 1.4
Distribution of assets as a proportion of technical provisions



Tranche	T1	T2	T3	T4
95th percentile	97.3%	97.8%	97.4%	92.2%
Upper quartile	89.2%	91.0%	90.4%	79.9%
Median	81.5%	83.9%	82.4%	71.4%
Lower quartile	71.9%	75.2%	73.6%	62.5%
5th percentile	57.3%	60.8%	59.5%	51.6%

Figure 1.5 below depicts the distribution of funding levels in each tranche on an s179 basis. s179 liabilities are influenced by gilt yields and reflect the fact that PPF compensation does not reflect full scheme benefits.

Figure 1.5
Distribution of assets as a proportion of s179 liabilities



Tranche	T1	T2	T3	T4
95th percentile	125.4%	138.5%	129.8%	119.7%
Upper quartile	95.0%	107.1%	102.3%	88.7%
Median	81.4%	91.7%	88.6%	72.1%
Lower quartile	70.5%	79.2%	75.5%	61.0%
5th percentile	55.5%	63.9%	60.7%	48.8%

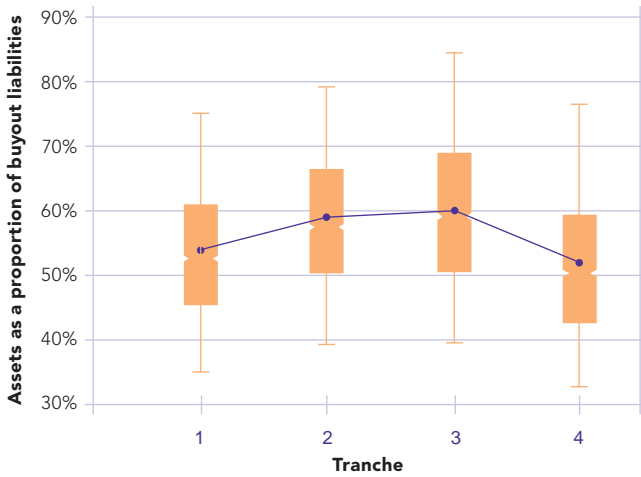
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⁶ The whiskers of box plots presented in this report start and end at the 5th and 95th percentiles respectively. The edges of boxes represent the 25th and 75th percentiles while notches represent the 50th. The mean is represented by a blue dot.

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Figure 1.6 below depicts the distribution of funding levels in each tranche on a buyout basis. Buyout liabilities represent an estimate of the cost of securing scheme liabilities with annuities purchased from a regulated insurance company. As with Figure 1.5 on page 16, the distribution for buyout funding levels in tranche 4 has also shifted downward.

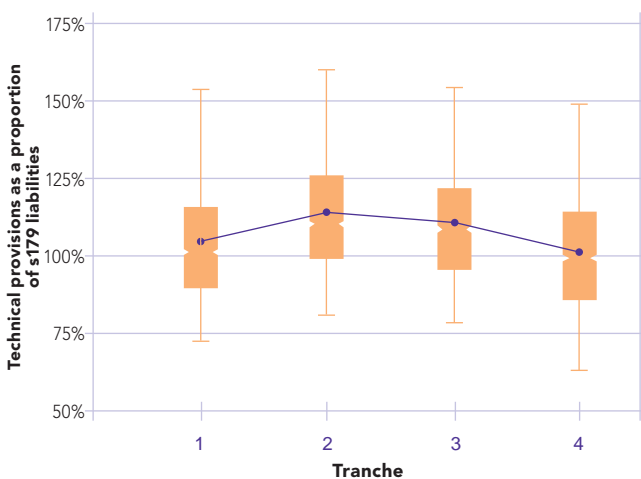
Figure 1.6
Distribution of assets as a proportion of buyout liabilities



Tranche	T1	T2	T3	T4
95th percentile	75.1%	79.1%	84.4%	76.6%
Upper quartile	61.0%	66.5%	69.0%	59.3%
Median	52.7%	57.6%	59.0%	50.2%
Lower quartile	45.3%	50.2%	50.5%	42.7%
5th percentile	35.0%	39.3%	39.7%	32.8%

Figure 1.7 below depicts the distribution of technical provisions as a proportion of s179 liabilities.

Figure 1.7
Distribution of technical provisions as a proportion of s179 liabilities



Tranche	T1	T2	T3	T4
95th percentile	154.3%	160.0%	154.0%	149.4%
Upper quartile	115.9%	126.3%	123.4%	114.3%
Median	101.7%	110.5%	108.4%	99.5%
Lower quartile	89.4%	98.1%	95.5%	85.7%
5th percentile	73.5%	80.6%	77.5%	67.4%

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Table 1.6 below shows the influence of scheme characteristics on funding. Schemes with the highest asset to technical provision ratios are: those within the largest scheme membership group (more than 5,000 members); those with the highest level of technical provisions (more than £300m); those that are the most mature (based on pensioner technical provisions to total technical provisions); and those classed within the lowest risk PPF insolvency group (as defined in The Purple Book 2010).

Table 1.6
Assets as a proportion of technical provisions by scheme characteristics

Tranche	Unweighted average			
	Tranche 1	Tranche 2	Tranche 3	Tranche 4
Overall	79.8%	82.0%	80.9%	71.3%
Number of members				
< 100 members	78.0%	79.6%	79.1%	71.5%
100 to 499 members	79.5%	82.0%	81.3%	70.4%
500 to 999 members	79.5%	84.0%	81.8%	69.4%
1,000 to 4,999 members	81.7%	83.6%	82.1%	71.9%
5,000 + members	84.9%	88.5%	85.3%	75.7%
Size of technical provisions				
< £5m	77.9%	79.3%	78.2%	71.3%
£5m to less than £20m	79.4%	81.8%	80.7%	70.6%
£20m to less than £100m	79.8%	83.5%	82.1%	70.5%
£100m to less than £300m	82.6%	84.8%	83.9%	72.2%
£300m +	85.0%	88.0%	84.1%	74.8%
Maturity (% of pensioner technical provisions)				
< 25%	77.4%	79.8%	78.5%	69.9%
25% to less than 50%	81.0%	83.6%	81.9%	71.0%
50% to less than 75%	82.8%	86.0%	84.2%	74.0%
75% to 100%	87.2%	83.4%	87.3%	77.3%
Insolvency group (as defined by The Purple Book 2010)				
Insolvency groups 1 and 2	80.9%	82.7%	82.1%	73.0%
Insolvency groups 3 to 8	79.1%	82.5%	80.2%	69.7%
Insolvency groups 9 and 10	76.3%	77.8%	78.4%	69.3%

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Table 1.7 below indicates that:

- On average, schemes with fewer than 100 members have technical provisions covering a higher proportion of s179 liabilities when compared to schemes within other membership size groups.
- Schemes with technical provisions of £100m and above tend to have a higher funding ratio than schemes that have lower technical provision.
- Maturity (based on the ratio of pensioner technical provisions to total technical provisions) is positively associated with the proportion of technical provisions to s179 liabilities. This is consistent with the practice of assuming higher discount rates for non-pensioners than pensioners to reflect greater use of return-seeking assets to back non-pensioner liabilities.
- In tranche 4, the ratio of technical provisions to s179 liabilities is positively associated with insolvency risk groups (ie the higher the risk group, the higher the average ratio of technical provisions to s179 liabilities). A similar relationship is not apparent in other tranches.

Table 1.7
Technical provisions as a proportion of s179 liabilities by scheme characteristics

Tranche	Unweighted average			
	Tranche 1	Tranche 2	Tranche 3	Tranche 4
Overall	105.2%	114.2%	111.0%	102.0%
Number of members				
< 100 members	111.6%	120.6%	114.4%	104.0%
100 to 499 members	102.6%	112.6%	110.2%	101.2%
500 to 999 members	102.6%	108.3%	106.3%	100.7%
1,000 to 4,999 members	102.6%	109.0%	109.7%	100.2%
5,000 + members	102.8%	113.9%	110.8%	103.6%
Size of technical provisions				
< £5m	106.7%	115.8%	108.7%	97.4%
£5m to less than £20m	103.5%	113.9%	111.4%	102.0%
£20m to less than £100m	104.2%	111.9%	111.2%	103.2%
£100m to less than £300m	107.7%	114.3%	111.2%	104.0%
£300m +	108.1%	117.3%	116.0%	107.0%
Maturity (% of pensioner technical provisions)				
< 25%	102.1%	112.1%	107.7%	95.1%
25% to less than 50%	103.8%	113.3%	109.3%	102.3%
50% to less than 75%	116.0%	121.0%	121.1%	111.5%
75% to 100%	128.9%	137.4%	135.1%	124.0%
Insolvency group (as defined by The Purple Book 2010)				
Insolvency groups 1 and 2	105.6%	114.8%	111.5%	100.8%
Insolvency groups 3 to 8	104.9%	113.3%	110.3%	101.8%
Insolvency groups 9 and 10	104.3%	115.6%	111.4%	104.7%

1.5 Comparison of funding in tranches 1 and 4

There are 1,455 schemes that have so far submitted recovery plans for valuations in both of these tranches and the following comments are based on those schemes.

The average level of technical provisions at scheme level (among schemes that submitted recovery plans both in tranche 1 and tranche 4) has increased by 15.4% between the 2 values, whilst the average amount of assets at scheme level has decreased by 2.6%.

As a result of these movements, the average (weighted) funding level has fallen from 86.2% to 72.8% and the average level of underfunding increased from £22.6m to £50.4m.

The average (weighted) ratio of the technical provisions to the full buyout liability is 72.5% in tranche 4 and was 69.4% in tranche 1. The average (weighted) buyout liability has increased by 11% whereas the average (weighted) technical provisions has increased by 15.4%.

Table 1.8 below shows selected funding figures and ratios of schemes in tranches 1 and 4 (for schemes with plans in both tranches 1 and 4 only).

Table 1.8
Summary on funding for schemes with valuations
in both tranches 1 and 4

Average	Tranche 1	Tranche 4
	£m	
Technical provisions	£160.8	£185.5
Assets (technical provisions)*	£138.7	£135.1
Buyout liabilities	£231.7	£256.1
Assets (buyout)*	£142.0	£134.6

*Data sets vary because buyout estimates are not available for all schemes

Appendix

Appendix

Data assumptions

Conventions

- For each triennial cycle, data is grouped into tranches of 3 covering valuation dates within the cycle. In this report, a scheme's tranche is based solely on the effective date of valuation; that is, the Part 3 valuation date. This date could, in theory, differ to the date the valuation should have fallen due.
- Insolvency groups 1 to 10 (as defined in The Purple Book 2010) are based on insolvency probabilities which correspond to Dun and Bradstreet (D&B) failure scores. The mapping of failure scores to insolvency probabilities underlying this analysis is that used by the PPF for the purposes of the 2011-2012 levy. This mapping is the third of 3 versions and reflects an updated methodology from the second (ie that used for the previous levy year). The 2009 scheme funding publication used the first version and, as such, should not be compared with this publication.
- This report uses 'second valuations' to refer to recovery plans in the second cycle of scheme valuations for schemes which filed recovery plans in the first cycle. In this publication, this refers to tranche 4 schemes which had tranche 1 plans. At the end of January 2011, the regulator had received 1,455 of these.
- Averages quoted are unweighted, unless otherwise specified.
- We refer to 'PPF-compliant' contingent assets to describe arrangements that the PPF recognise in the levy calculation. These assets have to satisfy requirements of the determination (rules for calculating the PPF levy) and must be certified correctly and on time.

Data coverage

- The analysis covers plans received by the regulator up to 31 January 2011.
- The majority tranche 4 plans are second valuations under the scheme funding regime (valuation dates 22 September 2008 to 21 September 2009).
- The valuation periods for tranches 1 to 3 are as follows: tranche 1 (22 September 2005 to 21 September 2006); tranche 2 (22 September 2006 to 21 September 2007), and tranche 3 (22 September 2007 to 21 September 2008).
- Base data may vary in different sections as a result of data validation and cleaning.
- In some instances, there are minor variations between figures reported in this publication and previous publications. This is the result of improvements in data coverage, data cleansing and methodology.

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Data assumptions continued**Methodology**

- Weighted averages are weighted by technical provisions.
- Owing to the scheme specific nature of the data (and data protection standards on information disclosure), individual data points cannot be presented in some instances. As such, scatter plots and box plots reflect data up to 95th percentiles.
- Figure totals may reflect rounding.
- To facilitate comparative analyses of funding a small number of s179 liability, totals in tranche 4 have been adjusted to an estimate at the Part 3 date (see Glossary on pages 24-26).
- Maturity is measured as the proportion of pensioner technical provisions in total technical provisions.
- The whiskers of box plots presented in this report start and end at the 5th and 95th percentiles respectively. The edges of boxes represent the 25th and 75th percentiles while notches represent the 50th. The mean is represented by a blue dot.

Glossary

Definitions

Actuarial valuation

A comparison by the actuary of the value placed on scheme assets with the technical provisions and an assessment of any future contribution requirement. Calculation of the technical provisions is usually based on full member-by-member data.

Buyout liabilities (or s75 or solvency)

This refers to the scheme actuary's estimate of the cost of securing scheme liabilities with annuities purchased from a regulated insurance company, which features as part of the actuarial valuation. Section 75 (s75) of the Pensions Act 1995 provides for the calculation of a debt on the employer on the buyout basis (see s75 debt), if a scheme winds up (or if an employer becomes insolvent, or ceases to participate in a multi-employer scheme). Throughout this publication, we use the term 'buyout.' In a small number of cases, an alternative measure of solvency is submitted to us, in which case this will be the data that has been used in this analysis and there is no distinction made.

Contingent assets

Contingent assets are assets on which a claim by the pension scheme would exist on the occurrence of 1 or more specified future events ('the contingent event'), such as movements in corporate asset holdings, increased employer borrowing, employer insolvency, or the failure to achieve a specified funding level. Unless the events occur, these assets are not available to the trustees to meet members' benefit payments. They are not included as scheme assets for the purpose of assessing whether a scheme meets its statutory funding objective (ie that assets are sufficient to cover technical provisions) until they are transferred to the scheme.

Defined benefit (DB)

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.

Different rates approach

The practice of using separate discount rates with respect to pre-retirement and post-retirement benefits in the valuation of liabilities. (See also 'Single rates' approach.)

Discount rate

A discount rate is a rate of compound interest which is used to calculate the present value of a sum due at a later time. This action discounts the sum due to its value today. It inherently assumes that the present value is invested and has to earn the chosen discount rate to achieve the sum due at the later time.

Often separate rates are chosen for the pre-retirement and post-retirement periods. The post-retirement rate is used to discount the pension payments of current pensioners back to the valuation date. It is also used to discount the expected pensions of active and deferred members back to their assumed retirement date, and then the pre-retirement discount rate is used to discount these retirement date liabilities of active and deferred members back to the valuation date.

Where a single discount rate is used, scheme maturity might affect the rates chosen by particular schemes. Immature schemes (with the majority of members being active or deferred) may seek higher returns from higher risk investments, such as equities. Mature schemes (with the majority of members being pensioners) may be more likely to invest in bonds or gilts with lower expected returns but less risk. The discount rate may be set to reflect these behaviour patterns. (See also 'Single rates approach', 'Different rates approach', 'Effective single rate'.)

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Definitions continued**Effective date (valuation date)**

An actuarial valuation or an actuarial report considers the funding of a scheme as at a particular date, known as the effective date. The effective date will be earlier than the date on which calculations are done. The effective date of a scheme's first Part 3 valuation cannot be before 22 September 2005.

Failure to agree

Failure by trustees and the employer to agree an appropriate valuation of the scheme and deficit recovery plan, in line with the scheme funding requirements contained in Part 3 of the Act (ie technical provisions, a recovery plan, the content of the statement of funding principles or the content of the schedule of contributions).

FRS17 liabilities (or IAS19)

The current accounting standard for retirement benefits set out by the UK Accounting Standards Board. The primary objective of this liability measure is to ensure that a company's statutory financial statements reflect, at fair value, the assets and liabilities attributable to the employees' retirement benefits entitlement and any related funding. Some UK sponsors use FRS17 while others use IAS19. For our purposes, they are effectively the same and both are referred to as FRS17.

IAS19

An international accounting standard equivalent of FRS17. (See FRS17 liabilities.)

Part 3 Valuation or scheme funding valuation

An actuarial valuation meeting the requirements of Part 3 of the Pensions Act 2004 concerning the funding of defined benefits (DB), which apply to any actuarial valuation received by trustees (on or after 30 December 2005) that is based on an effective date of 22 September 2005 or later.

Pension Protection Fund (PPF)

A body corporate established under the Pensions Act 2004. The PPF was set up to provide compensation to members of eligible defined benefit pension schemes, when there is a qualifying insolvency event in relation to the employer, and where there are insufficient assets in the pension scheme to cover the PPF level of compensation.

Pension protection levy

This is the annual amount that a pension scheme is charged by the PPF. It is composed of a scheme-based levy and a risk-based levy.

Recovery plan

Under Part 3 of the Pensions Act 2004, where there is a funding shortfall at the effective date of the actuarial valuation, the trustees must prepare a plan to achieve full funding in relation to the technical provisions. The plan to address this shortfall is known as a recovery plan.

Recovery plan length

The recovery plan length is the time that it will take for a scheme to recover any shortfall at the effective date of the actuarial valuation, so that by the end of the recovery plan it will be fully funded in relation to the technical provisions.

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Definitions continued**Section 179 liabilities (s179)**

This refers to a valuation of PPF compensation benefits under section 179 of the Pensions Act 2004, for PPF levy purposes. This measure is designed to be a close approximation to the liability measure that would be used to decide whether the PPF would need to take on the scheme were the employer to become insolvent.

In contrast to technical provisions, the assumptions to be used in a s179 valuation are prescribed by the PPF and are standard across all schemes. They are designed such that s179 is close to the cost of securing the valued benefits with an insurance company at the valuation date.

Section 75 debt (s75 debt)

This is the debt (including a contingent debt) owed by the employer to the trustees of the scheme and calculated in accordance with the s75 basis. (See also 'Buyout liabilities'.)

Section 179 (s179) valuation

To calculate the risk-based pension protection levy, the PPF Board must take account of scheme underfunding. To obtain a consistent basis for determining underfunding, schemes must complete a PPF 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 PPF, as set out in Schedule 7 of the Pensions Act.

Single effective discount rate (SEDR)

A single composite rate computed by the regulator and made up of constituents of the different rates approach, allowing approximately for the maturity of schemes. The regulator also uses this approach to normalise bases where the discount rate varies year-on-year.

Single rates approach

The use of a single discount rate in the valuation of pre-retirement and post-retirement liabilities. (See also 'different rates approach'.)

Statutory funding objective

Under Part 3 of the Pensions Act 2004, every scheme is subject to the statutory funding objective which is to have sufficient and appropriate assets to cover its 'technical provisions'.

Technical provisions

The funding measure used for the purposes of Part 3 valuations (see above). The 'technical provisions' are an estimate, made on actuarial principles, of the assets needed at any particular time to make provision for benefits already considered accrued under the scheme using assumptions prudently chosen by the trustees – in other words, what is required for the scheme to meet the statutory funding objective of a given date. These include pensions in payment (including those payable to survivors of former members) and benefits accrued by other members, which will become payable in the future.

The Pensions Regulator ('the regulator')

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

Valuation summary

A form to be completed when a recovery plan and schedule of contributions have been agreed by the trustees and the employer, following an actuarial valuation.

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Recovery plans Scheme funding and other security arrangements

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