Annual funding statement analysis

A review of defined benefit pension schemes with valuation dates between September 2015 and September 2016 (Tranche 11)

May 2016

The Pensions Regulator

Contents

Introduction

In order to provide further context to our 2016 annual funding statement (found at **www.tpr.gov.uk/statement2016**) we are publishing our analysis of the expected positions of defined benefit (DB) pension schemes with valuation dates between 22 September 2015 and 21 September 2016 (Tranche 11). This analysis has been used to inform our approach and messages to trustees and employers in our statement.

The analysis is mainly aimed at the advisory community to help illustrate the messages in the statement in a quantitative way and highlight the estimated impact of the changes in market conditions since the date of these schemes' previous valuations.

In modelling the impacts of market conditions on schemes, we have made a number of approximations based on the high level and limited data we hold, which means we cannot take account of some scheme-specific characteristics. The position of individual schemes will vary depending on a number of individual factors. Similarly, our analysis of trends in potential sponsor affordability is based on high level data. Affordability of individual sponsors, including any assessments of the sponsor's plans for sustainable growth, will be a scheme-specific assessment.

When putting in place their integrated risk management (IRM) plan and agreeing appropriate recovery plans, it is for trustees and employers to work collaboratively in their assessments of the scheme's funding and risk position as well as the covenant strength and affordability.

Summary

Market conditions and impacts on scheme funding

Since the last valuation date, those schemes carrying out valuations in 2016 are likely to have seen most major asset classes perform well. For example, over the periods December 2012 to December 2015 and March 2013 to March 2016, the FTSE All World (excluding UK sterling) returned 42.1% and 29.2% respectively. However, wider concerns for global growth and reductions in the nominal and real yields are likely to have a significant impact on schemes' expected returns across various asset classes over the medium and longer term.

Overall, our modelling suggests that, for the majority of schemes, the value of their liabilities is likely to have grown faster than their assets since their last valuation. The increase in deficits could be in the region of 20-35%, depending on the scheme's valuation date and hedging strategy.

Developments in employers' profits, balance sheets and dividend payments

Changes in the strength of the sponsor covenant is a key consideration for trustees and employers when setting their funding plans. Our analysis of sponsoring employers suggests that the majority of sponsors have seen an increase in the nominal value of their profits and balance sheets over the last three years. However, there is a wide distribution between individual companies and many may have seen a decline over the period.

For FTSE350 companies who paid both deficit repair contributions (DRCs) and dividends over the last six years, we have seen the median ratio of the DRCs to dividends decline from around 17% to around 10%. This is mainly driven by the significant increase in dividends over the period, without a similar increase in contributions.

Impacts on recovery plans and affordability

Bringing this analysis together, we have modelled the potential impact of these higher deficits on schemes' recovery plans and how revisions to the level of DRCs might compare to the profitability of the sponsor.

Our modelling highlights that, if when following their 2016 valuation schemes maintain their existing recovery plan end date, the median increase in required DRCs would be in the region of 75% to 100%. For the majority of sponsors, the revised DRCs compared to their profits appear to be relatively low and/or no higher than at their scheme's last valuation. So this increase may be affordable for the majority of sponsors without materially affecting their plans for sustainable growth.

We have also modelled a three year extension in the recovery plan end date for a subset of schemes that our analysis shows are likely to be the most challenged by the changes in market conditions and/or their sponsors' affordability. With this extension, there are a minority of schemes where the new DRC would still be a higher proportion of the sponsor profits than at their last valuation, and/or be over 50% of those reported profits.

Understanding the implications of scheme maturity on funding plans

Our analysis this year also includes an illustration of the impact that volatile market conditions can have on a scheme's funding plan, where they are required to sell assets in order to meet their cash flow demands. For these schemes, having to sell assets at inopportune times can have a material effect on their funding positions and recovery plans. This will be an important consideration for such schemes in setting their recovery plans and funding strategies for their 2016 valuations. Early planning as part of schemes' IRM plans will help trustees to put in place appropriate strategies to manage these risks.

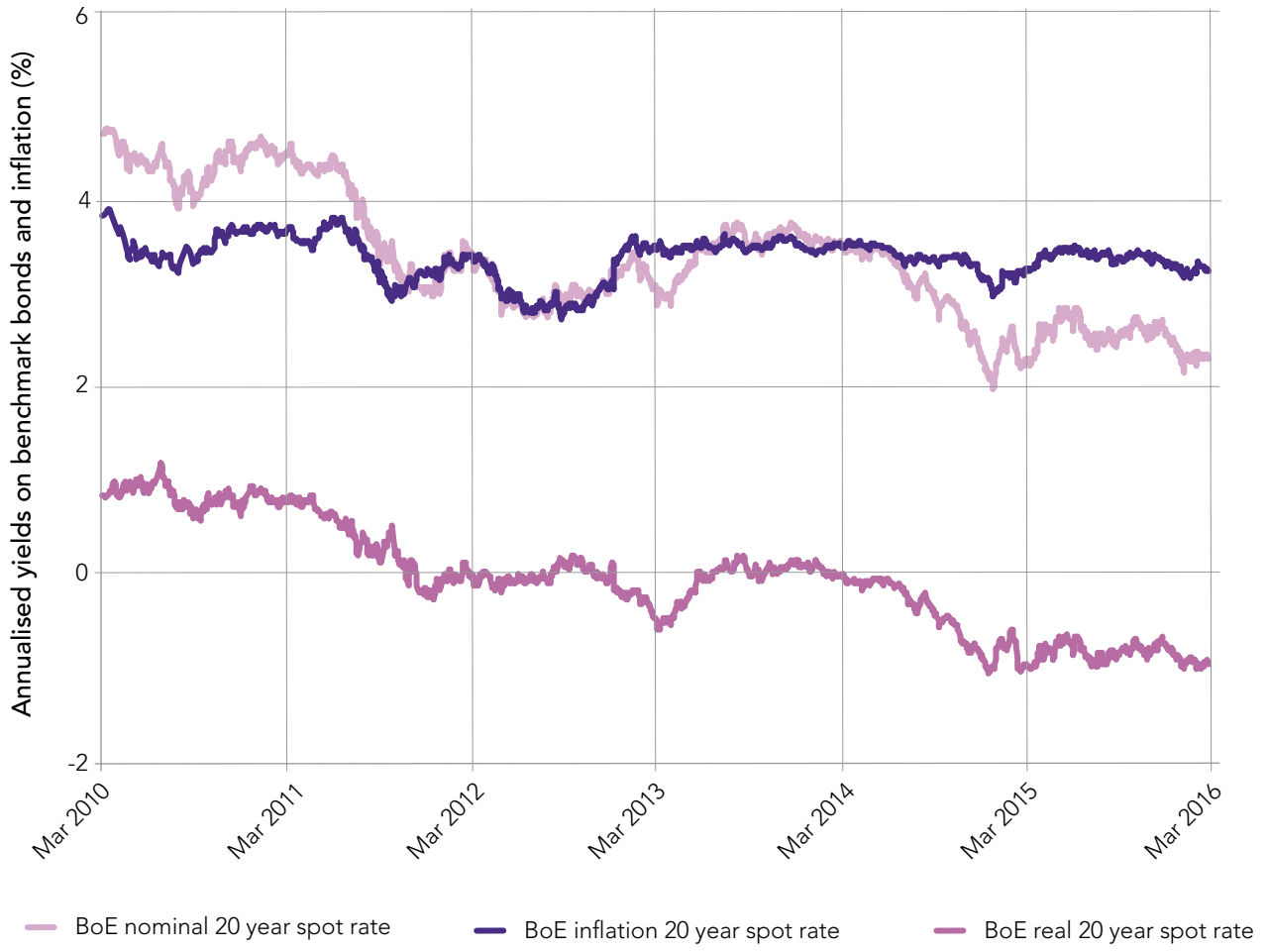
Market indicators

Scheme funding is sensitive to the impact of the changes in market conditions on both schemes' assets and the valuation of their liabilities.

Bond yields

Figure 1 shows the Bank of England estimates of nominal and real gilt yields and implied inflation (as measured by the Retail Prices Index or RPI) over a 20 year period at each date from March 2010.

Figure 1: Benchmark yields

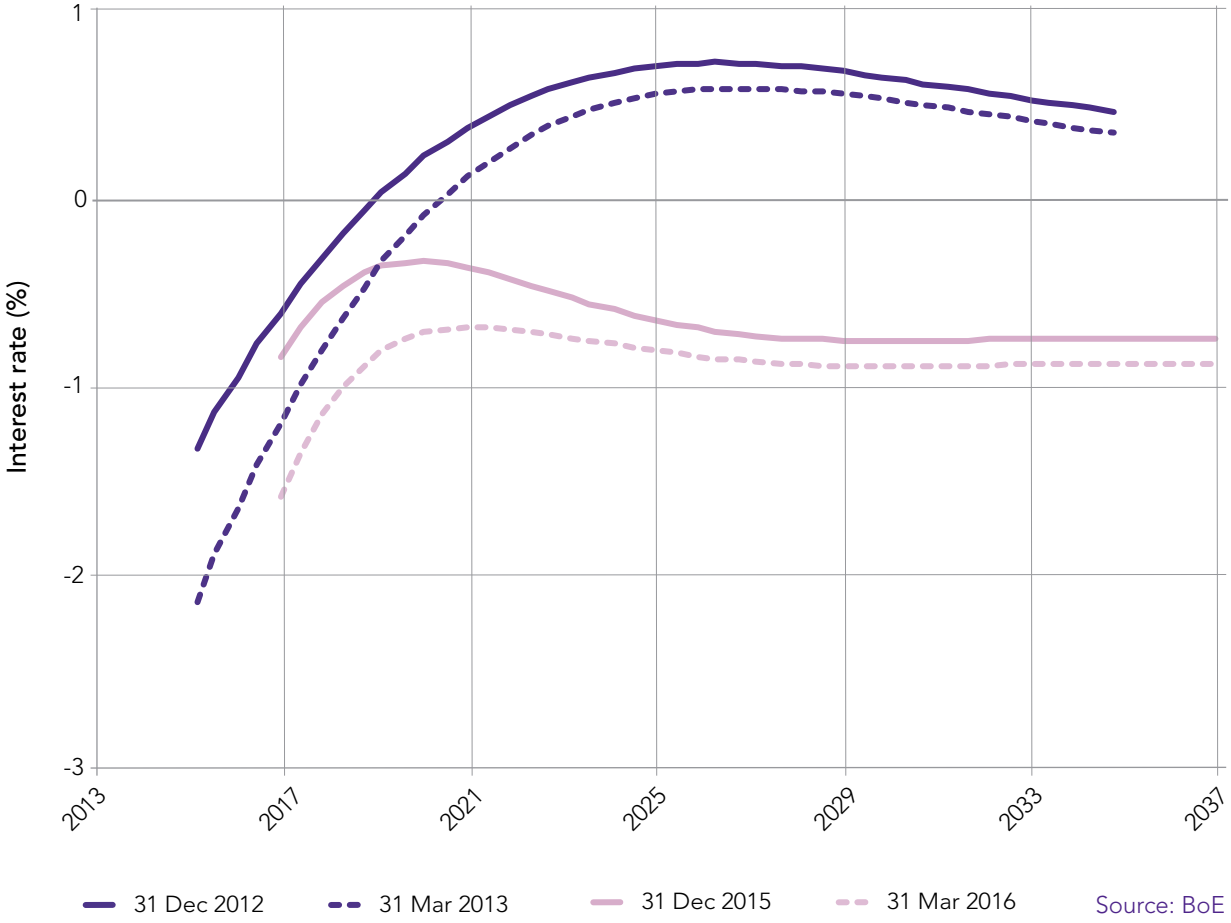


Sources: Bank of England (BoE), Thomson Reuters

There was a significant fall in yields in mid 2014 with the long-term real gilt yields falling into negative territory. While they have stabilised since late 2014, they did not recover from these earlier falls.

Figure 2 shows the real forward interest rates as estimated by the Bank of England as at the end of December 2012, March 2013, December 2015 and March 2016. December and March are the most common valuation dates for schemes in this tranche.

Figure 2: UK instantaneous real forward gilt curves



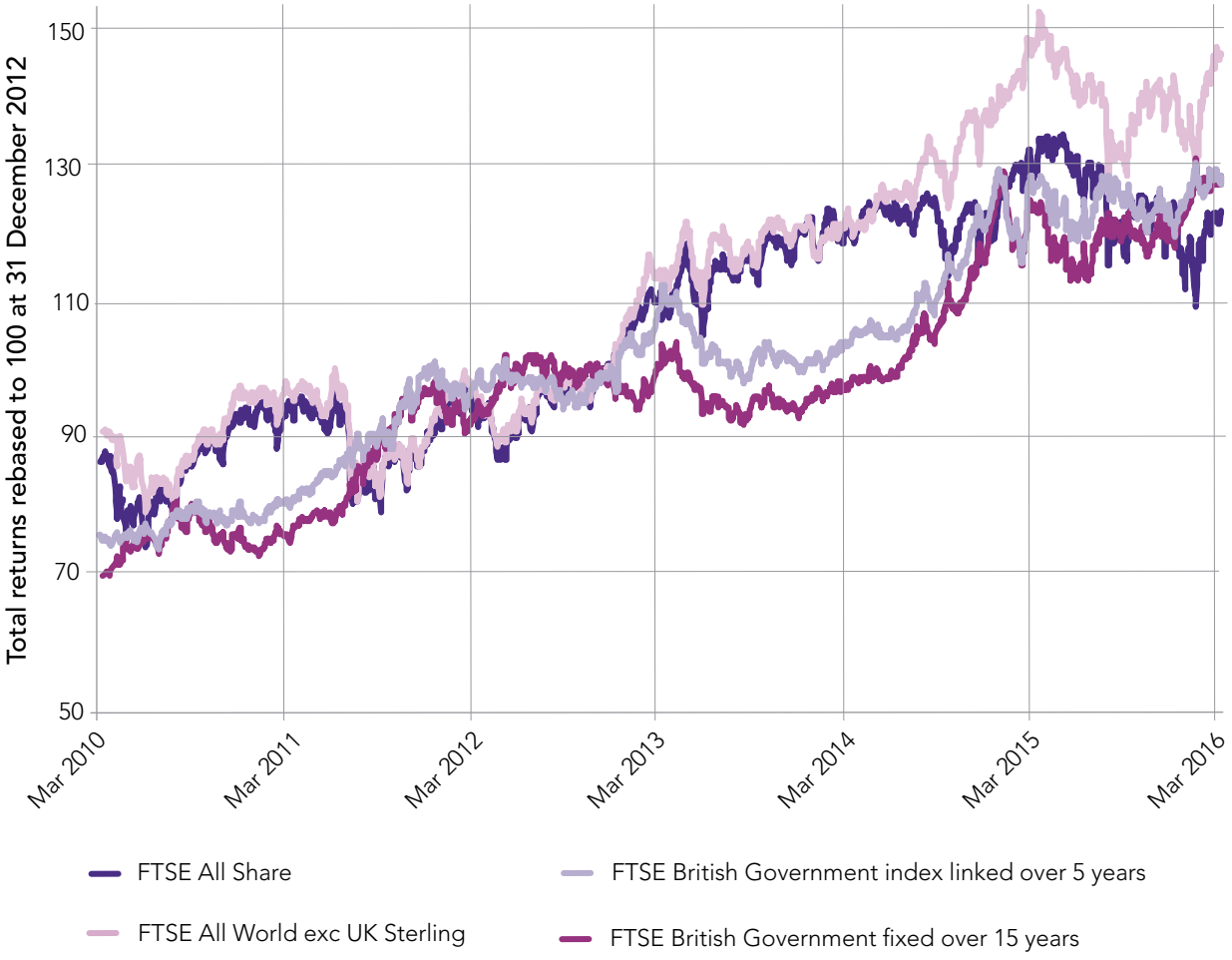
This chart shows that over the periods December 2012 to December 2015 and March 2013 to March 2016, there has been a similar fall in the implied real forward interest rates across both periods, and they are expected to be lower both in the short and long term.

The reduction in yields and expectations for interest rates and inflation is likely to have a significant impact on the expected returns across various asset classes. All else being equal, we would expect that most schemes in Tranche 11 will set funding strategies based on lower expected investment returns from most asset classes than at their last valuation. As a consequence, we expect that most schemes will have a larger than expected reported value for their liabilities at their valuation date.

Asset returns

Figure 3 shows total returns (ie increases in value with income re-invested) for a range of asset class indices since 2010. The returns have been re-based to 100 at 31 December 2012, so that if equal amounts had been invested in each asset class index at that date, the chart shows the relative change from that point.

Figure 3: Asset returns



Source: Thomson Reuters

Table 1 shows the total returns over the periods December 2012 to December 2015 and March 2013 to March 2016.

Table 1: Total returns for various asset indices

Index name (asset class)	Total returns over the period 31 Dec 12 - 31 Dec 15	Total returns over the period 31 Mar 13 - 31 Mar 16
FTSE All Share (UK equities)	23.4%	11.4%
FTSE All World excluding UK Sterling (Overseas equities)	42.1%	29.2%
FTSE All UK Property GAV (Property)	47.1%[1]	46.4%[1]
FTSE British Government fixed over 15 years (fixed interest gilts)	18.8%	27.9%
FTSE British Government index link over 5 years (index-linked gilts)	20.6%	17.8%
HFRX Global Hedge Fund United Kingdom Sterling/Pounds	2.4%	-2.9%

Source: Thomson Reuters

Over the last three years, returns have been significantly positive for the asset classes shown above. However, they have been relatively flat or negative over the last 12 months. The hedge fund index has seen a negative return over the period March 2013 to March 2016.

UK and overseas equities returned significantly more over the period December 2012 to December 2015 than March 2013 to March 2016. This is primarily due to the significant positive returns on these asset classes over the period December 2012 to March 2013.

Fixed interest gilts have returned significantly more when looking from March 2013 to March 2016 compared with December 2012 to December 2015, primarily due to the fall in the gilt yields between December 2015 and March 2016.

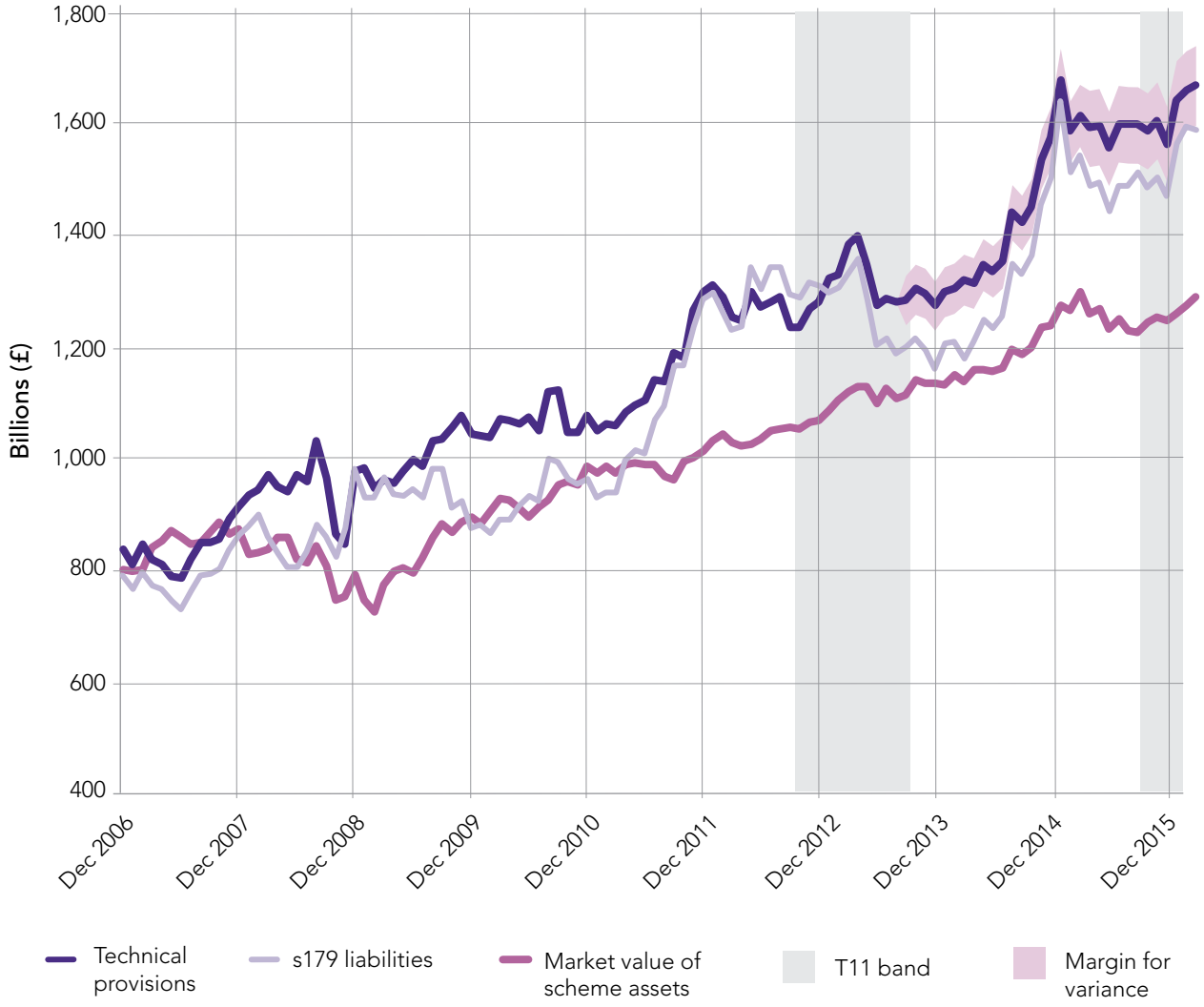
1
Data for this index only available up to end November 2015.

DB schemes

Funding position of DB schemes in aggregate

Figure 4 shows estimates of assets, section 179 liabilities and technical provisions derived from the movement in the PPF 7800 index for all schemes in that index. This is an aggregate analysis based on highly summarised data and shows an illustrative range for the value of technical provisions.

Figure 4: Estimated assets and liability positions of DB pension schemes



Sources: Pension Protection Fund (PPF), The Pensions Regulator

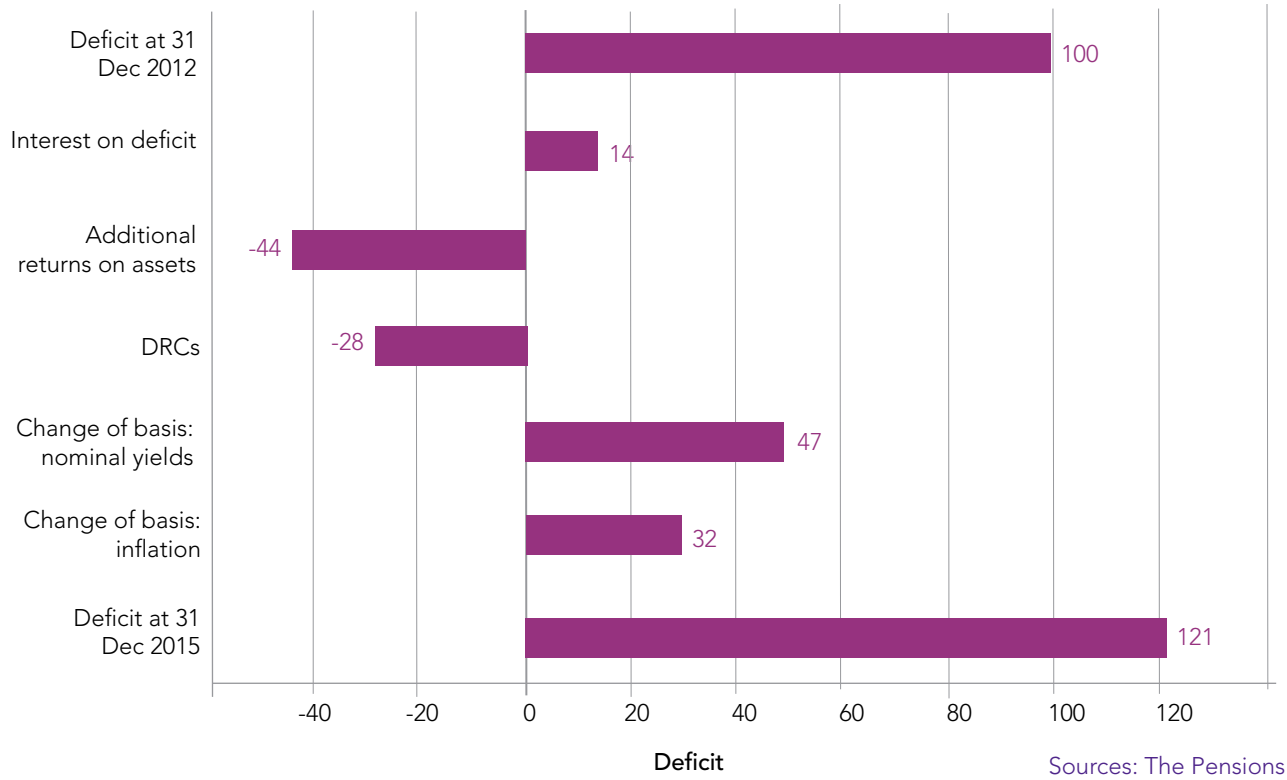
The changes in market conditions since their last valuation mean that deficits on a technical provisions basis are likely to have increased for many schemes in Tranche 11.

This analysis may not be representative of individual schemes whose assets and liabilities will depend on many scheme-specific factors. These include the approach taken to setting discount rates and the exact timing of valuations and funding position, level of DRCs, asset allocation and interest rate and inflation hedging strategies.

Potential impact on scheme deficits in more detail

Figures 5a and 5b illustrate the key drivers in the change in deficit[2] for all Tranche 11 schemes at the two most common valuation dates, December and March.

Figure 5a: Estimated impact of market conditions on deficits of all Tranche 11 schemes – December 2012 to December 2015



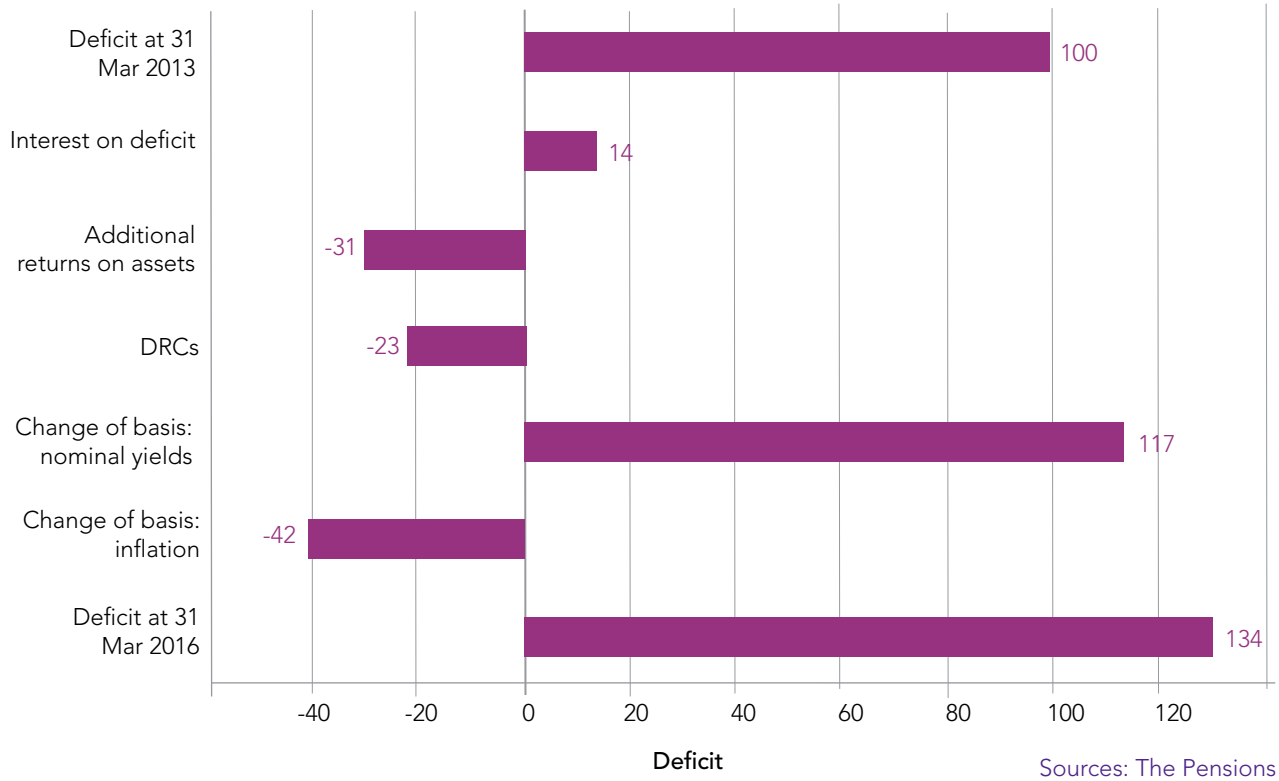
Sources: The Pensions Regulator, Thomson Reuters, FTSE group, Markit iBoxx

The starting deficit for all schemes has been notionally set to 100 to allow for easy comparison of the change over the period. The size of the bars shown on the chart illustrates the relative impact of each of those items on the deficit over the period.

Deficit contributions and better than expected asset returns have broadly offset the increase in liabilities due to the change in market conditions, meaning funding levels have remained broadly stable. However, we estimate that the aggregate deficit of Tranche 11 schemes as at 31 December 2015 could be about 20% higher compared to three years ago. No account for hedging has been allowed for in this analysis so schemes with hedging strategies may have fared better.

2
For the purpose of this illustration, we have assumed that the discount rate used for technical provisions retains the same outperformance over gilts. In practice, schemes may use a different benchmark and/or make changes to the outperformance assumption to reflect changing market conditions and expectations for future returns.

Figure 5b: Estimated impact of market conditions on deficits of all Tranche 11 schemes – March 2013 to March 2016



Sources: The Pensions Regulator, Thomson Reuters, FTSE group, Markit iBoxx

The starting deficit for all schemes has been notionally set to 100 to allow for easy comparison of the change over the period. The size of the bars shown on the chart illustrates the relative impact of each of those items on the deficit over the period.

When looking at March 2013 to March 2016, the aggregate funding level is estimated to have decreased over the three years. This has mainly been driven by the significant impact of the change in market conditions, including a decrease in real gilt yields between December 2015 and March 2016, as can be seen from Figure 2.

Most schemes with March valuation dates are likely to have a higher reported deficit than expected and higher than at their previous valuation. We estimate that this could be in the region of 35% in aggregate across all schemes. Again, no account for hedging has been allowed for in this analysis, so schemes with hedging strategies may have fared better.

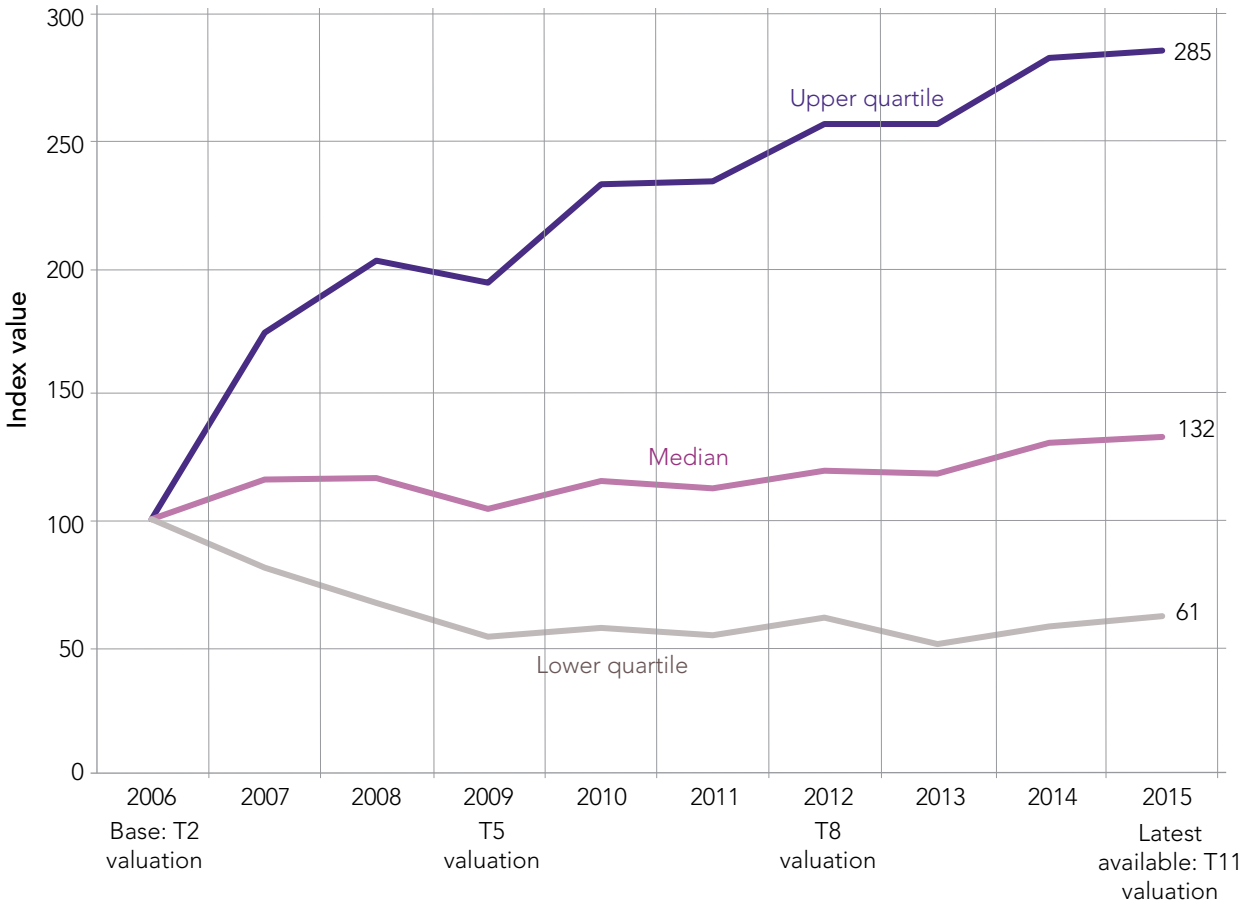
Employer trends

Sponsor profitability

As well as the impact of market conditions on the scheme, changes in the strength of the sponsor covenant is a key consideration for trustees and employers.

Figure 6 looks at how the level of profitability, approximated by sponsor Profit Before Tax (PBT) in this illustration, has changed for schemes with a Tranche 11 valuation date. PBT data for 2006 has been rebased to 100 for ease of comparison.

Figure 6: Profit before tax for Tranche 11 schemes from 2006



Sources: The Pensions Regulator, Financial Analysis Made Easy published by Bureau van Dijk

The above chart shows for Tranche 11 schemes the distribution of changes in sponsor PBT from 2006 with the quartiles of the overall distribution plotted for each year, relative to 2006.

Only schemes with sponsors where positive PBT has been reported in each of the years shown are included in this chart, given presentational difficulties associated with negative PBT in the base year. See Table 2 overleaf for details of the full distribution of sponsors included in this chart for the complete picture.

The median of the distribution at the latest point (index value = 132) suggests that nominal profits have increased by over 32% for half of the schemes in the analysis.

The lower quartile of the distribution at the latest point (index value = 61) suggests that for a quarter of schemes, PBT has changed by between +32% and -39%, with a further quarter of schemes for whom PBT has decreased by more than -39%, relative to 2006.

The upper quartile (latest index value = 285) suggests that for a quarter of schemes, PBT has increased by between +32% and +185%, with a further quarter of schemes for whom PBT has increased by more than +185%, relative to 2006.

Since the previous valuation date (2012) for these schemes, increases in indexed values at the upper quartile and median suggest that for a majority of schemes, nominal profits have increased. Figure 7 provides more detail on the change in PBT since schemes previous valuations.

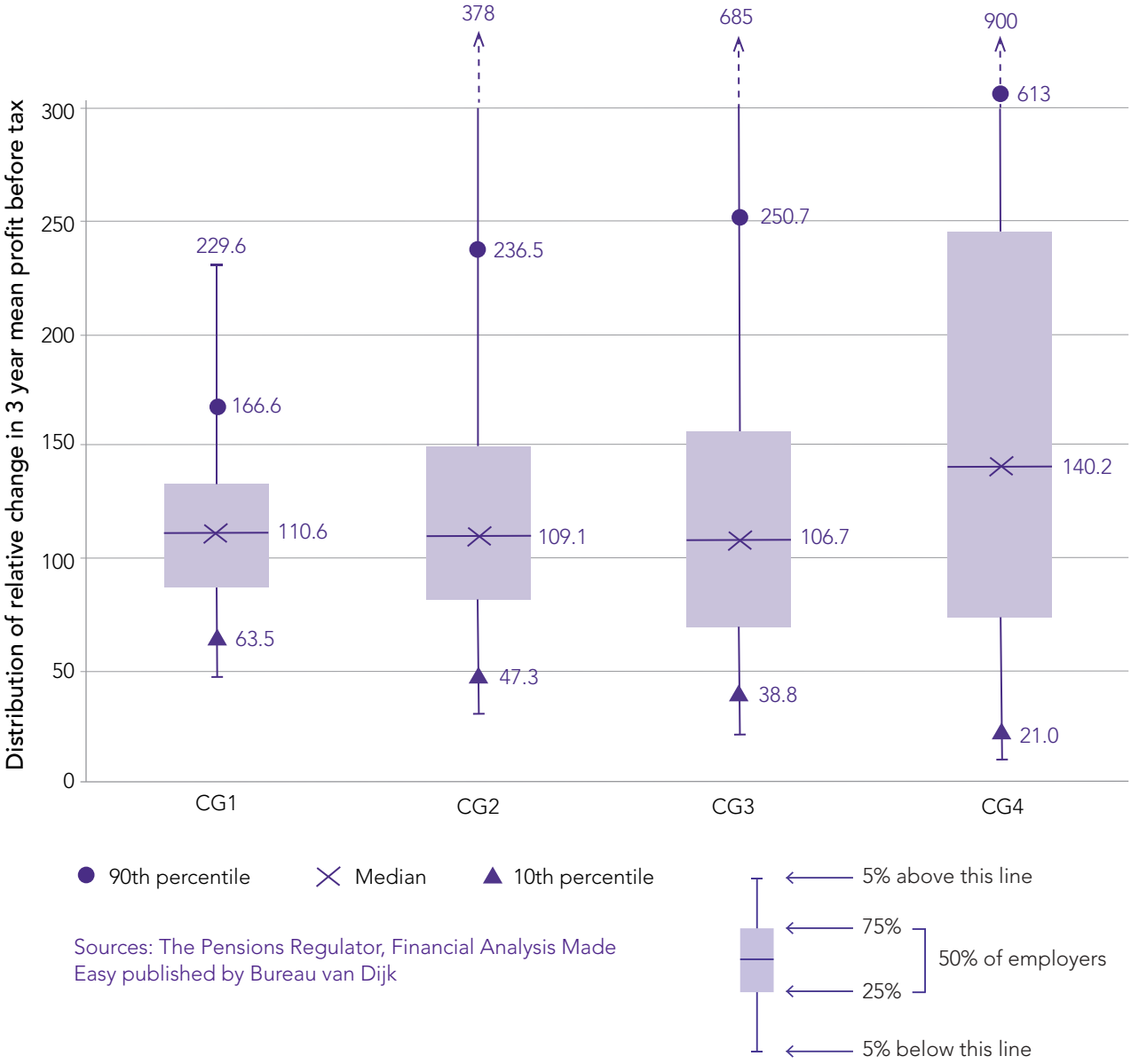
Table 2: Full distribution (proportion of all schemes including negative PBT categories)

Group	Base (2006) (%)	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	Latest (%)
Insufficient PBT data (inc base)	19.5	20.6	20.8	22.1	22.3	22.3	22.9	22.9	24.1	22.5
Included in Figure 6	64.3	57.1	50.2	48.1	51.6	51.3	50.0	51.3	51.6	53.1
Negative PBT in base year	16.2	7.7	7.6	8.9	10.1	9.6	10.3	10.1	10.4	10.5
Negative PBT in ref year	N/A	6.3	13.1	14.2	10.4	11.0	11.9	10.6	9.2	9.1
Negative PBT in both years	N/A	8.3	8.2	6.8	5.7	5.8	4.9	5.1	4.7	4.9

Sources: The Pensions Regulator, FAME published by Bureau van Dijk

In each of the years, the data covers between around 50% to 65% of schemes. Around 20-25% are excluded due to insufficient sponsor PBT data. The remainder are excluded due to either reporting negative PBT in the base year (2006), in the reference year, or both.

Figure 7: Profit before tax for Tranche 11 schemes (excluding negative PBT categories)



Sources: The Pensions Regulator, Financial Analysis Made Easy published by Bureau van Dijk

The above chart shows the distribution of the change in sponsor PBT for Tranche 11 schemes from the previous valuation (2012) to latest available sponsor data.[3] The data is split by covenant grade[4] for comparison. For each scheme, sponsor PBT in 2012 has been re-based to 100.

3
Latest available represents approximately 20% sponsor accounts with 2015 financial year ends, and approximately 80% 2014 financial year ends.

4
Covenant groups (CG) 1-4 are assigned at the point of initial RP reviews to facilitate prioritisation. These grades may vary to the view taken during case-level intervention, where a wider range of information is taken into account. They are defined as: covenant group 1 – strong; 2 – tending to strong; 3 – tending to weak; 4 – weak. Covenant assessments are not usually undertaken for in-surplus schemes.

For the majority of sponsors shown in Figure 7, there has been an increase in the reported profits across all CG rated schemes in this analysis, with the most significant increase in CG4 schemes – around a 40% increase at the median.

However, there is a wide distribution and there remains a number of schemes with sponsors reporting a decline in profits over the period.

Table 3: Full distribution (proportion of all schemes including negative PBT categories)

Group	Proportion of all T11 schemes
Insufficient PBT Data	14.7%
Included in Figure 7	61.3%
Negative PBT in Tranche 8	8.1%
Negative PBT in both tranches	9.4%
Negative PBT in Tranche 11	6.5%
Total	**100.0%**

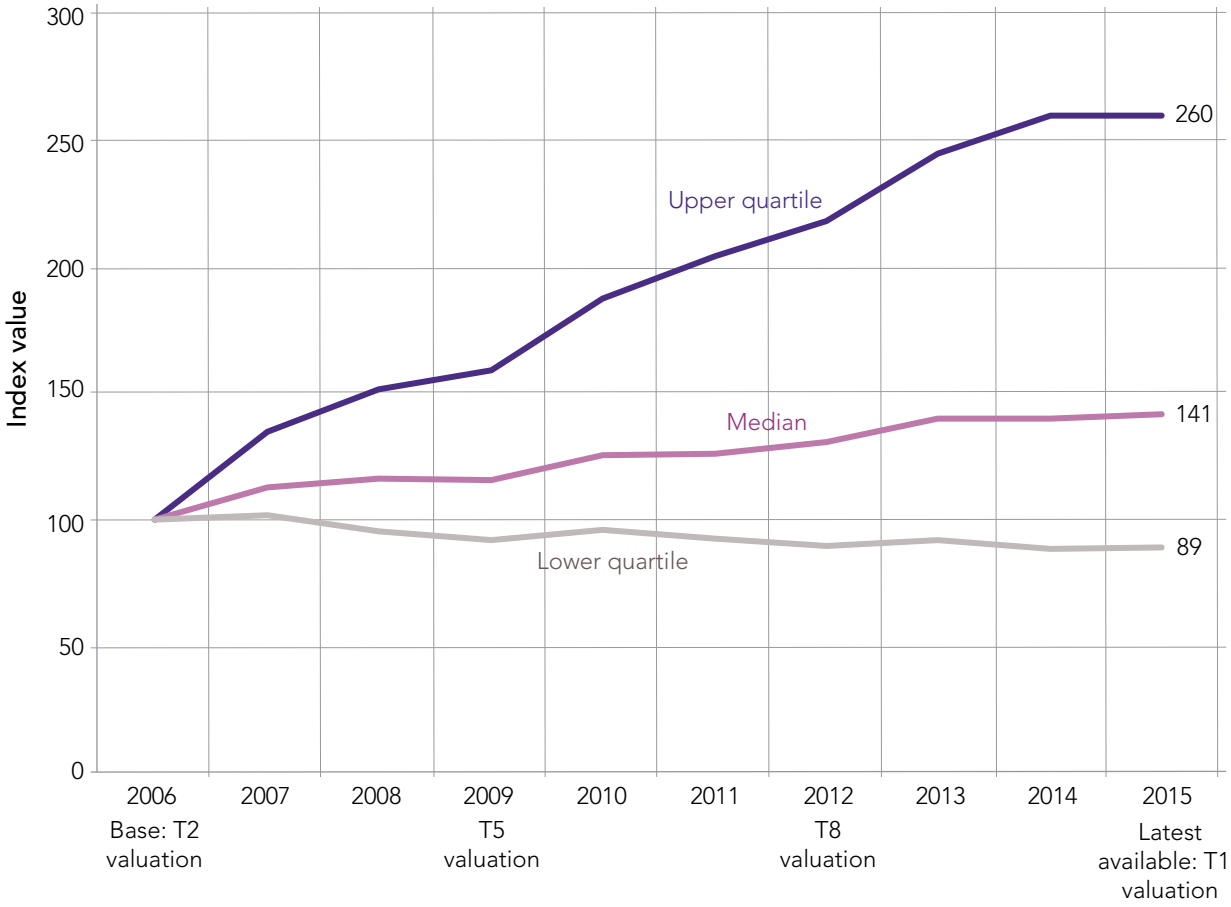
Sources: The Pensions Regulator, Financial Analysis Made Easy published by Bureau van Dijk

Figure 7 only includes those schemes that reported a positive sponsor PBT in 2012 and in their latest reported accounts. This is around 61% of the universe of Tranche 11 schemes. Around 15% are excluded due to insufficient sponsor PBT data. Around 8% are excluded due to sponsors reporting negative PBT in Tranche 8, but they have reported positive PBT in the current tranche. Around 15% are excluded due to sponsors reporting negative PBT in Tranche 8 and/or in the current tranche.

Sponsor balance sheets

Figure 8 looks at how the strength of sponsors' balance sheets, approximated using shareholder funds (SHF), has changed for schemes with a Tranche 11 valuation date. SHF data for 2006 has been rebased to 100 for ease of comparison.

Figure 8: Shareholders' funds for Tranche 11 schemes



Sources: The Pensions Regulator, FAME published by Bureau van Dijk

Figure 8 shows for Tranche 11 schemes the distribution of changes in sponsor SHF from 2006 with the quartiles of the overall distribution plotted for each year, relative to 2006.

The median of the distribution at the latest point (index value = 141) suggests that SHF have increased by more than +41% for half of the schemes in the analysis. The lower quartile of the distribution at the latest point (index value = 89) suggests that for a quarter of schemes, SHF have changed by between +41% and -11%, with a further quarter of schemes for whom SHF have reduced by more than -11%, relative to 2006. The upper quartile (latest index value = 260) suggests that for a quarter of schemes, SHF have increased by between +41% and 160%, with a further quarter of schemes for whom SHF have increased by more than 160%, relative to 2006.

Since the previous valuation date (2012) for these schemes, increases in indexed values at the upper quartile and median suggest that, for a majority of schemes, SHF have increased over the last three years.

Table 4: Full distribution (proportion of all schemes including negative SHF categories)

Group	Base (2006) (%)	2007 (%)	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	Latest (%)
Insufficient SHF data (inc base)	13.2	14.0	14.2	14.9	15.2	14.7	14.5	14.6	15.6	13.6
Included in Figure 8	79.0	77.1	76.0	74.4	74.1	74.0	73.9	73.6	72.3	74.2
Negative SHF in base year	7.8	2.2	2.9	2.6	3.7	4.0	4.2	4.4	4.1	4.2
Negative SHF in ref year	N/A	1.2	2.2	2.9	2.9	3.4	3.8	4.1	4.4	4.4
Negative SHF in both years	N/A	5.5	4.8	5.2	4.1	3.9	3.6	3.4	3.6	3.6

Sources: The Pensions Regulator, FAME published by Bureau van Dijk

Figure 8 only includes those schemes with sponsors that reported positive SHF in the years shown. The data coverage varies from around 70% to 80% across the years shown. Around 10-15% of schemes are excluded due to insufficient SHF data. The remaining 5-10% are excluded due to either reporting negative SHF in the base year (2006) or in the reference year, or both.

Dividend trends

Figure 9a shows the distribution of the ratio of DRCs to dividends paid by sponsors of DB schemes in the FTSE350 (representing around 210 employers and 450 schemes) from 2010 to latest reported accounts.

Figure 9a: Ratio of DRCs to dividends (where both DRCs and dividends are non-zero) – Current FTSE350 companies sponsoring DB/hybrid pension schemes

Source: The Pensions Regulator, FAME published by Bureau van Dijk

Figure 9a shows that for the current FTSE350 that sponsor DB pension schemes, the trend in DRCs as proportion of dividends has generally declined over the period from 2010, with the median ratio declining from around 17% in 2010 to less than 10% in sponsors' latest accounts. This is mainly driven by the significant increase in aggregate dividends over the period, without a similar increase in contributions.

For three quarters of this population in 2010, DRCs represented less than 47% of dividends and less than 31% of dividends based on the latest information. Similarly, for a quarter of this population in 2010, DRCs represented less than 5% of dividends and have reduced to less than 3% of dividends based on the latest information.

Table 5: Full distribution (proportion of around 210 employers including nil DRCs and/or nil dividends) – FTSE350 companies sponsoring DB/hybrid pension schemes

Group	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	Latest (%)
DRCs and dividends both non-zero (included in the distribution in Figure 9a)	68	69	74	74	74	73
Nil DRCs	13%	17%	16%	15%	17%	20%
Nil DRCs and nil dividends	2%	2%	1%	1%	2%	2%
Nil dividends	16%	12%	9%	10%	7%	5%

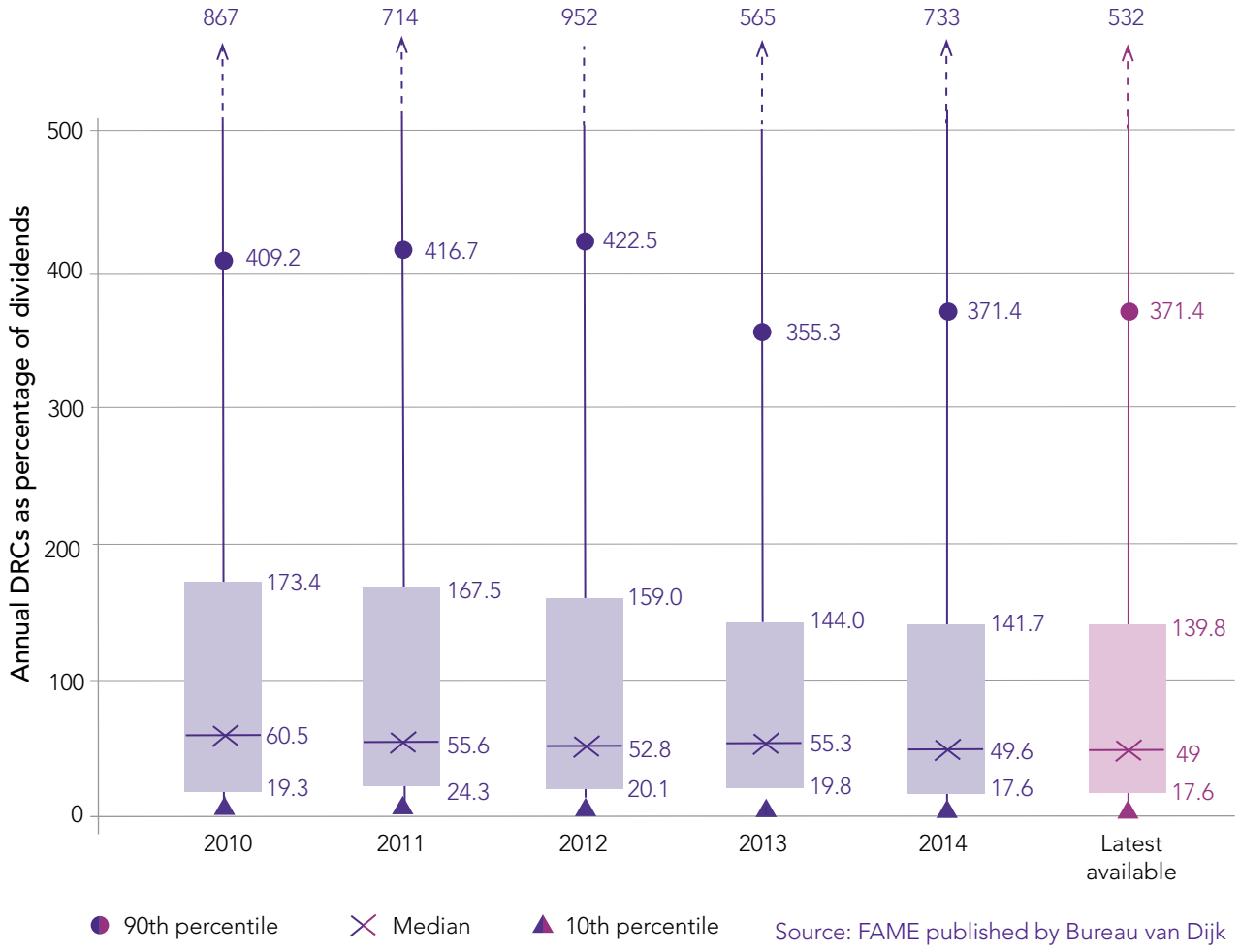
Sources: The Pensions Regulator, FAME published by Bureau van Dijk

Figure 9a only includes those current FTSE350 companies that sponsor a DB scheme, and where both the DRCs and dividends were paid in the year shown. Table 5 shows that in latest sponsor accounts this amounted to 73% of the total current FTSE350 companies that sponsor a DB scheme.

The percentage of current FTSE350 companies that sponsor a DB scheme that paid no DRCs but paid dividends has increased from 13% in 2010 to 20% based on the latest accounting information. The percentage of current FTSE350 companies that sponsor a DB scheme that paid no dividends but paid DRCs has decreased from 16% in 2010 to 5% based on the latest accounting information.

Figure 9b shows distribution of the ratio of DRCs to dividends paid by sponsors of schemes outside FTSE350 (representing around 800 employers and 950 schemes) from 2010 to 2015, who paid at least one dividend over the period 2010 to latest available accounts.

Figure 9b: Ratio of DRCs to dividends (where both DRCs and dividends are non-zero) – non-FTSE350 companies who paid at least one dividend over the period 2010 to latest available accounts



This chart shows for this population the trend in DRCs as proportion of dividends has remained more stable over the period from 2010, relative to the FTSE350, but has seen a general decline.

The ratio of DRCs to dividends is in general much higher than for the FTSE350. However, the median of the distribution has declined from around 60% in 2010 to around 50% based on the latest accounting information.

Table 6: Full distribution (proportion of all 800 employers including nil DRCs and/or nil dividends) – non-FTSE350 companies who paid at least one dividend over the period 2010-latest available accounts

Group	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	Latest (%)
DRCs and dividends both non-zero (included in the distribution in Figure 9b)	47	48	53	50	52	53
Nil DRCs	16	13	13	14	16	17
Nil DRCs and nil dividends	8	9	9	11	8	8
Nil dividends	29	30	25	25	24	22

Sources: The Pensions Regulator, FAME published by Bureau van Dijk

Figure 9b only includes those dividend paying non-FTSE350 companies that sponsor a DB scheme, where both the DRC and dividends in the year shown were non-zero. Table 6 shows that in 2010, this amounted to 47% of the total non-FTSE350 companies that sponsor a DB scheme, and 53% based on latest accounting information.

The percentage of non-FTSE350 companies that sponsor a DB scheme that paid no DRCs but paid dividends in a given year, has remained relatively stable over the period shown, only varying between 13% and 17%.

The percentage of non-FTSE350 companies that sponsor a DB scheme that paid no dividends but paid DRCs in a given year, has decreased from 29% in 2010 to 22% based on the latest accounting information.

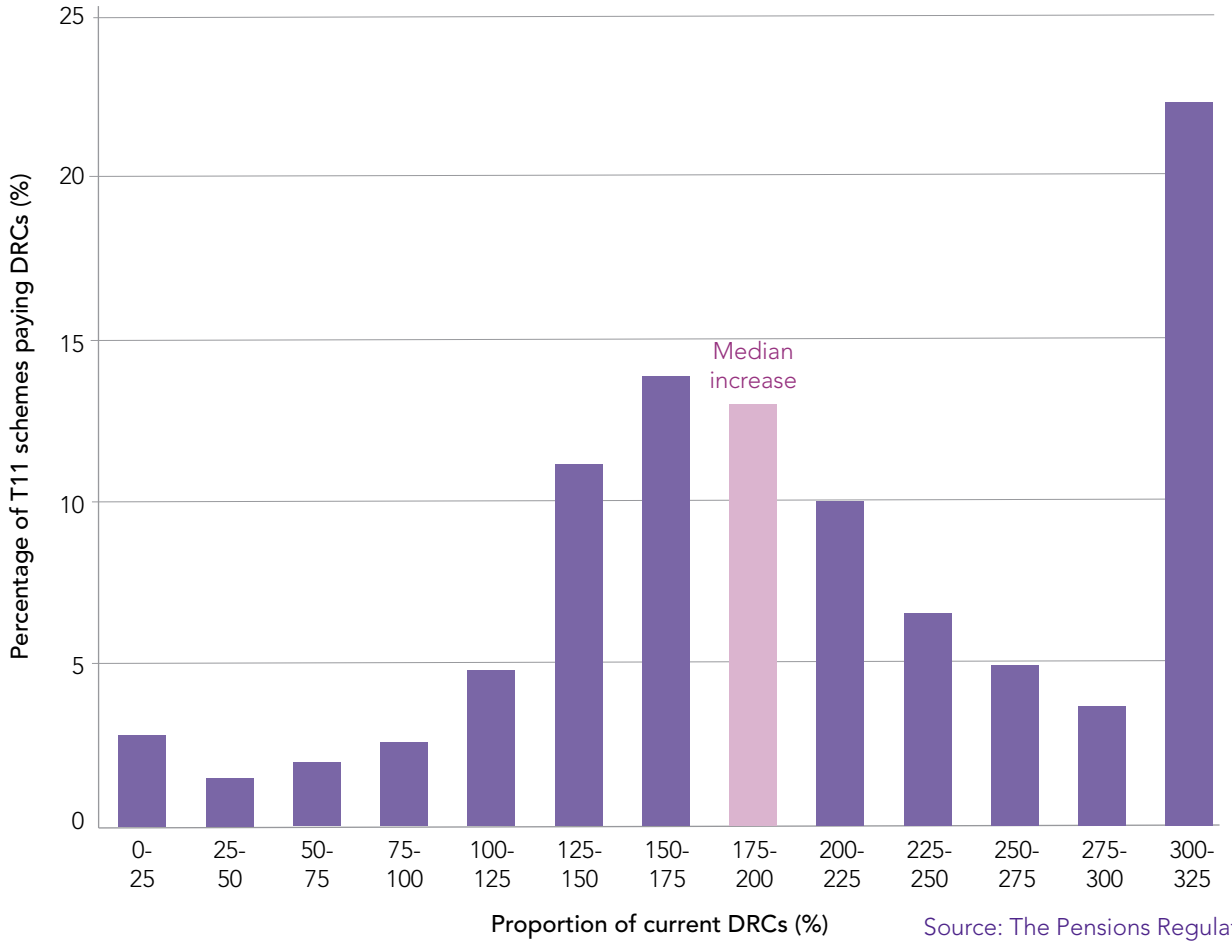
Implications for scheme funding

Our analysis above highlights that most schemes are likely to have a larger than expected deficit at their valuation date and will have to make changes to their recovery plan. However, the trends in sponsors PBT and SHF and the relative increase in dividends compared to DRCs highlights that affordability may have increased for a number of sponsors.

Potential impact on DRCs

Figure 10 below illustrates the potential impact on DRCs for Tranche 11 valuations, expressed as a percentage of the level of current DRCs (ie what was agreed in Tranche 8 valuations). We have assumed, for the purpose of illustration, that the scheme aims to eliminate the deficit over the remaining term of the recovery plan agreed at the last valuation.

Figure 10: Modelled Tranche 11 DRCs as a proportion of current DRCs – based on same RP end date as last valuation



Source: The Pensions Regulator

Around 5-10% of schemes would see a reduction in modelled DRCs (meaning a proportion of current DRCs of less than 100%) because of an improvement in the funding position compared to the previous valuation date. Around 5% of schemes would need to pay broadly the same amount of DRCs or see an increase of less than 25%. Around 35-40% of schemes would see an increase of between 25-100%. Around 45-50% of schemes would need to increase DRCs by more than 100% in order to keep the same recovery plan end date. The median increase in modelled DRCs is in the region a 75-100% increase (as indicated by the pink bar in Figure 10).

These increases are driven by the expected increase in deficit for most schemes, coupled with the modelling assuming that this increased deficit is paid off over the remaining life of the recovery plan put in place at the scheme's last valuation, which may be very short in some cases.

Comparing these impacts to the sponsor's affordability

Figure 10 highlights the potential increase in DRCs for schemes assuming that Tranche 11 deficits were paid off over the remaining life of the current recovery plan. A key driver in trustees and employers agreeing appropriate contributions is the affordability position of the sponsor and the impact the contributions may have on its plans for sustainable growth. To illustrate how these increases in contributions may compare to changes in sponsors' profits, this section looks at how the ratio of DRCs to sponsor PBT may change under the modelled scenario.

Schemes for which modelled Tranche 11 DRCs are at least three times (300%+) the current DRCs

According to Figure 10, just over 20% of schemes would need to increase DRCs by three times or more in order to maintain the same recovery plan end date. For many of these schemes, this significant increase may be explained by having a very short period remaining on their recovery plan, or the current level of DRCs may be very small compared to the size of the scheme and employer. As a result, the modelled level of DRCs will have increased substantially in percentage terms.

Table 7: Schemes for which modelled Tranche 11 DRCs are at least three times (300%+) the current DRCs

Modelled T11 DRCs as % of latest PBT	Remaining length of current recovery plan					
	3 yrs or less	3-6 yrs	6-9 yrs	9-12 yrs	12+ yrs	Total
0-25	32	22	19	4	2	79
25-50	12	15	12	2	0	41
50-75	8	13	3	2	1	27
75-100	8	2	5	1	1	17
100+	35	35	15	3	3	91
Negative PBT	19	20	15	2	7	63
No PBT data	15	11	7	1	5	39
Total	**129**	**118**	**76**	**15**	**19**	**357**

Sources: The Pensions Regulator, FAME published by Bureau van Dijk

This table shows:

- Between 55-60% of the schemes in this segment have remaining recovery plan length of three years or less or have modelled DRCs <50% of PBT. These are shown in the shaded area above.
- Around a third of the schemes in this segment have longer than three years left on their recovery plan and have modelled DRCs representing over 50% of the employers PBT or have reported negative PBT.

All schemes

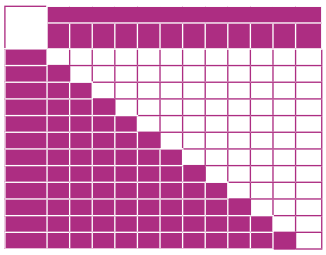
Table 8 illustrates the significance of DRCs compared to sponsors' PBT at schemes' last valuation, compared to the modelled DRCs for schemes in Tranche 11.

The left hand column shows the DRCs agreed in Tranche 8 as a proportion of the three year average PBT of the employer up to 2012 (the information that would have been relevant at Tranche 8 valuation dates). The row at the top shows the modelled DRCs for Tranche 11 as a proportion of the three year average PBT of the employer up to the latest available date. For example, our modelling estimates that 65 schemes agreed DRCs in Tranche 8 that were in the band 0-10% of the employer's PBT and, under the modelled scenario for Tranche 11, the new DRCs for these schemes are estimated to be between 10-20% of the employer's PBT.

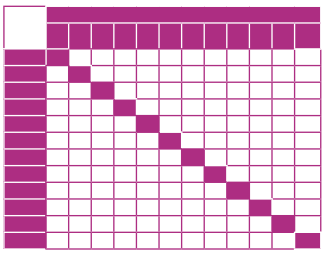
Table 8: DRCs compared to employer's PBT in Tranches 8 and 11

		Modelled T11 DRCs as a percentage of latest PBT											
		0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**100+**
Tranche 8 DRCs as a percentage of 2012 PBT	**0**	82	69	11	9	5	0	2	2	1	0	0	5
	0-10	13	177	65	20	13	11	2	1	0	3	0	13
	10-20	2	14	40	30	23	7	11	6	10	2	4	15
	20-30	1	4	7	13	14	10	13	8	4	3	4	21
	30-40	1	5	7	4	9	11	7	5	6	2	3	20
	40-50	1	2	1	3	3	2	8	1	2	4	2	12
	50-60	1	0	1	2	3	1	1	2	3	4	3	8
	60-70	1	1	1	0	1	0	0	3	2	0	0	15
	70-80	1	0	2	1	0	0	1	1	2	1	4	11
	80-90	1	1	1	0	1	0	0	0	0	2	0	6
	90-100	0	0	0	1	0	0	0	0	0	1	0	10
	100+	2	3	1	5	4	4	8	1	5	5	5	117

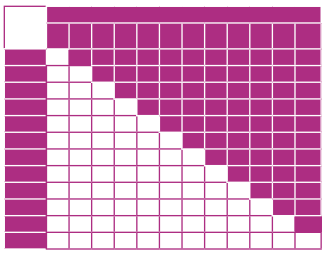
Sources: The Pensions Regulator, FAME published by Bureau van Dijk



Group A



Group B



Group C

Table 8[5] shows:

- Schemes in Group A are those where the modelled Tranche 11 DRCs as a proportion of the employer's PBT are estimated to be less than those agreed in Tranche 8. This represents around 10-15% of schemes shown in the table. For these schemes, the modelled DRCs may be more affordable than at the scheme's last valuation.
- Schemes in Group B are those where the modelled Tranche 11 DRCs as a proportion of the employer's PBT are estimated to be in the same range as that agreed in Tranche 8. This represents around 35-40% of schemes shown in the table. For these schemes, the modelled DRCs may be similarly affordable than at the scheme's last valuation.
- Schemes in Group C are those where the modelled Tranche 11 DRCs as a proportion of the employer's PBT are estimated to be greater than those agreed in Tranche 8. This represents around 45-50% of schemes shown in the table. For these schemes, the modelled DRCs may be less affordable than at the scheme's last valuation. However, for around a quarter of these schemes the modelled DRCs are less than 20% PBT, and for over a third they are less than 30%. Therefore it is likely to be an affordable increase for many schemes in this group.

5
Covers approximately 61% of Tranche 11 schemes.

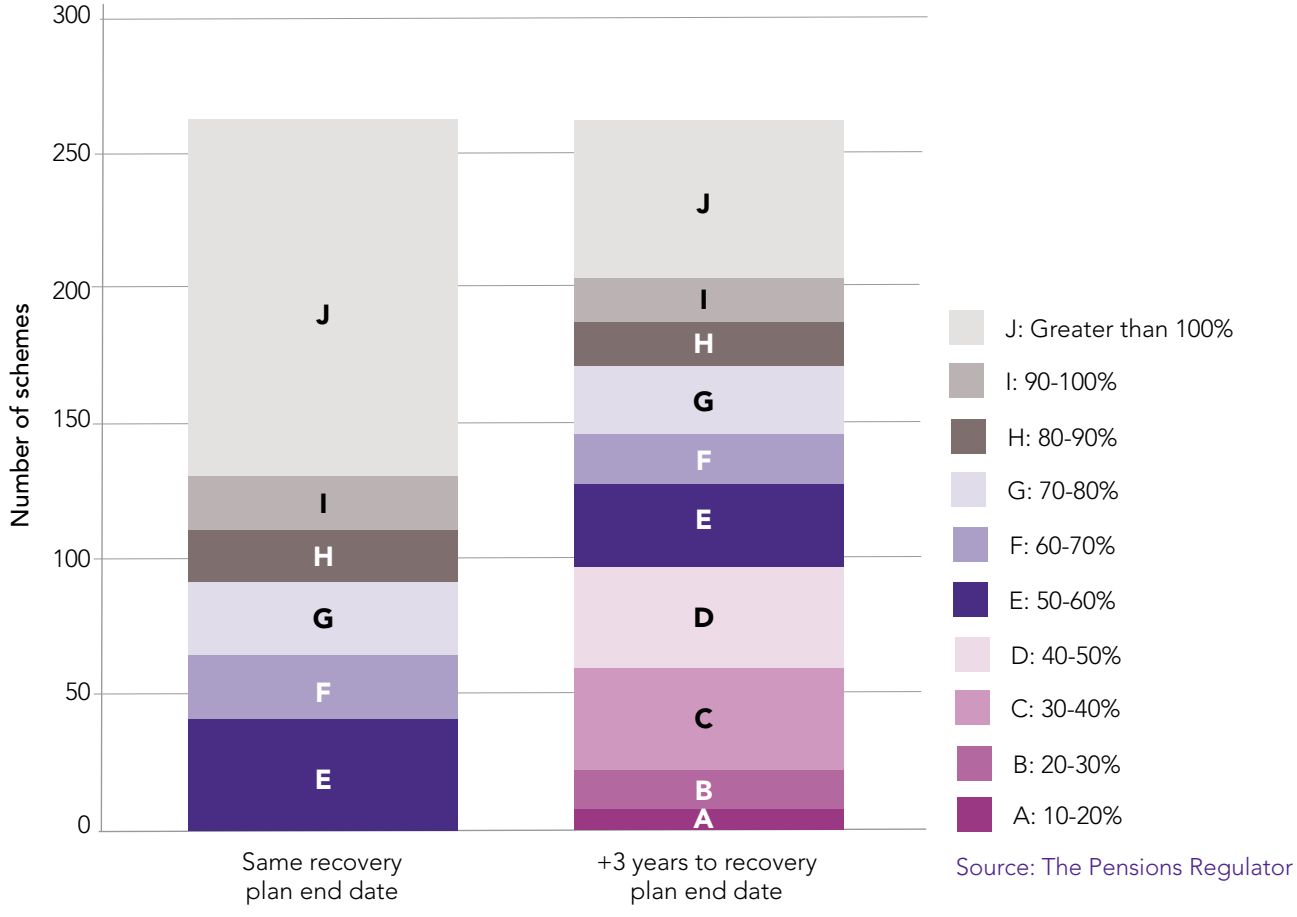
Managing affordability constraints

Table 8 shows that, for many schemes, the modelled DRCs for Tranche 11 are likely to be affordable without materially impacting on the employer's plans for sustainable growth. This is because the ratio of modelled DRCs to PBT appears to be relatively low and/or the same or lower than at the schemes last valuation.

However, it also highlights that there are a number of schemes where the modelled DRCs would represent a higher proportion of the sponsor's PBT than agreed at the last valuation and the modelled DRCs would represent a significant proportion of the sponsor's PBT. These schemes may not have sufficient affordability to make such increases in DRCs without materially affecting the sponsor's plans for sustainable growth.

In Figure 11 we have highlighted a section of schemes most impacted by the modelled DRCs and included a three year recovery plan extension to illustrate how use of the flexibility in setting the recovery plan length can help manage the DRC increases and impact of these on affordability. Schemes included in this scenario are those that, prior to any extension on their existing recovery plan end date, would see their modelled DRC to PBT ratio increase; and have a modelled DRC to PBT ratio of over 50%. This represents around 20-25% of the schemes in this analysis.

Figure 11: Change in modelled DRC to PBT ratio for the most stressed schemes after adding 3 years to existing recovery plan lengths



Source: The Pensions Regulator

Figure 11 shows that after adding three years to their recovery plan end date for these schemes:

- around 10% of these schemes would see modelled DRCs move to less than 30% of PBT
- 25-30% of these schemes would see modelled DRCs move to 30-50% of PBT
- around 30% of these schemes are now in the 50-80% of PBT bracket and a further 5-10% in the 80-100% bracket
- around 25% of these schemes who would need to pay over 100% of PBT with a three year extension

After a three year extension, those schemes that would still need to pay over 50% of PBT, and this is a higher proportion of PBT than previously agreed, represent around 10% of schemes included within our overall analysis. This is around 5-10% of schemes in the tranche carrying out 2016 valuations. These schemes may need to make other adjustments in order to put in place an appropriate recovery plan.

Impact of maturity

Illustrating the risks for mature schemes

As schemes mature, cash flow management is becoming an important consideration as in order to meet cash flow demands, schemes are required to sell the assets they hold. Well-funded schemes should be able to arrange their assets for their cashflow requirements to be met in an orderly way which minmises the risk of forced sales of assets in depressed markets.

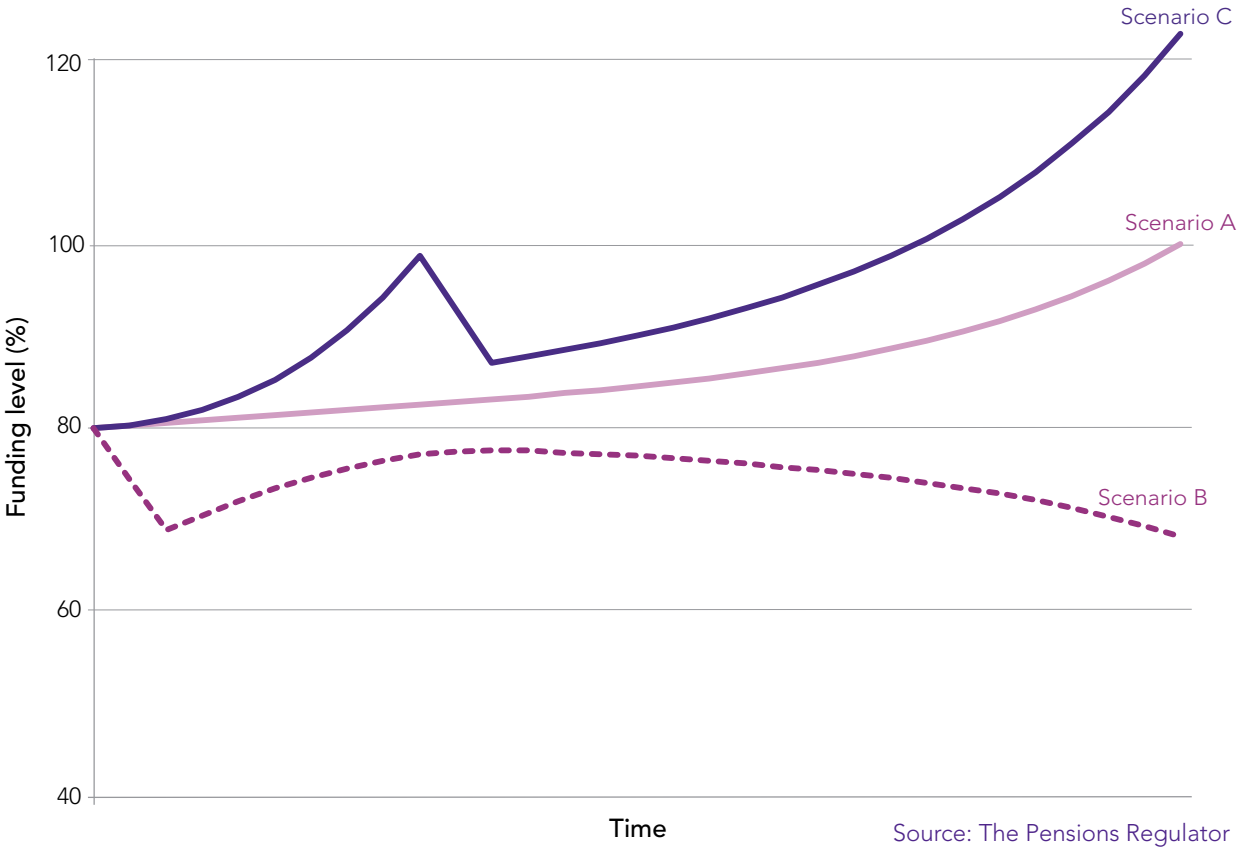
However, underfunded schemes face an increased risk of having to sell assets to meet scheme cashflows. Future investment uncertainty may mean that they are forced to sell assets at inopportune times, negatively affecting their funding plan. It is important that trustees are aware of these risks and take them into account when setting an appropriate funding and recovery plan.

To illustrate this issue, Figure 12 on the next page shows three different funding level projections for a relatively mature scheme with an average duration of liabilities of around 14 years. For the purpose of illustration, it is assumed to need to sell assets to meet its cash flow needs. In this illustration, the scheme is 80% funded and the recovery plan is based on a combination of paying DRCs each year and asset outperformance in excess of the discount rate for the liabilities, assumed for these purposes as 1% per annum.

All three of the scenarios shown assume that the assumptions made in the recovery plan are borne out in practice. However, we have applied three different market volatility scenarios over the first third of the recovery period. In each scenario the scheme achieves the same return of 1% pa in excess of the liability discount rate over that first third of the recovery plan period, and then asset returns are equal to the assumed rate for each subsequent year until the end of the recovery plan.

- Scenario A experiences no market volatility and so the asset return is equal to the assumptions made in each year of the recovery plan.
- Scenario B assumes that during the first third of the recovery plan, asset returns are negative in the early years but returns in the following years are higher. For the last two thirds of the recovery period, returns are equal to the assumed rate in each year.
- Scenario C assumes that during the first third of the recovery plan assets return more than the assumed rate in the early years but returns in the following years are lower. For the last two thirds of the recovery period, returns are equal to the assumed rate in each year.

Figure 12: Funding level projections under three different return scenarios



Source: The Pensions Regulator

In Scenario A, there is no market volatility and the scheme reaches full funding by the end of the recovery plan period.

In Scenario B, where asset returns are negative in the early years the scheme is selling more assets at a lower price than expected to meet the scheme cashflow requirements. This can lead to the scheme's assets being depleted at a significantly quicker rate than anticipated and a lower asset base over the remainder of the recovery plan. Even though the overall assumed returns are achieved, the scheme is unable to reach full funding over the intended period.

In Scenario C, where returns are higher in the early years, this can have a positive effect on the funding trajectory for the scheme. With monitoring, schemes that achieve higher than expected returns may choose to adjust their strategies throughout their funding plan to crystallise the improved asset performance and mitigate future stress events.

Overall, this graph is intended to highlight that, for underfunded mature schemes, cash flow needs can have a significant impact on the trajectory of funding for the scheme if there are volatile market movements over the funding cycle, even if overall assumed returns are achieved over the recovery period.

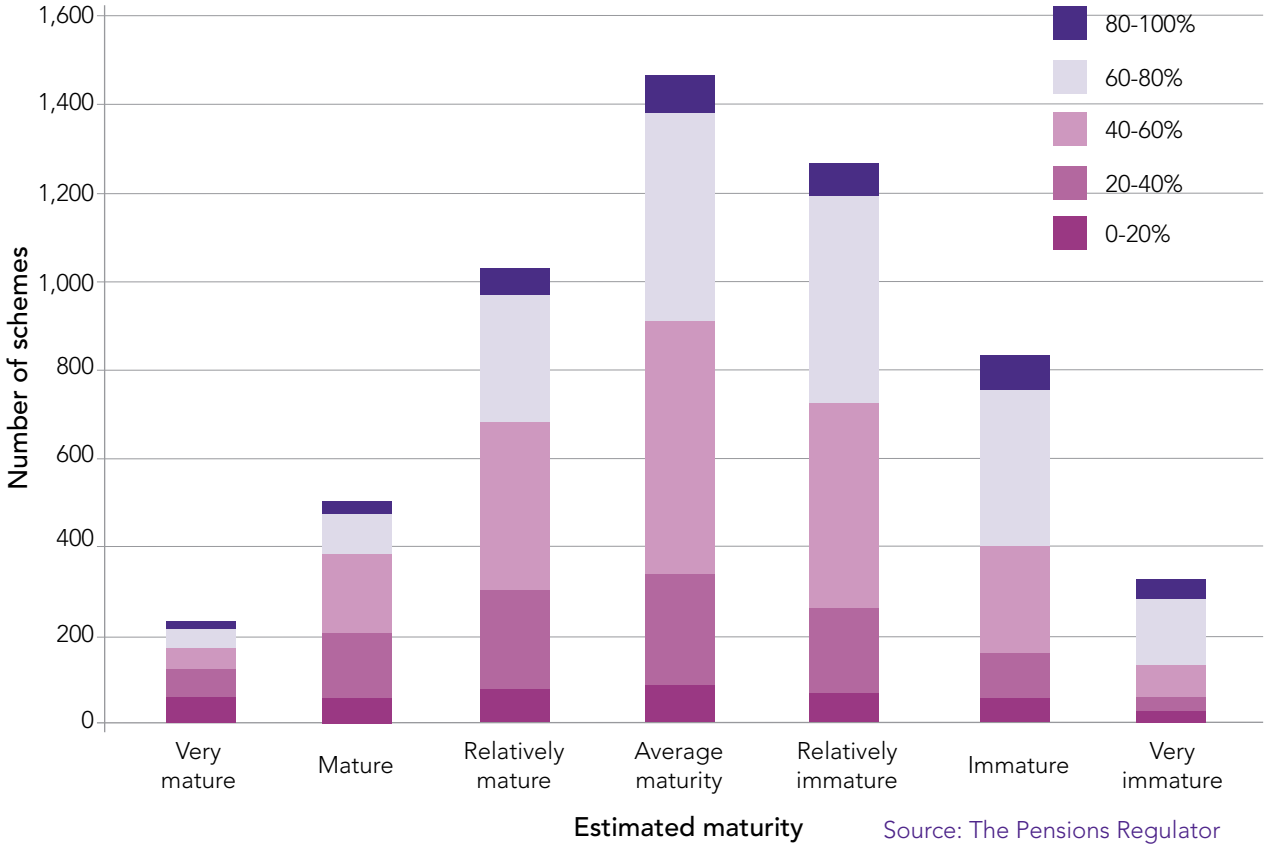
We have not shown the impact where actual investment returns are lower than those assumed over the recovery plan period. In these scenarios, the outcome for schemes could be an even more stressed position than illustrated here, with the consequence that this will require even greater financial support from the sponsor.

It is important that trustees of such schemes understand the profile of their scheme cashflows to identify when the requirement to meet cashflows could become an issue and have appropriate cash flow management plans in place.

Highlighting this risk for the UK universe

Figure 12 highlights the potential risks to schemes funding trajectories for schemes that are required to sell assets in order to meet their cash flow demands. Figure 13 splits out the DB universe into seven maturity bars to illustrate the current maturity of schemes and the level of growth assets held.

Figure 13: Maturity and growth assets for the UK universe of DB schemes



Source: The Pensions Regulator

Figure 13 highlights that there are over 700 schemes that have an estimated duration of 14 years or less. Of these schemes, nearly 200 have over 60% in growth seeking assets.

Table 6: Maturity and growth assets - accompanying table

Average duration of cash flows[8]	Maturity bar
0-12	Very mature
12-14	Mature
14-16	Relatively mature
16-18	Average maturity
18-20	Relatively immature
20-22	Immature
22+	Very immature

Source: The Pensions Regulator

More mature schemes with relatively higher allocations to growth assets which are underfunded are more vulnerable to volatility in market conditions as illustrated by Figure 12. Sponsors may be called on for further contributions to manage the impacts of downside risks when they occur.

The strength of the covenant and ability of the sponsor to provide financial support at the right times and the impact this would have on its sustainable growth are important considerations.

Schemes may have strong sponsors who are able to mitigate the risks of volatile market conditions through additional contributions. However, this can mean a more unpredictable call on the sponsor for financial support and may materially affect the sponsor's growth plans.

Schemes with weaker sponsors may not be in a position to manage the risks of financial market volatility through increases in sponsor contributions without materially affecting the sponsor's growth plans. These schemes may have to put in place other measures to manage these risks.

In general, schemes may find that over the course of their recovery plans they become more vulnerable to the potential problems linked to high cash flow needs as they mature. Early planning as part of schemes' IRM process will help them to put in place appropriate strategies to manage the risks of volatile market conditions over the course of their funding cycle and meet cashflow needs, minimising the risk of asset sales at inopportune times.

8 Estimated average cash flow duration only for illustration, based on technical provision liability data.

Methods, principal assumptions and limitations

Scheme data

We rely solely on the information supplied to us via scheme returns, which may not be the most up to date or contain the level of detail that would be available to scheme actuaries when advising their clients. This inevitably leads to many more simplifications and approximations in the methods we use to estimate aggregate and individual funding positions, compared with the more robust calculations carried out for formal valuation and recovery plan reporting by scheme trustees.

Many of these assumptions or simplifications have been driven by data limitations. For example, we have used index-tracking of major asset classes, made no allowance for hedging instruments to mitigate interest rate or inflation risk or for changes in asset strategy since the previous valuation. Additionally, we have made assumptions about scheme liabilities in aggregate that may not accurately reflect the underlying liabilities of individual schemes.

The baseline for estimating the current deficit of each scheme is based on the results reported to us following its last valuation, adjusted approximately for contributions paid and movements in assets and liabilities in line with appropriate indices. Our analysis relies upon point-in-time valuations of schemes' assets and liabilities. For estimating the impacts on recovery plans, we have used the simplifying assumption that all Tranche 11 schemes have their next actuarial valuation as at 31 March 2016. Further, we have assumed that the discount rate used to measure the liabilities of each scheme will have changed exactly in line with the movement in gilt yields between these two dates. If, collectively, trustees choose to use discount rates which are lower than we have assumed, then both the estimated liabilities and deficits are likely to be higher than those modelled in this analysis and vice versa.

This is not an exhaustive list of actuarial assumptions. The assumptions we have made may be a significant source of difference when compared with formal valuation results at the individual scheme level. In particular, for individual schemes, the results will be highly dependent on the exact date of valuation, the scheme's asset strategy including any changes made during the intervaluation period, any changes to its mortality and longevity assumptions to reflect new information and emerging experience and the scheme's assessment of the appropriate discount rate to measure its liabilities.

Employer data

We rely solely on the information supplied to us via scheme returns to identify our employer population, which may not be the most up to date or contain the level of detail that would be available to covenant advisers when advising their clients. This inevitably leads to many more simplifications and approximations in the methods we use to estimate aggregate and individual covenant support.

Much of the data underlying the analyses rely on an evaluation of the ownership of participating employers by other group entities. Ownership is defined as where a company is the UK-domiciled Domestic Ultimate Owner (DUO) of a participating employer, with a minimum controlling stake or interest of 50.01% in that employer. In some cases we do not have sufficient data to identify the DUO of a subject company (participating employer).

We have used the latest published corporate financial data available from our sources as at 1 April 2016 in respect of statutory employers to which more than one DB membership is directly attributable – the most recent data primarily relating to accounting years ending in 2014 or 2015.

For some employers (and therefore some schemes), the required data was not available – mainly SMEs, public/third sector or overseas companies – and therefore the analyses may not be representative of these schemes and/or sectors.

In order to estimate the available covenant support we have made certain assumptions and simplifications. The principal ones (though not an exhaustive list) are as follows:

- Where an employer participates in more than one scheme and/or a scheme is sponsored by more than one employer, we have made assumptions about the division and aggregation of an employer's financial support among the pension schemes in which it participates, based on the relative size of each scheme's deficit, and the number of members in each scheme attributable to each employer.
- Where corporate financial information for statutory employers was not available individually, where appropriate we have used consolidated accounts for the relevant group, thus potentially overstating the covenant support available.

- Where corporate financial information was not available for all statutory employers to a scheme, we have used information aggregated over only those employers for whom the relevant data was available, thus potentially understating the covenant support available.

Any of these assumptions, made to overcome data limitations, may be a significant source of error at the individual scheme/employer level.

Throughout this analysis we have used certain accounting-based metrics (see Glossary) as indicators of covenant support to compare with actuarially assessed liabilities, deficits or contributions. In practice, other measures may provide more appropriate indicators of formally assessed covenant strength and these may vary, among other things, by type of employer. Accordingly this analysis, or the metrics, should not be seen as a substitute for such bespoke assessments.

The ratios of DRCs to PBT as shown in this analysis may not always reflect a sponsoring employer's affordability. For example, looking at the PBT data may not be an appropriate methodology for assessing affordability due to inaccurate, misleading or absent data resulting from a complex group structure within which one or more employer(s) sits. Additionally, DRCs may be funded by other companies within the employer's group. However, it is a useful methodology for looking at general trends across the universe.

Glossary

Deficit repair contributions (DRCs)

These are contributions made by employers to the scheme in order to address any deficit in the value of the assets compared to the TPs, in line with the Schedule of Contributions and the RP. For the purpose of this analysis, we have assumed current contributions to be those in year 4 of the RP agreed at the Tranche 8 valuation, except for RPs which were shorter than four years where we have assumed that the contributions paid in the last full year of the plan have continued. Throughout this analysis we have used DRCs in the context of the value the scheme receives without making any allowance for any tax benefit the sponsoring employer may receive.

Dividends

A sum of money paid by a company to its shareholders. Dividends shown are total dividends paid in each respective year, including any special dividends but excluding share buy-backs. We have not made any adjustments for any bias due to large payouts from a small number of companies.

Profit before tax (PBT)

Profit before tax is a profitability measure after deduction of all operating expenses, interest on debt and depreciation but before the deduction of corporate tax. Except for Figure 6 (which shows trends in profitability since 2006), we use the average of the last available three years' profits for all of our analysis as a reasonable indicator of cash generation after debt service and maintenance capital expenditure (capex). We make no adjustments to remove the impact of any pension items already included in the reported figure.

Recovery plan (RP)

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 TPs. The plan to address this shortfall is known as a recovery plan.

RP length

The RP length is the time that it is assumed it will take for a scheme to eliminate any shortfall at the effective date of the actuarial valuation, so that by the end of the RP it will be fully funded in relation to the TPs.

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 TPs, the assumptions to be used in an 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 value of PPF compensation level of benefits with an insurance company at the valuation date.

Shareholders' funds

Shareholders' funds are an estimate of a firm's total assets minus its total liabilities. No adjustment is made to remove the impact of any pension accounting items already included in the reported figure.

Technical provisions (TPs)

The funding measure used for the purposes of Part 3 valuations. The TPs are a calculation undertaken by the actuary 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. These include pensions in payment (including those payable to survivors of former members) and benefits accrued by other members and beneficiaries, which will become payable in the future.

Tranches

'Tranche' refers to the set of schemes which are required to carry out a scheme-specific funding valuation within a particular time period. Schemes whose valuation dates fall between 22 September 2015 and 21 September 2016 (both dates inclusive) are in Tranche 11. Because scheme-specific funding valuations are generally required every three years, these schemes (with a few exceptions) had their last formal valuation in Tranche 8 (valuation dates between 22 September 2012 and 21 September 2013).

How to contact us

Napier House
Trafalgar Place
Brighton
BN1 4DW

www.tpr.gov.uk

www.trusteetoolkit.com
Free online learning for trustees

www.pensionseducationportal.com
Free online learning for those running public service schemes

Annual funding statement analysis
A review of defined benefit pension schemes with valuation dates between September 2015 and September 2016 (Tranche 11)

The Pensions Regulator