

Scheme funding analysis

A review of valuation and recovery plans for scheme valuations with effective dates in the period September 2011 to September 2012 (Tranche 7)

Introduction

The regulator published its first annual funding statement in April 2012¹. That statement was aimed at trustees and employers of defined benefit (DB) pension schemes who were undertaking their scheme valuations with effective dates in the period September 2011 to September 2012 (Tranche 7 schemes).

The statement set out our views on acceptable approaches to the valuation process in the context of the prevailing economic environment at the time of publication.

In October 2012 we also published an evidence and analysis document² containing information on the approach that informed our 2012 statement. Our modelling, as set out in the analysis document, suggested that the majority of scheme deficits could be managed within current plans or by modest use of the flexibilities available.

The following analysis reports back on the outcomes from Tranche 7 valuations and provides insight into scheme behaviours.

This is intended to provide further information and transparency on scheme funding and our views of funding outcomes. Further statistics on Tranche 7 valuations and recovery plans can be found in our 2014 scheme funding publication³.

1
[www.tpr.gov.uk/
funding2012](http://www.tpr.gov.uk/funding2012)

2
[www.tpr.gov.uk/
db-regime](http://www.tpr.gov.uk/db-regime)

3
[www.tpr.gov.uk/
funding-statistics2014](http://www.tpr.gov.uk/funding-statistics2014)

Schemes' use of the flexibilities

The scheme-specific funding regime has a number of flexibilities that allow schemes to manage their funding strategy in a way that is tailored to their individual circumstances.

Our 2012 statement set out our view that the use of flexibilities was likely to be most appropriate for schemes most impacted by the change in financial conditions and whose sponsors had the most serious affordability constraints.

These flexibilities can be used to help to manage the level of contributions that is appropriate based on the schemes' needs and the employers' affordability and plans for growing the covenant. Our analysis in the following sections looks at the use of some flexibilities for two sets of schemes in Tranche 7:

Set 1: Schemes that increased deficit repair contributions (DRCs) by greater than or equal to inflation⁴, relative to their Tranche 4 recovery plan

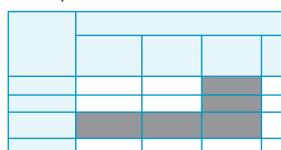
Set 2: Schemes that reduced or kept DRCs static after taking inflation into account.

⁴
Retail Prices Index,
2009-2012.

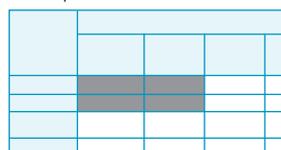
Table 1**Set 1: Use of flexibilities by schemes that increased DRCs by greater than or equal to inflation**

Absolute change in RP end date	Absolute nominal change in recovery plan (RP) return spread over 20 year gilts			
	Static/reduced return spread over 20 year gilts	0-50 basis points (bps) increase return spread over 20 year gilts	Greater than 50bps increase in return spread over 20 year gilts	Total
Static/reduced RP	10%	6%	6%	22%
0-3 year RP extension	8%	4%	2%	14%
Greater than 3 year RP extension	10%	4%	3%	17%
Total	28%	14%	11%	53%

Group 1A



Group 1B



Source: The Pensions Regulator, Thomson Reuters, FTSE Group, ONS

- The table highlights how these schemes used the flexibility in RP length and the assumption for the annual return on assets over the length of the recovery plan
- Set 1 contains 53% of all schemes in this analysis. The percentages in Table 1 therefore relate to the percentage of all schemes within both sets
- All the schemes in this table increased their DRCs by greater than or equal to inflation over the period from Tranche 4 to Tranche 7.
- Broadly speaking, this shows that:
 - around 25% of schemes combined a real terms increase in DRCs with a greater use of these flexibilities (Group 1A)
 - around 28% of schemes combined a real terms increase in DRCs with no or more limited use of these flexibilities (Group 1B).

Table 1 highlights that for a significant minority of schemes (Group 1A), the impact of the changes from Tranche 4 to Tranche 7 on the schemes' valuation was significant and they therefore used a number of the flexibilities in addition to DRC increases.

Table 2**Set 2: Use of flexibilities by schemes that reduced or kept DRCs static after taking into account inflation**

Absolute change in RP end date	Absolute nominal change in RP asset return assumption per annum spread over 20 year gilts			
	Static/reduced return spread over 20 year gilts	0-50 bps increase return spread over 20 year gilts	Greater than 50bps increase in return spread over 20 year gilts	Total
Static/reduced RP	8%	5%	6%	19%
0-3 year RP extension	6%	5%	3%	14%
Greater than 3 year RP extension	7%	3%	4%	14%
Total	21%	13%	13%	47%

Group 2A

Group 2B

Source: The Pensions Regulator, Thomson Reuters, FTSE Group, ONS

- Table 2 highlights how these schemes used the flexibility in recovery plan length and the assumption for the annual return on assets over the length of the recovery plan
- Set 2 contains 47% of all schemes in this analysis. The percentages in Table 2 therefore relate to the percentage of all schemes within both sets
- All the schemes in this table either reduced or kept DRCs static after taking into account inflation over the period from Tranche 4 to Tranche 7
- Broadly speaking, this shows that in order to reduce/maintain DRCs in real terms:
 - around 23% of schemes needed to make greater use of these flexibilities (Group 2A)
 - around 24% of schemes needed to make no or more limited use of these flexibilities (Group 2B).

For schemes reducing or maintaining DRCs, but making greater use of the other flexibilities, trustees should ensure that the risks to the scheme and members' benefits are not materially increased by these behaviours, and that the sponsor has affordability constraints and/or funds are being used to invest in the sustainable growth of the employer.

Table 3
Considering these sets of schemes together

Group	Deficit recovery contribution (DRC) outcome	Use of highlighted flexibilities
1A (25% of schemes)	DRC increase in real terms	Greater use of highlighted flexibilities (ie greater than three year RP extension and/or greater than 50bps increase in RP return pa spread over gilts)
1B (28% of schemes)	DRC increase in real terms	No or limited use of highlighted flexibilities (ie less than three year RP extension/reduction and less than 50bps increase/decrease in RP return pa spread over gilts)
2A (23% of schemes)	DRC static/decrease in real terms	Greater use of highlighted flexibilities (ie greater than three year RP extension and/or greater than 50bps increase in RP return pa spread over gilts)
2B (24% of schemes)	DRC static/decrease in real terms	No or limited use of highlighted flexibilities (ie less than three year RP extension/reduction and less than 50bps increase/decrease in RP return pa spread over gilts)

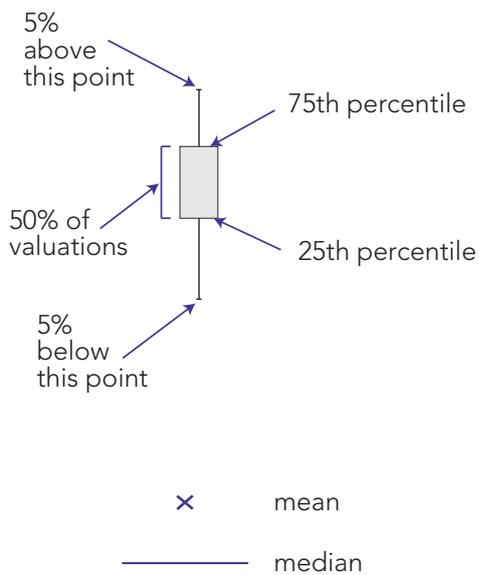
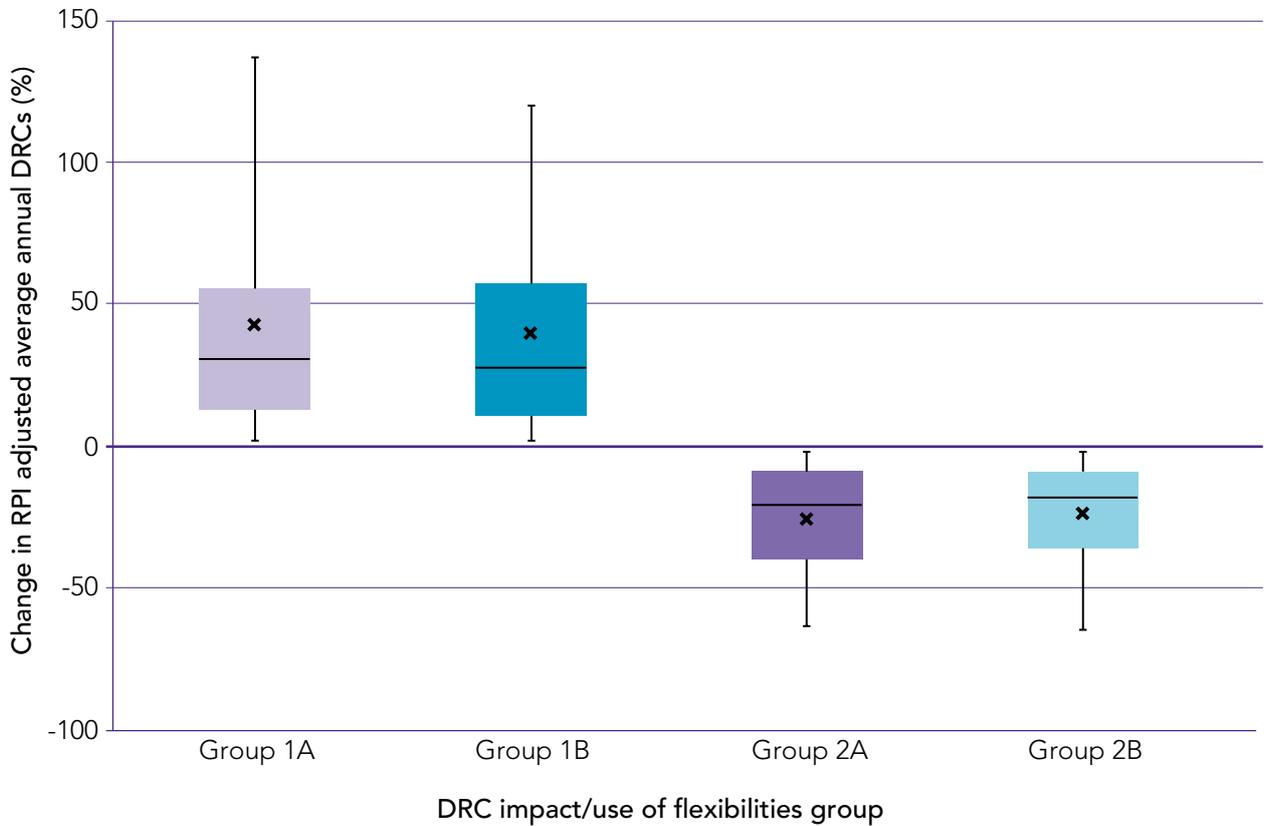
The following analysis compares these sets of schemes by dividing them into four groups, as shown in Table 3, and assesses some of the behaviours and funding outcomes for these four groups.

In summary:

Group	DRC change	Flexibilities use
1A	Increase	Greater
1B	Increase	No/limited
2A	Decrease	Greater
2B	Decrease	No/limited

Changes in DRCs

Figure 1: Distribution of change in RPI adjusted average annual DRCs by DRC impact/use of flexibilities group



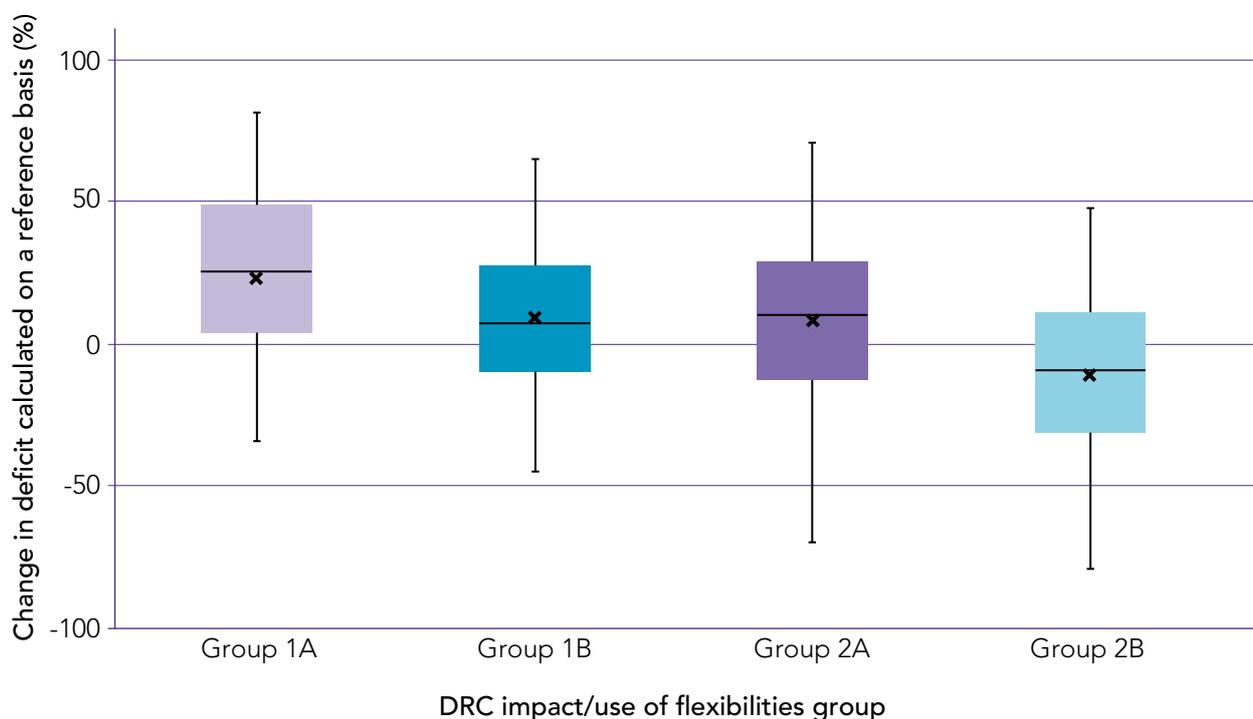
Source: The Pensions Regulator, ONS

Group	DRC change	Flexibilities use
1A	Increase	Greater
1B	Increase	No/limited
2A	Decrease	Greater
2B	Decrease	No/limited

- Figure 1 shows the change in DRCs since their previous valuation, split by the four identified groups. This is an increase for groups 1A and 1B and a decrease for groups 2A and 2B
- The left hand vertical axis shows the scale of DRC increases as a percentage increase (after accounting for inflation) over the period from Tranche 4 to Tranche 7

Impact of market conditions

Figure 2: Distribution of change in deficit calculated on a reference liability basis by DRC impact/use of flexibilities group

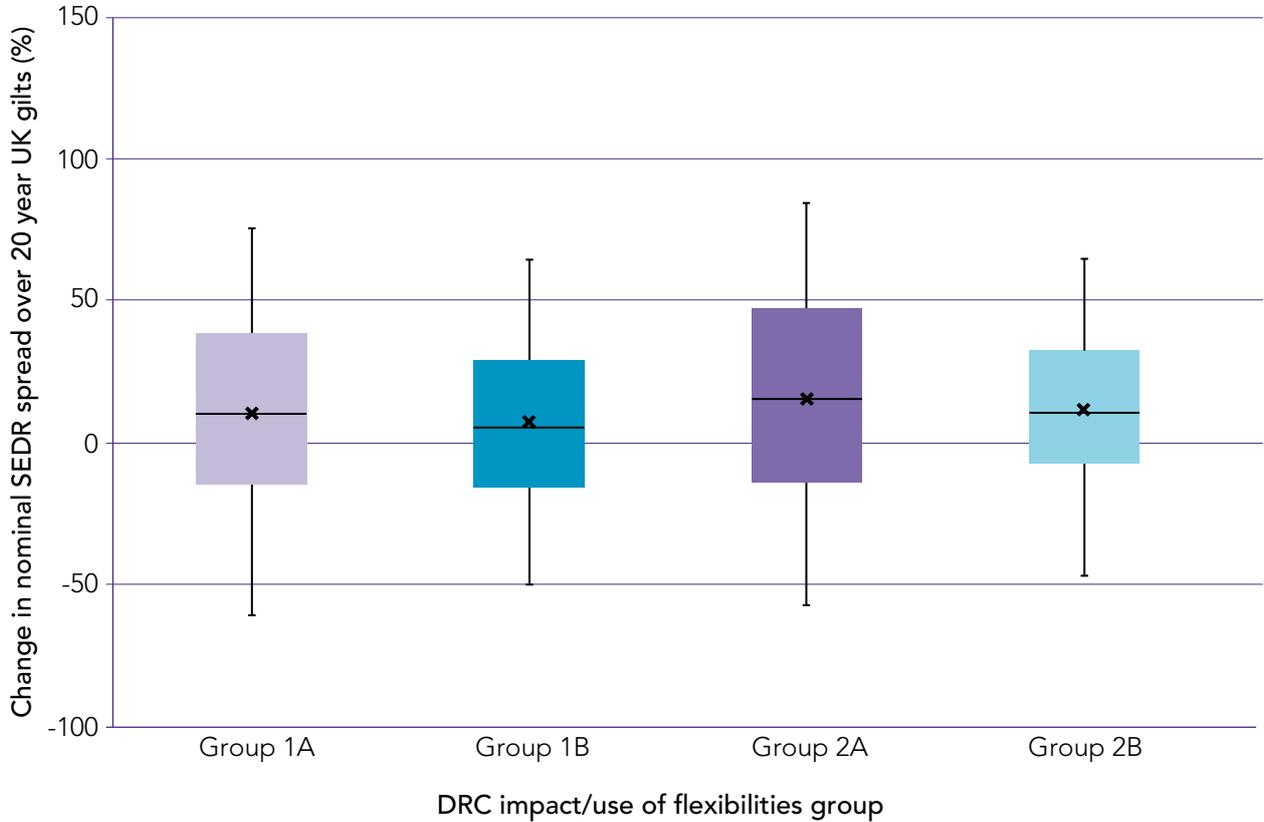


Source: The Pensions Regulator, ONS

- Figure 2 shows the change in deficit measured on a reference liability basis for the four groups of schemes. The reference liability basis allows for analysis on a consistent basis across schemes
- Group 1A generally saw the greatest increase in deficit from Tranche 4 to Tranche 7. This is consistent with their real term increase in DRCs combined with significant use of other flexibilities in order to manage their deficits
- Group 2B generally saw a reduced deficit overall and this is consistent with their ability to manage their deficits without requiring a real DRC increase and with limited use of flexibilities
- Groups 1B and 2A were generally affected in similar ways by the changes in market conditions. However, they used the flexibilities in differing ways with:
 - Group 1B generally choosing to increase DRCs with no/limited use of the other flexibilities, while
 - Group 2A generally made greater use of the other flexibilities and kept real DRCs static/reduced.

Use of flexibility in the discount rate

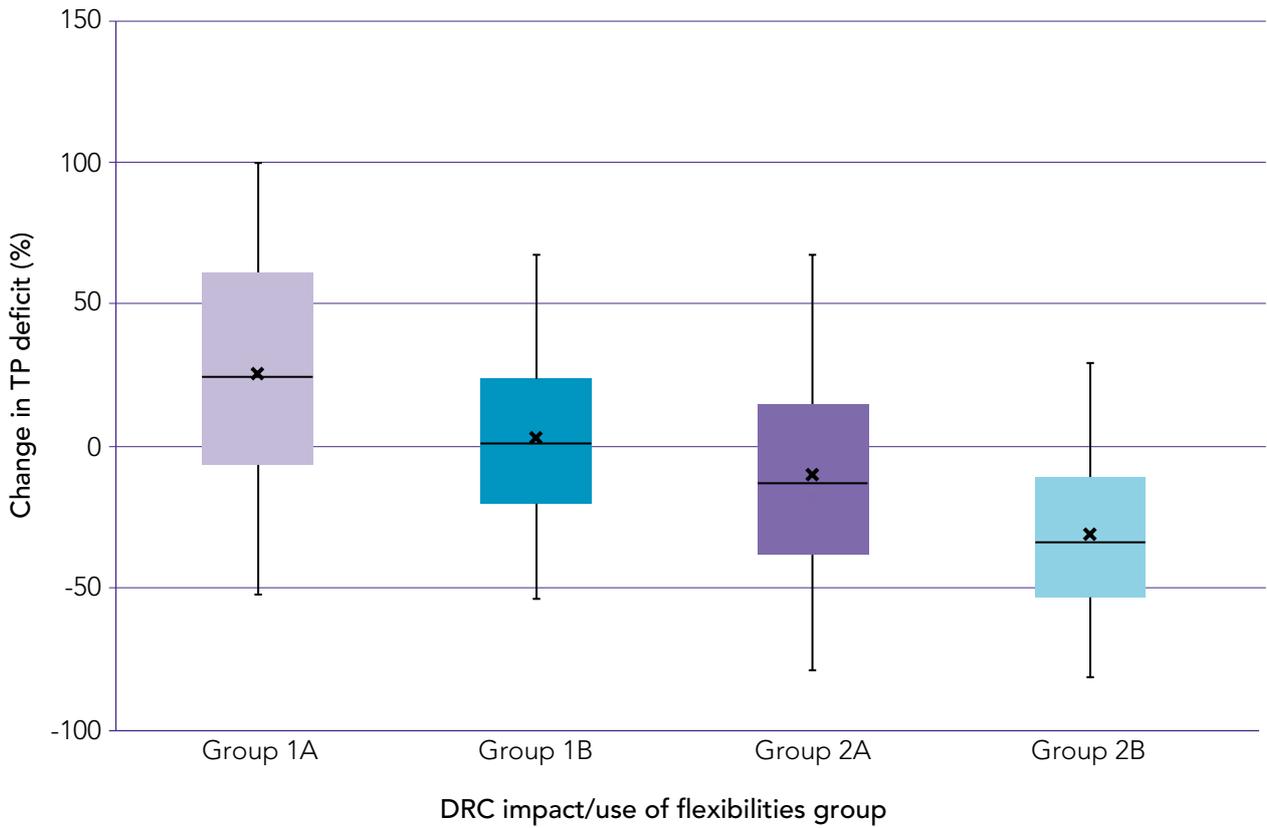
Figure 3: Distribution of change in nominal single effective discount rate (SEDR) spread over conventional 20 year UK gilts by DRC impact/use of flexibilities group



Source: The Pensions Regulator, Thomson Reuters, FTSE Group, ONS

All groups made adjustments to their discount rates to reflect changed market conditions, but generally Group 2A made greatest use of this flexibility, consistent with that group's general approach to make greater use of the flexibilities in order to limit the impact on DRCs.

Figure 4: Distribution of change in technical provisions (TP) deficit by DRC impact/use of flexibilities group



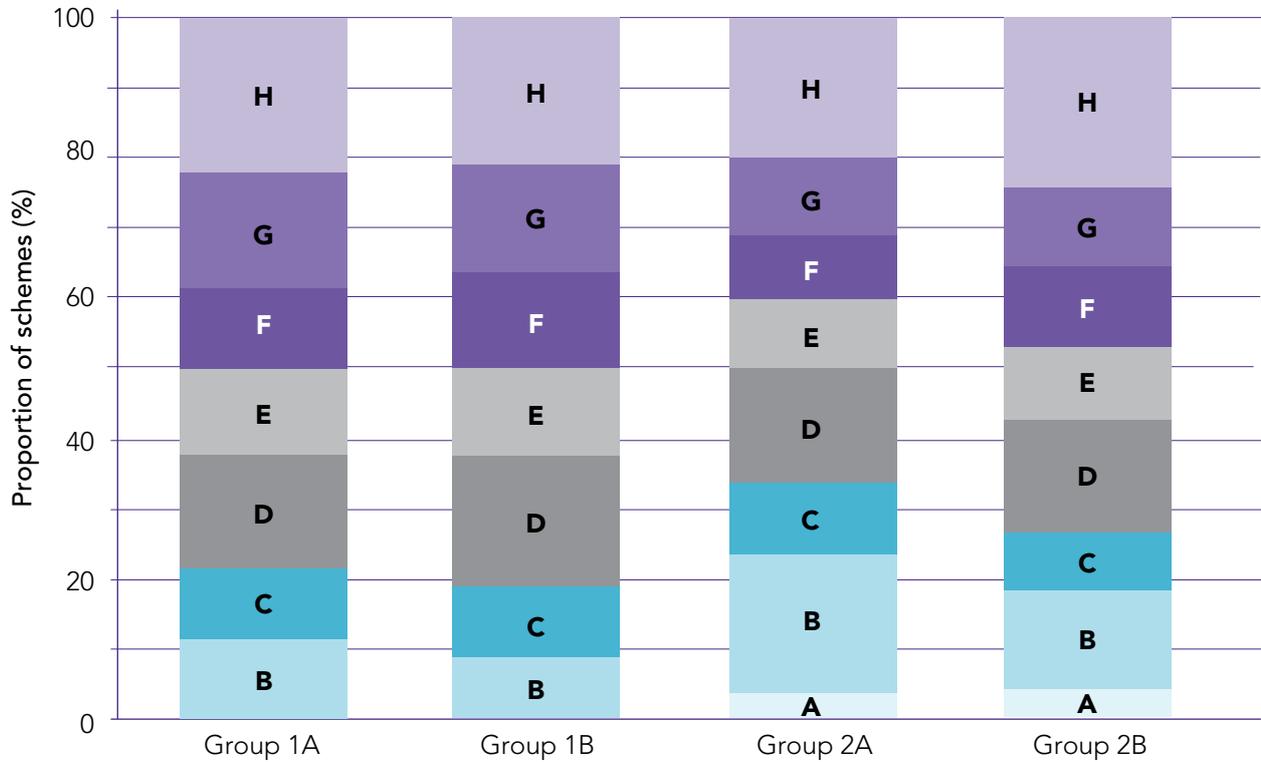
Source: The Pensions Regulator, ONS

Group	DRC change	Flexibilities use
1A	Increase	Greater
1B	Increase	No/limited
2A	Decrease	Greater
2B	Decrease	No/limited

When looking at the impacts on technical provisions deficits, generally Groups 1A and 1B were most affected with Group 1A generally experiencing the greatest increase.

Contributions as a percentage of employer profit before tax (PBT)

Figure 5: Average annual DRCs as a percentage of employer PBT



- H: Negative PBT
- G: Over 100%
- F: 50-100%
- E: 25-50%
- D: 10-25%
- C: 5-10%
- B: Less than 5%
- A: No DRCs

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

Group	DRC change	Flexibilities use
1A	Increase	Greater
1B	Increase	No/limited
2A	Decrease	Greater
2B	Decrease	No/limited

When looking at the DRCs agreed in Tranche 7 as a percentage of the sponsors' PBT, Figure 5 highlights that:

- there are many schemes across all groups where DRCs make up a substantial part of the employers' PBT and for around 22% of schemes across all groups, the employers' PBT is negative
- employers of schemes in Group 2A generally have the greatest level of headroom for DRC increases relative to PBT. There may be scheme specific reasons for this, but this is likely to be due to their decision not to increase DRCs in real terms and to make greater use of the other flexibilities.

Additional notes

- Approximately 17% of schemes have been excluded from this analysis due to insufficient PBT data. Insufficient PBT data is most prevalent in the smaller scheme population representing a limited proportion of total liabilities
- The three year average PBT to 2011 (generally the latest available data at the Tranche 7 date) may in some instances be based on less than three years data given limited availability
- PBT is calculated net of pension financing items on an accounting basis. This has not been accounted for in this analysis and would serve to reduce the ratio of DRCs to PBT for the majority of schemes
- PBT is after depreciation and payment of interest so provides a reasonable approximation for cash generation after debt service and maintenance capital expenditure (CAPEX). In practice other measures of employer cash flow may be more appropriate since trustees need to balance their demands against other essential calls on the sponsor's business, including investment for sustainable growth.

Conclusions

In order to manage deficits that are higher than expected, schemes have used the flexibilities in the scheme funding framework in different ways.

A key part of agreeing appropriate funding outcomes is how the level of DRCs relates to the affordability of the sponsor and their plans for sustainable growth in order to improve the long term covenant to the scheme.

This analysis shows that there were a number of schemes whose employers may have had room for increases in DRCs but when compared to another group of schemes who were in a similar position, chose to make greater use of the flexibilities rather than make DRC increases.

The flexibilities are available as tools to manage scheme deficits. In circumstances where schemes elect to make a greater use of flexibilities, trustees should ensure that the risks to the scheme and members are not materially increased by these behaviours.

We assessed for Tranche 7, and will continue to assess, whether we think the outcome for a scheme is appropriately balanced, and look to engage with schemes which represent the greatest risk.

Methodology and limitations

Data coverage

1. The data contained in this analysis were submitted by schemes to the regulator in RPs.
2. The data set comprises such submissions with both a Tranche 4 and Tranche 7 valuation date, received by the regulator up to 31 January 2014.
3. The majority of Cycle 2 plans (eg Tranche 4) and Cycle 3 plans (eg Tranche 7) are second and third valuations respectively under the scheme funding regime. However Tranches 4 and 7 do not constitute a perfect cohort. The reasons for submitting a RP in Tranche 4 but not Tranche 7 are several. They include:
 - where a scheme's assets were less than its TPs in Tranche 4 but exceeded its TPs for its Tranche 7 valuation
 - where a scheme may have wound up or be in the process of winding up
 - and/or where a scheme may have transferred to the PPF.

Also, some schemes have had their most recent valuations less than three years since their previous valuation.

4. Base data vary slightly in different sections of the analysis as a result of data coverage, validation and cleaning.
5. At least 88% of all RPs with a Tranche 7 valuation date submitted by 31 January 2014 are included in this analysis.

Methodology

1. Weighted averages are weighted by TPs unless otherwise stated.
2. Owing to the scheme-specific nature of the data, individual data points cannot be presented in some instances. As such, data distributions start and end at the 5th and 95th percentiles respectively.
3. Figure totals may reflect rounding.
4. Two approaches are used by pension schemes in respect of the discount rate assumption: a single investment return approach (single rates approach); and, a different investment returns approach (different rates approach). The former assumes that returns on pre-retirement investments are the same as that of post-retirement investments, while the latter usually assumes that the pre-retirement investment returns are higher than post-retirement investment returns. For the purposes of comparison, in instances where a different rates approach has been adopted, the regulator has constructed a single effective discount rate (SEDR): a composite rate based on the single rate or, where a different rates approach has been adopted, constructed from both the pre- and post-retirement rates. This is calculated as:

$$\begin{aligned} \text{SEDR} = & \text{Post-retirement rate} \\ & + ((1 + \text{Pre-retirement rate}) / (1 + \text{Post-retirement rate}) - 1) \\ & * (1 - \text{Pensioner TPs} / \text{total TPs}) ^ 0.4 \times 0.56. \end{aligned}$$

(The parameters 0.4 and 0.56 were developed by trial and error to create an approximate methodology which fits a simple formula to the more complex and scheme-specific interaction of maturity and duration. The regulator does not hold sufficient data to reliably make a more accurate calculation on a scheme-by-scheme basis.)

5. Average annual DRCs are calculated as the average of DRCs over the first four years of the RP.

Limitations of employer analysis

Reconciliation of our universe of c.14,000 unique statutory employers (and additional connected/associated entities, where relevant), with third party data sources in order to acquire the requisite corporate financial measures underpinning certain aspects of the analysis, is an evolving process which requires expert judgement, and unavoidably introduces errors/uncertainty which cannot be fully mitigated.

We have used the latest published corporate financial data available from our sources as at 1 April 2014 in respect of statutory employers (as reported to us in a scheme's annual return) – with the most recent data primarily relating to accounting years ending in 2012 to 2013 but in some cases relating to earlier years.

Certain data for certain schemes was not available – this tends to be concentrated in: smaller schemes; and, particular sectors (eg SMEs, public/third sector or overseas companies); and therefore the analysis may not be representative of these schemes and/or sectors.

Compared with the more detailed and contemporary information available to trustees and their advisers, the techniques we have used to estimate available covenant support involve various assumptions and simplifications. Many of these assumptions or simplifications have been driven by: data limitations or availability; the reconciliation of third party data with our own; and the methodological approaches necessitated by a heterogeneous universe of employers with – in many cases – multiple scheme associations both within and across corporate groups.

The main examples (though the items below are far from an exhaustive list) of such assumptions/simplifications are:

- where an employer participates in more than one scheme or the scheme is sponsored by more than one employer, we have made assumptions about the division of an employer's financial support among the pension schemes in which it participates
- where corporate financial information for statutory employers was not available individually, we have used consolidated accounts for the relevant group, thus potentially overstating the covenant support available; and
- 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 due to data limitations and interpretations may be a significant source of error at the individual scheme/sponsor level.

Moreover, accounting-based metrics may be poor indicators of formally assessed covenant strength and accordingly this analysis should not be seen as a substitute for such bespoke assessments.

Glossary

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 fell from 22 September 2005 to 21 September 2006 (both dates inclusive) were in Tranche 1, from 22 September 2006 to 21 September 2007 were Tranche 2 (both dates inclusive) etc. Because scheme-specific funding valuations are generally required every three years, schemes whose valuations are in Tranche 1 will also be likely to carry out valuations in Tranches 4, 7 and 10.

Technical provisions (TPs)

The funding measure used for the purposes of Part 3 valuations (see above). 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.

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 RP.

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.

Deficit repair contributions (DRCs)

These are contributions made by sponsors to the scheme in order to address any asset to TPs deficit, in line with the Schedule of Contributions and the RP.

Reference liabilities basis

An estimate of liabilities calculated on a common basis which enables a consistent comparison between schemes. For this purpose we have used a single discount rate equal to the yield on the FTSE Actuaries 20 year nominal gilt index plus 0.5%.

Profit before tax (PBT)

A measure of earnings as reported in the corporate accounts before any adjustment to remove the impact of pension accounting items.

This has been used here for illustration, recognising that in practice other measures may be more appropriate for analysis of individual scheme employers since trustees need to balance their demands against other essential calls on the employer's business.

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