The defined benefit regime

Evidence and analysis

October 2012

The Pensions Regulator

Introduction

The regulator aims to promote a good understanding of the defined benefit (DB) funding regime and to operate in an open and transparent manner.

This document sets out evidence on the way that schemes have used some of the flexibilities in the regime, notably with regard to discount rates, recovery plans, and contingent assets. As would be expected of a scheme-specific regime, practice varies.

It also provides information on the approach that informed our statement on DB funding in the current economic environment which we published earlier this year (April 2012). The analysis set out here includes a number of affordability measures and an assessment of how the approach to DB funding in our statement is expected to affect schemes.

Schemes' use of the flexibilities in the system

Where appropriate, schemes can make use of a number of flexibilities in the system. In the following charts and graphs we illustrate the wide range of scheme circumstances and examine the variations in discount rates, recovery plan lengths and use of contingent assets.

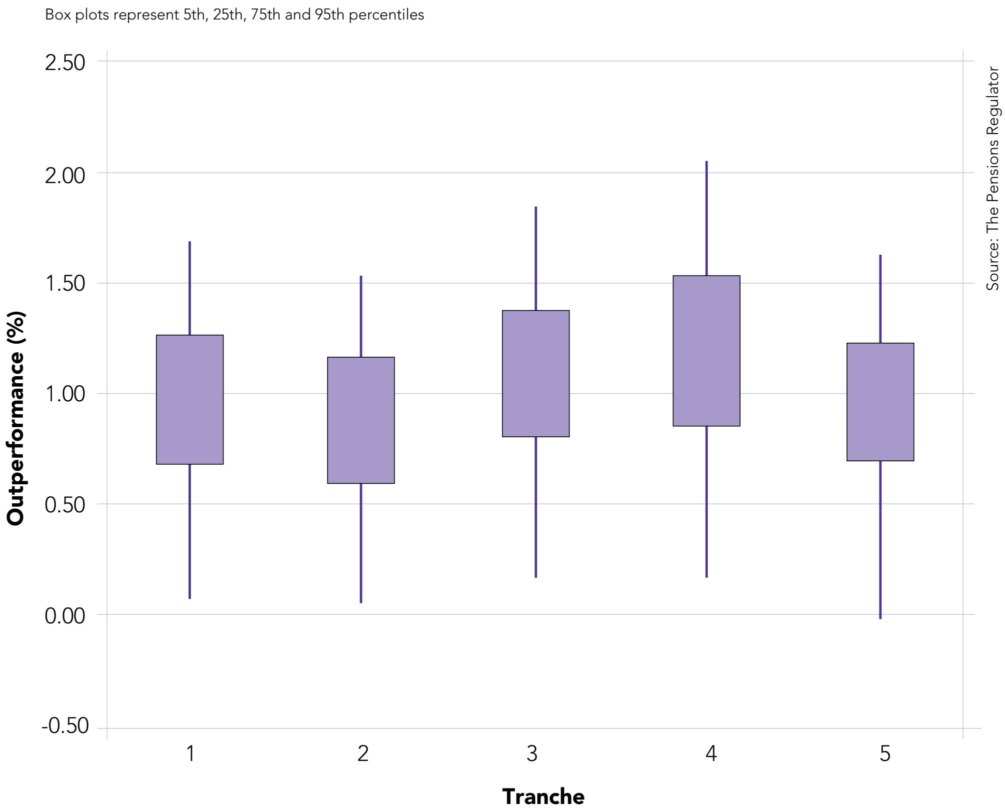
Funding levels vary from scheme to scheme and contributions are scheme-specific

Contributions and technical provision (TP) funding levels for Tranche 4 schemes

- There is a wide variety of scheme circumstances and the regulatory framework must take account of a range of differing schemes and employers
- There is no significant correlation between funding levels and speed of recovery as many other factors contribute to the speed at which deficits are paid.

Discount rates are set on a scheme-specific basis

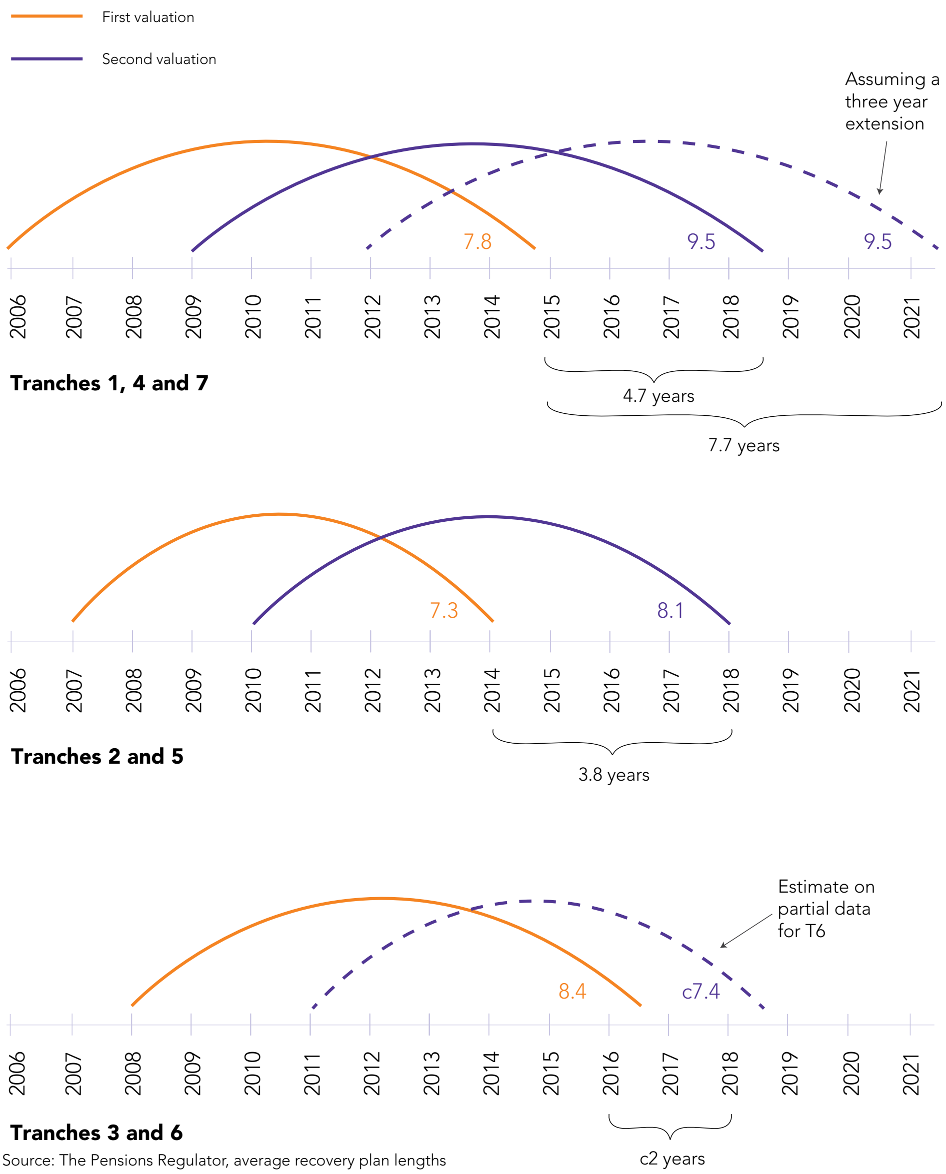
Distribution of assumed outperformance over gilts



- This chart considers outperformance of nominal single effective discount rate (SEDR) over conventional 20 year UK gilts
- Discount rates vary substantially from scheme to scheme, representing a scheme-specific approach dependent on individual characteristics
- Outperformance over Tranches 1-5 has ranged from below zero to over 200 Basis Points (bps)
- The regulator views any increase in the asset outperformance assumed in the discount rate to reflect perceived market conditions as an increase in the reliance on the employer's covenant.

Schemes have used the flexibility available in setting recovery plan lengths

Average recovery plan length by funding cycle

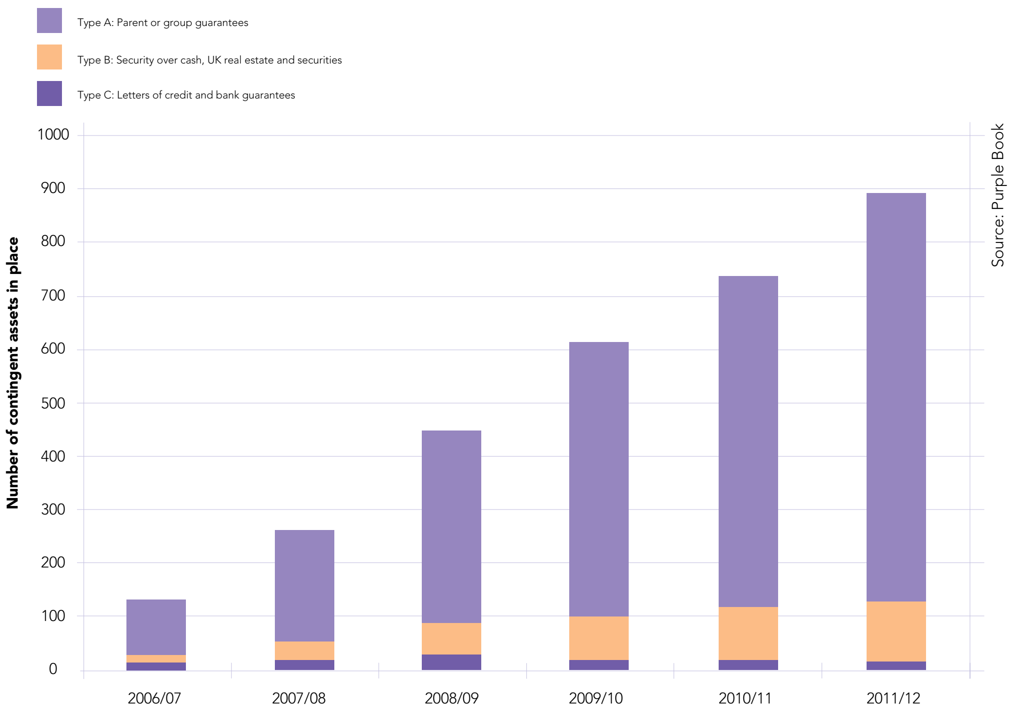


Source: The Pensions Regulator, average recovery plan lengths

- The first two sets of DB schemes have gone through two valuation cycles (Tranches 1 and 4, Tranches 2 and 5), on average plans have been extended by approximately 4.2 years from their original end date
- We expect that for Tranche 7 valuations, some trustees will need to make use of this flexibility to further extend the end date.

Alternative forms of support

Schemes have used the option of contingent assets as well as cash contributions



- Represents Pension Protection Fund (PPF) eligible contingent assets
- Over the last six years employers have made use of other forms of security beyond direct contributions to schemes
- The number of contingent assets has increased about seven-fold and over 20% of schemes in Tranche 5 reported using at least one contingent asset.

Our analysis for Tranche 7 schemes

Ahead of producing our statement, **Pension scheme funding in the current environment** (April 2012), which was designed to assist the schemes currently undertaking valuations and scheme funding discussions (Tranche 7), we considered how to achieve the right balance between in regulating the appropriate funding of DB pension schemes, in particular giving due account to the affordability of employers. This analysis focuses on Tranche 7 valuations only. We considered three main factors:

- the expected funding positions as at March 2012 using 'roll-forward techniques' from summarised data collected from past valuations
- the projected estimated deficit recovery contributions (DRC) requirements under a number of scenarios, and
- the impact of the potential revised DRCs against standard metrics of corporate cash flow.

As a starting point, we tested whether it would be reasonable for schemes to continue with their current funding plans. We recognise that in practice scheme-specific assessments for covenant require more complex techniques and judgements and this analysis does not prejudice this need.

Our analysis is highly dependent on key assumptions. We have demonstrated this with a sensitivity analysis. Our conclusions based on this are that:

- about 25% of schemes would not need to amend their current recovery plans (Group D)
- for about 30% of schemes, they will need to make only small adjustments to their previous recovery plan end rate for instance a 10% increase in DRCs which is broadly in line with inflation and a modest increase, up to 3 years in recovery plan length (Group C)
- these 55% of schemes who will not need to significantly increase their contributions could rise to 75% if further flexibilities, such as adjusting the outperformance on the investment return in their recovery plans, were made (Group B).
- this leaves about 25% of schemes who would either need to make large increases in DRCs or, if there are significant affordability concerns, to make substantial use of a wider range of the flexibilities in the regime (Group A).

Based on this we concluded that movement across the board to reflect current conditions would not be justified, and therefore that flexibilities should be targeted on schemes facing affordability issues.

Flexibilities should target schemes with affordability issues

Tranche 7 DRC impact analysis

Analysis of how current contributions would be affected by estimated funding levels

This chart sets out possible impacts for four groupings of Tranche 7 schemes based on 31 March 2012 actuarial assessments:

- Group A: DRC increase above 10% even with a three year extension and weakened recovery plan assumption
- Group B: DRC increase contained to 10% if three year extension applied, but only through weakened recovery plan assumption
- Group C: DRC increase contained to 10% if three year extension applied
- Group D: No need to amend recovery plan.

When considered by amount of liabilities rather than number of schemes, those in the highest impact category represent a smaller percentage of the total.

We have assumed the same outperformance in the discount rate as reported by schemes in their Tranche 4 valuations and it is assumed that revised DRCs are index-linked.

Sensitivity analysis

Distribution of DRC impact groups is sensitive to assumptions

The exact choice of discount rate, relative to the choices made in 2008/9, can significantly increase or decrease the affected results. Other changes, eg to mortality, could also have an effect.

The model is sensitive to the limitations of an index-based three year projection. In particular, individual scheme assets will not track the indices. There are also inevitable uncertainties in the liability projections.

We assessed this by assuming an increase/decrease in assets of +/-7.5%. To put this in context, running the model at 31 December 2011 would have been equivalent to approximately -5% assets.

The impact of the estimated change in DRCs compared against corporate cash flow

Estimated projected DRCs as a percentage of sponsors' earnings before tax, depreciation and amortisation (EBTDA)

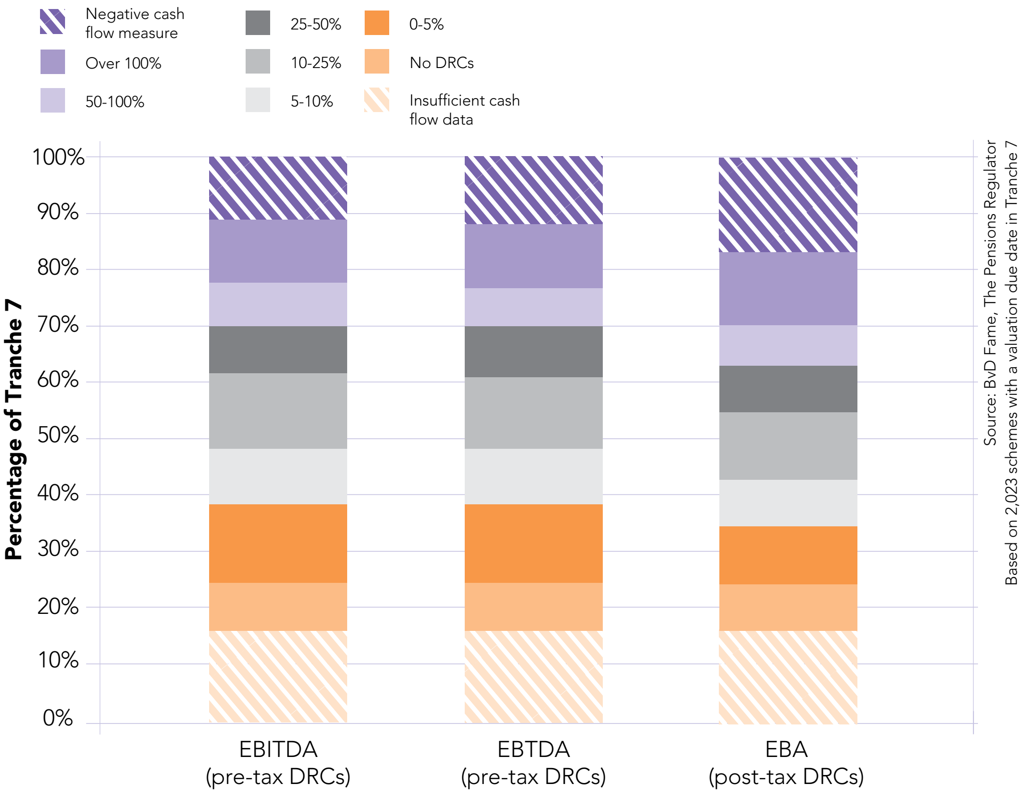
Tranche 7 DRCs are estimated assuming a three year extension for those, who in our analysis, need to make amendments to their recovery plan.

Compared with amounts sponsors are currently paying under their agreed recovery plans, for the majority of schemes DRCs as a percentage of EBTDA is not significantly higher.

Our analysis shows that there are a number of companies which are not currently paying DRCs, but who will likely have to do so in future.

The position is obscured by the number of companies which have negative EBTDA but are paying DRCs. This reflects the limitations of this metric in looking at impacts on sponsors' cash flow.

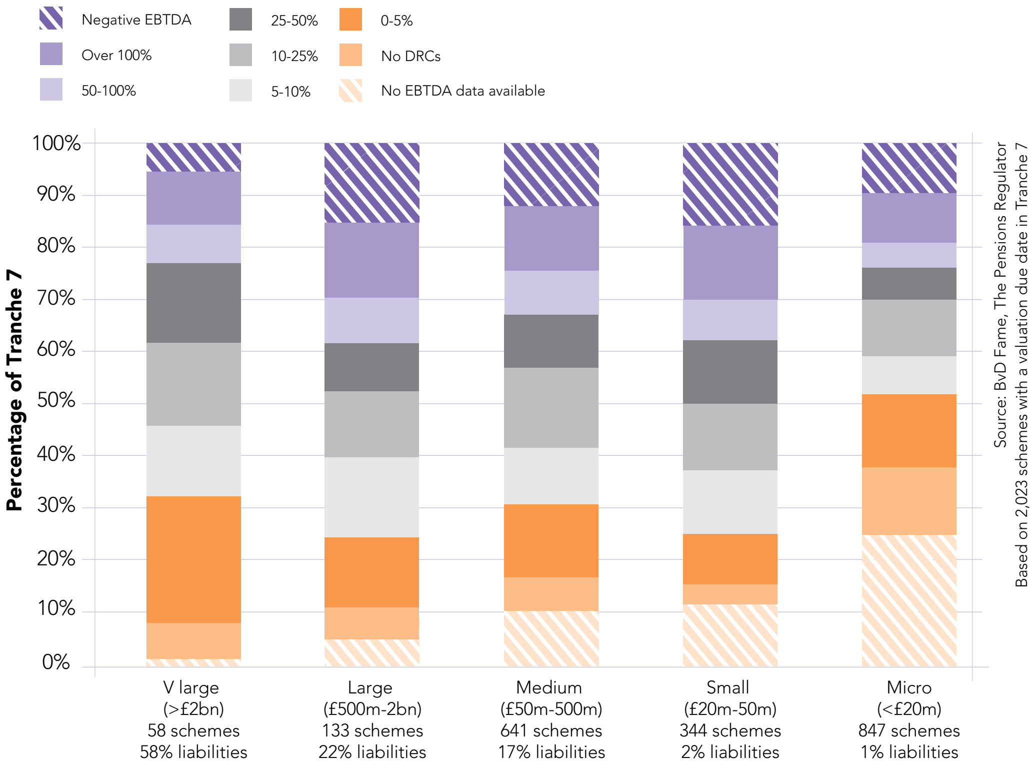
Using other employer cash flow metrics



We repeated this analysis against two other cash flow metrics to ensure that using any one metric did not give materially different results.

The choice amongst these metrics has little impact on the pattern across schemes in this analysis.

DRC/EBTDA metric by size of scheme (s75 liabilities)



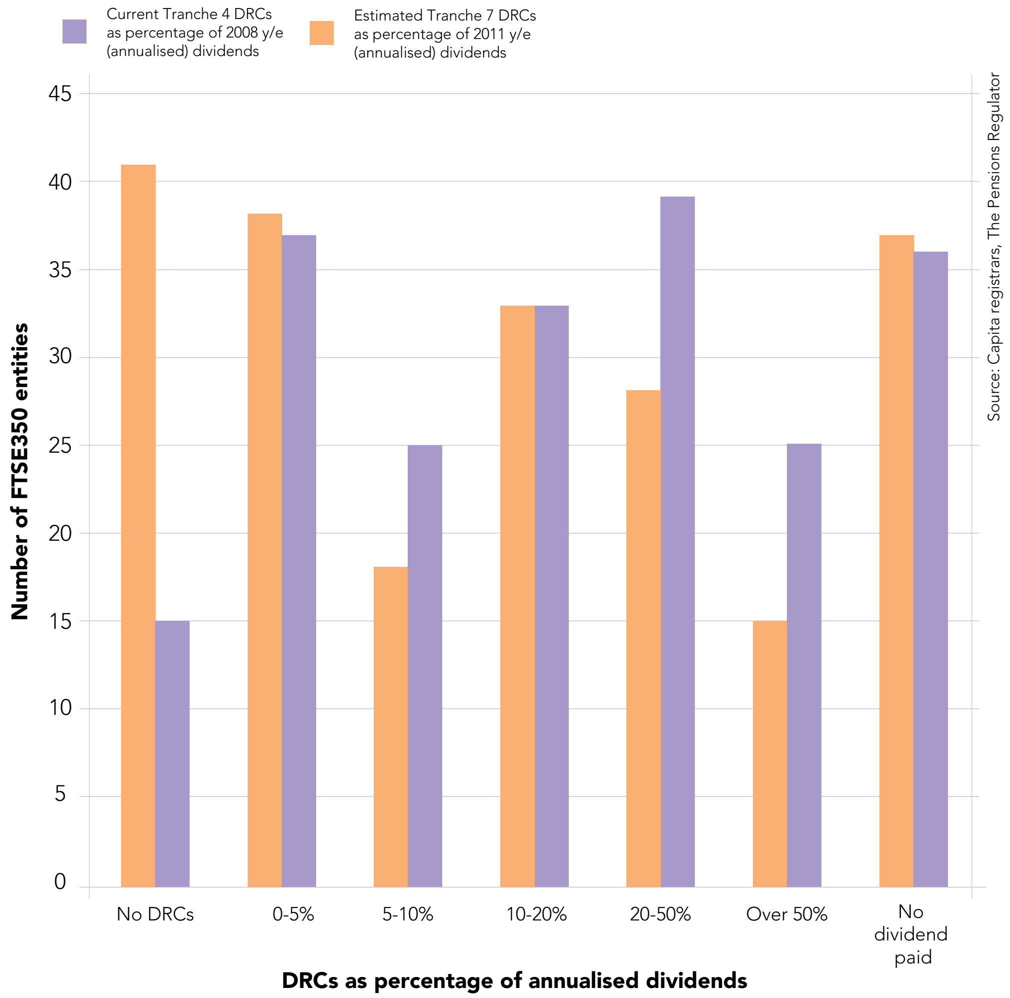
Schemes have many different characteristics. An important one is size and this chart shows whether DRC/EBTDA differs by size of scheme.

Higher ratios of DRC/EBTDA are in the large and small scheme categories. However, impacts are not heavily concentrated on schemes of a particular size.

For some schemes, data is not complete. Unavailable data is more prevalent in the smaller schemes representing a limited proportion of total liabilities.

DRCs as a percentage of dividends

DRCs as a percentage of annualised dividends for FTSE350 entities with material pensions exposure



For those listed sponsors where recent dividend information was available, we investigated what the new DRC requirement might be as a proportion of dividends paid to shareholders. We looked at FTSE350 companies with material pensions exposure.

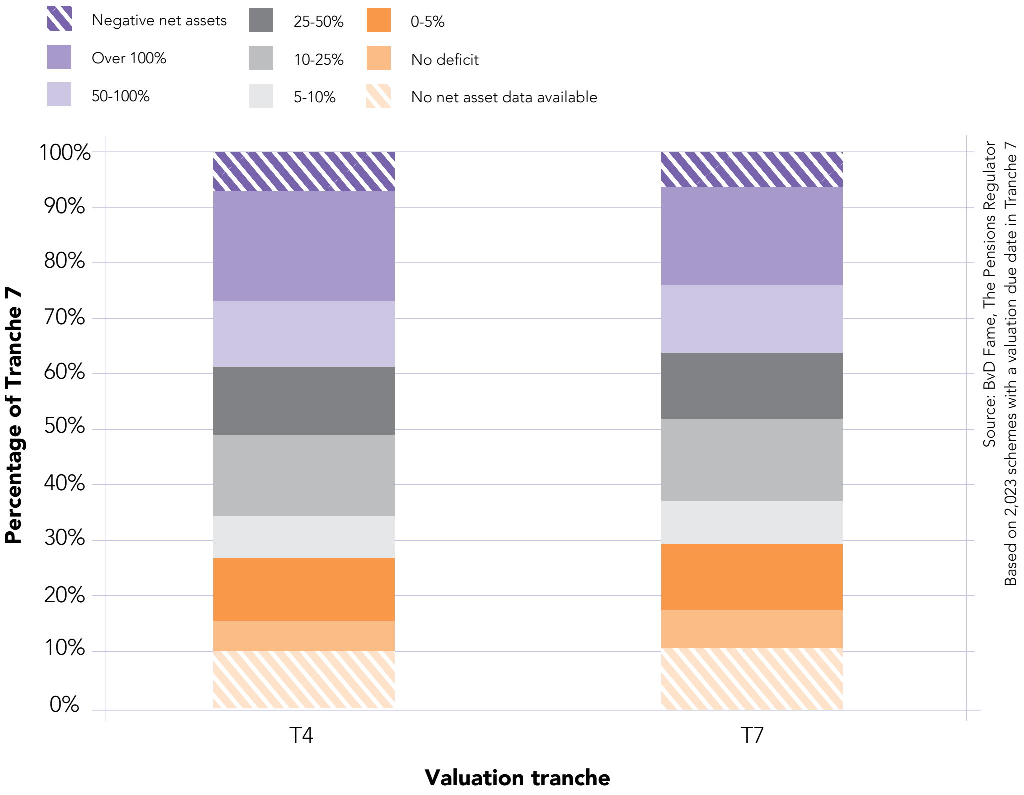
For more than half of FTSE350 sponsors in the sample, DRCs represent less than 20% of the value being paid in dividends.

For a limited number of schemes, DRCs are higher than current dividend payments; and for some, DRCs are being paid but dividends have been suspended.

The data is informative, but it says little for privately-held companies, mainly small/medium enterprises (SMEs).

Technical provision deficits

TP deficits as a percentage of sponsors' net assets



For around 10% of schemes no net asset data was available.

Approximately 25% of schemes have deficits less than 10% of net assets of the sponsor and therefore have lower significance.

For about 25% of schemes deficits are in the 10%-50% range and these may be manageable in the context of long term recovery plans.

Deficits exceed 50% of net assets in around 40% of cases. Where net assets fully reflect business value, these schemes may represent significant challenges to their sponsors.

Bringing together the impact analysis and affordability assessment

The next chart shows the extent to which schemes facing estimated increases in contributions are likely to be subject to affordability constraints.

The picture is mixed: additional contribution requirements of schemes do not appear to be correlated with sponsor affordability.

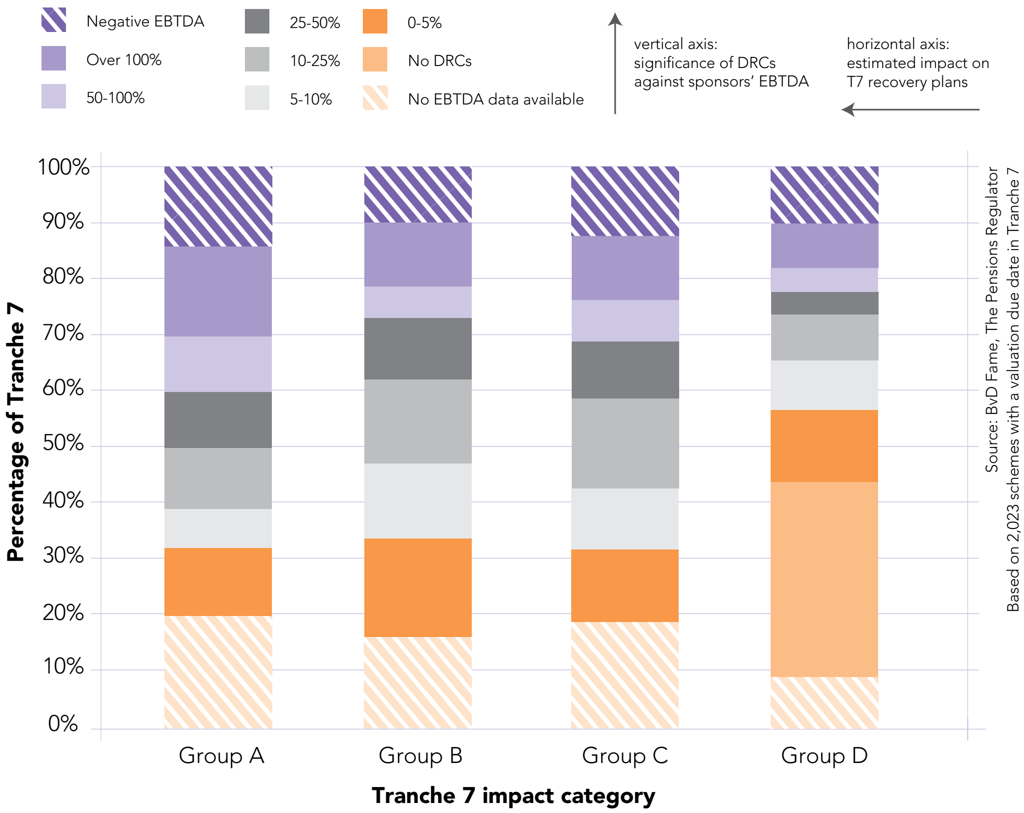
We observed that amongst the groups where no or minimal change was required in DRCs (Groups C and D, about 60% of Tranche 7 schemes), there are nevertheless schemes where pension contributions currently impose a substantial stress on sponsors' cash flows and will continue to do so.

Additionally, some schemes which require the greatest additional contributions have sponsors with apparent affordability.

Therefore, the stress likely to result from changes to contributions will mainly fall in a subset of Groups A and B, which have high DRCs as a percentage of EBTDA.

Are the schemes facing increased contributions likely to be subject to affordability constraints?

DRC impact groups with DRC/EBTDA metric



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Annex

Quality assurance

This report has been compiled by the regulator and is subject to appropriate checking and internal/external peer review. In particular the Government Actuary's Department (GAD) were asked to review the methodology and confirm that, despite the highlighted limitations, the results of the analysis broadly supported our position.

Compliance with the Financial Reporting Council's technical actuarial standards is neither asserted nor required by the FRC. These standards, along with others, do however inform the design of the regulator's quality assurance process.

Key assumptions for Tranche 7 estimates

- TP real discount rates adjusted at Tranche 7 to maintain constant spread to >5 year index-linked gilts
- Other assumptions unchanged
- In our assessment of revised DRCs, we allowed for recovery plan credit of 50% of long-term best estimate outperformance over discount rate for 10 years
- Consumer price index (CPI) credit equal to 10% of non-pensioner liabilities
- No allowance for future service
- Index-tracking of main asset classes; no allowance for changes to investment strategy
- No allowance for hedging instruments to mitigate risk, or for risk transfers
- Where 2011 accounting year-end corporate financial measures are missing, 2010 (and in some instances 2009) accounting year-end corporate financial measures have been used
- Corporate financial measures are at scheme level, ie they have been aggregated over all named participating employers to a scheme for which data exists
- Where an employer participates in more than one scheme in the sample, its corporate financial measures have been apportioned by s75 liability.

Data limitations

- Accounting metrics may be poor indicators of formally assessed covenant strength. This data has been used for the purposes of analysis only and should not be seen to replace the outcomes from formal assessments for other purposes
- Missing financial data for sponsors is most prevalent in the SME market and therefore the analysis may not be fully representative of this market.

Limitations of methodology

Compared with the more accurate calculations carried out for formal valuation and recovery plan reporting by scheme trustees, roll-forward techniques for approximate actuarial assessments involve numerous additional assumptions including:

- use of summarised scheme data effectively frozen at the scheme's last valuation date (which does not take account of subsequent membership movements, or liability transfers or risk mitigation strategies)
- no account of asset or liability cash flow since the last valuation, except for deficit recovery contributions
- no account of changes to investment strategy since the last valuation date
- for individual schemes, any of these omissions in isolation could be a significant source of error.

Where corporate financial measures are unavailable for all participating employers to a scheme, the scheme level (aggregated) corporate financial measures are aggregated over only those for which data is available, thus understating the scheme level (aggregated) corporate financial measure.

In many instances the degree of support available to a scheme extends further than the named participating employers to a scheme.

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 between 22 September 2005 and 21 September 2006 were in Tranche 1, between 22 September 2006 and 21 September 2007 were Tranche 2, 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.

TPs

Technical provisions

RPs

Recovery plans

SEDR

Single effective discount rate. We compute an effective single rate. The effective single rate is found using a model that converts the different rate approach into a single composite rate of equivalent strength to the actual rate allowing approximately for the maturity of the schemes.

DRCs

Deficit recovery contributions

EBITDA

Earnings before interest, tax, depreciation and amortisation – a measure of cash flow

EBTDA

Another measure of cash flow which treats interest items as an essential business expense

EBA

A further measure of cash flow, after deduction of interest, tax, and depreciation (latter being a proxy for smoothed capital expenditure)

Sponsors' net assets

Scheme level (aggregated) shareholders' funds adjusted for FRS17/IAS19 accounting liability where data available

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