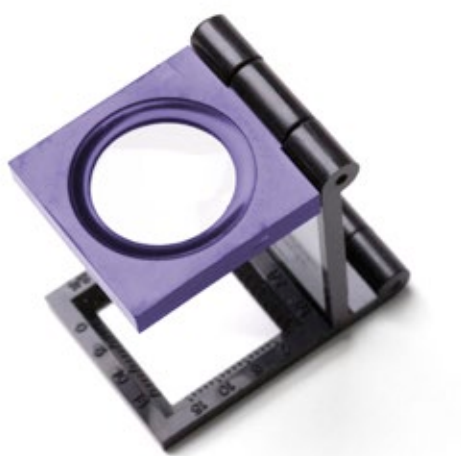


Scheme funding

Valuations and recovery plans of UK defined benefit and hybrid pension schemes



June 2013

The Pensions
Regulator

Overview

This is an update to The Pensions Regulator's (the regulator) annual analysis of UK defined benefit and hybrid schemes. All analyses including the data tables published in conjunction with this report (as an appendix) are prepared in accordance with the UK code of practice for official statistics. All analysis is based on valuations and recovery plans submitted by schemes to the regulator.

Most of the analysis here relates to schemes in deficit on a technical provisions (TPs) basis (except where otherwise stated). The analysis is based on recovery plans submitted, prior to any assessment of them by the regulator.

This update is primarily based on Tranche 6 schemes (schemes with effective Part 3 valuation dates falling from 22 September 2010 to 21 September 2011 both dates inclusive), and as such shows the evolution of funding over the first two triennial funding cycles.

By 31 March 2013, the regulator had received just over 1,500 recovery plans with a Tranche 6 valuation date, while over 400 schemes had reported surplus positions (trustees are only required to submit a recovery plan to the regulator when a scheme's assets are in deficit relative to its TPs at the date of its Part 3 valuation).

Due dates for submission of Tranche 6 recovery plans (for schemes in TP deficit only) fell from 21 December 2011 to 20 December 2012 both dates inclusive, ie within 15 months of the valuation date. Of the Tranche 6 schemes in deficit, 83% had submitted a recovery plan in Tranche 3 (ie recovery plans in respect of a valuation date falling from 22 September 2007 to 21 September 2008, both dates inclusive).

For more granular detail underlying the high level trends in this report, data summaries – referred to as 'tables' in this report – can be found in the Appendix.

Tranche 6 valuations

Tranche 6 valuations have valuation dates that fall from 22 September 2010 to 21 September 2011, both dates inclusive. As triennial valuations tend to coincide with year-end business reporting, the majority of Tranche 6 valuations are effective in December/January, and March/April.

Figure 1 shows the frequency distribution of valuation dates over the Tranche 6 valuation period.

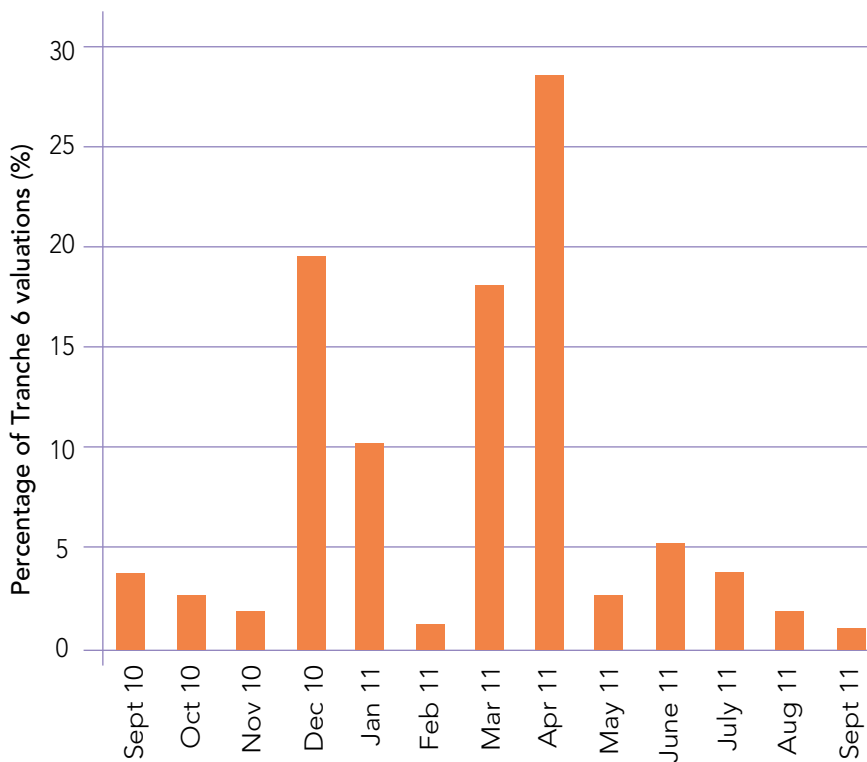


Figure 1: Distribution of Tranche 6 valuation dates for recovery plans submitted

Source: The Pensions Regulator

Economic conditions

83% of Tranche 6 schemes in deficit submitted a recovery plan in Tranche 3 (ie 3 years or 1 valuation cycle preceding). During the Tranche 3 valuation period (valuation dates from 22 September 2007 to 21 September 2008, both dates inclusive), the global financial crisis was in its early phase and the period was marked by widening credit spreads and a general downturn in economic activity. The recession and low yield environment that followed adversely affected scheme funding positions. Interest rates (both nominal and real) in the Tranche 6 valuation period were generally lower than they were in the Tranche 3 valuation period.

Between Tranche 3 and 6 valuations, falling equity returns caused some deterioration in asset values, but improvements resulting from some recovery in equity markets will have been realised in the 12 months to the end of March 2011. Figure 2 shows the yield on corporate and government bonds over the past six years. It also shows the volatility and changing relationship between bond yields and break-even inflation.

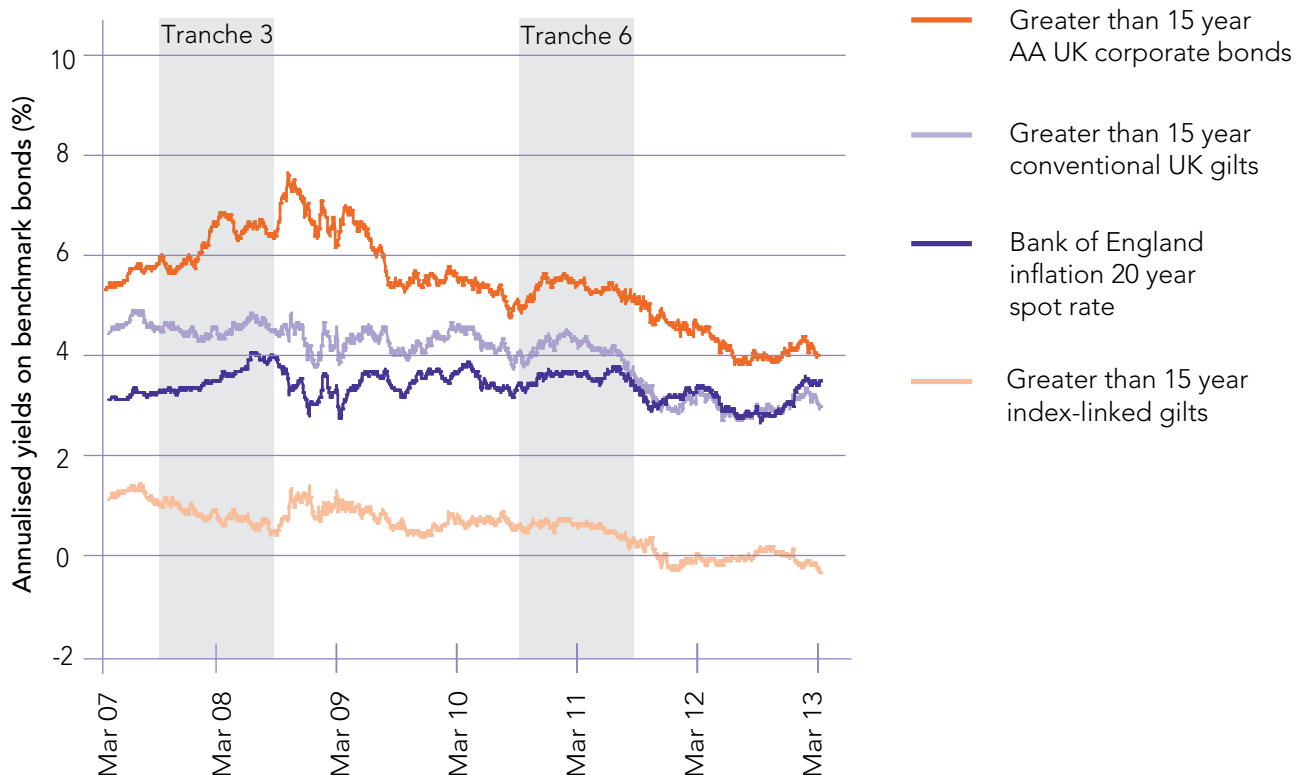


Figure 2: Market indicators: bond yields and inflation

Source: Thomson Reuters

Both assets and liabilities are influenced by prevailing financial market conditions at the valuation date

Liabilities are sensitive to changes in the assumed discount rate, inflation, and mortality assumptions, among other factors.

Figure 3 compares the return on equity and fixed interest asset classes. It shows total returns (increases in value with income reinvested) for a range of asset class indices since 2007. The returns have been rebased to 100 at 31 March 2008 (the period of most frequent Tranche 3 valuation dates – see Figure 1¹).

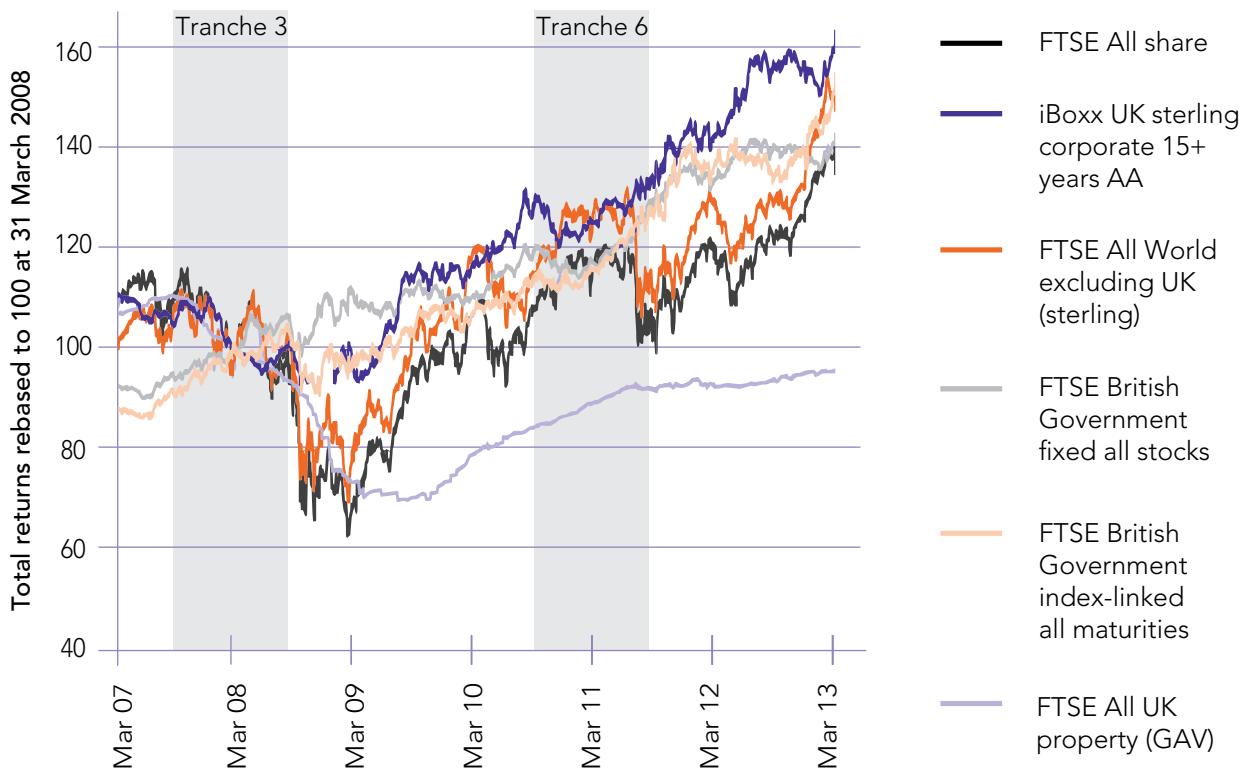


Figure 3: Market indicators: asset returns

Source: Thomson Reuters

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The distribution of Tranche 3 valuation dates very closely resembles that of Tranche 6.

Scheme demographics

As would be expected, Tranche 6 schemes (in deficit) exhibit a more mature profile than Tranche 3 schemes (as measured by the ratio of pensioner liabilities to total liabilities). A few other notable characteristics of Tranche 6 schemes in deficit (see Appendix, Table 1.2) are that:

- a quarter of schemes have a ratio of pensioner TPs to total TPs that exceeds 50%
- nearly 70% have fewer than 500 members
- around 80% have total TPs of less than £100m
- the proportion of schemes with more than 60% of their asset portfolio held in equities has fallen from 35% to 24% since Tranche 3; and
- around 91% have sponsors² attributed Dun & Bradstreet Trading Ltd (D&B) Failure Scores of 51 or higher (ie at least 50% of D&B assessed UK companies have a higher probability of failure over the subsequent 12 month period than companies in this group).

Scheme funding

In aggregate, schemes in Tranche 6 (including those in surplus) hold assets which are on average³ 88.3% of their TPs. Table 2.3⁴ shows that for schemes in deficit, the average ratio of assets to TPs is higher for Tranche 6 (83%) than it was for Tranche 3 (81%). The corresponding weighted⁵ averages are 87% and 84% respectively.

Figure 4 shows the distribution of Tranche 6 funding ratios relative to previous tranches. The observed average increase reflects the fact that the growth in assets outpaced the growth in liabilities over the period Tranche 3 to Tranche 6. For schemes with both Tranche 3 and Tranche 6 recovery plans, on average the market value of assets increased by 16% while TPs increased by 15%.

The Tranche 6 schemes with highest funding levels on a TPs basis tend to be schemes that typically have one or more of the following characteristics (see Appendix, Table 2.5):

- 5,000 or more members
- TPs of £100m or more
- are more mature; and
- sponsors attributed D&B Failure Scores of 86 and greater (ie 85% of D&B-assessed UK companies have a higher probability of failure over the subsequent 12 month period than companies in this group).

² D&B Failure Scores reflect that in respect of the principal employer. Data coverage is less than 100%.

³ Averages in this report are unweighted unless stated otherwise.

⁴ Tables referenced in this report can be found in the appendix.

⁵ Weighted values are weighted by technical provisions.

The average ratio of assets to s179 and buyout liabilities is 95% and 59% respectively (see Appendix, Table 2.3). The average ratio of TPs to s179 liabilities is 110% for Tranche 6. Among the schemes in surplus in Tranche 6 the average ratio of TPs to s179 liabilities is 104%, while the average ratio of assets to TPs is 109% (see Appendix, Table 2.7).

Figure 4 shows the distribution of the ratio of assets to TPs (for schemes in deficit only) by tranche.

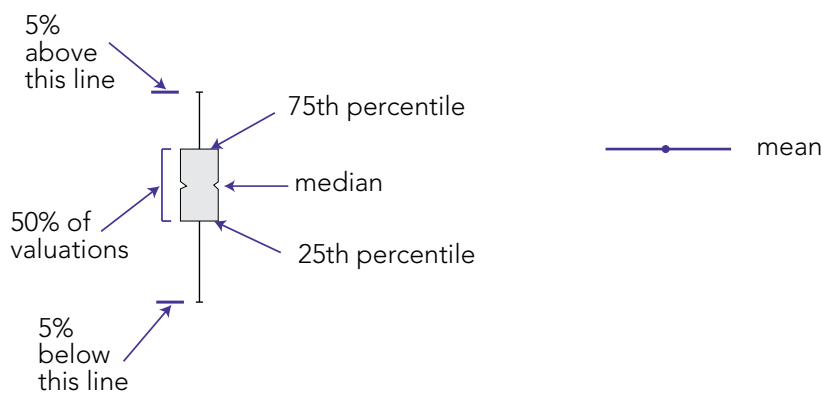
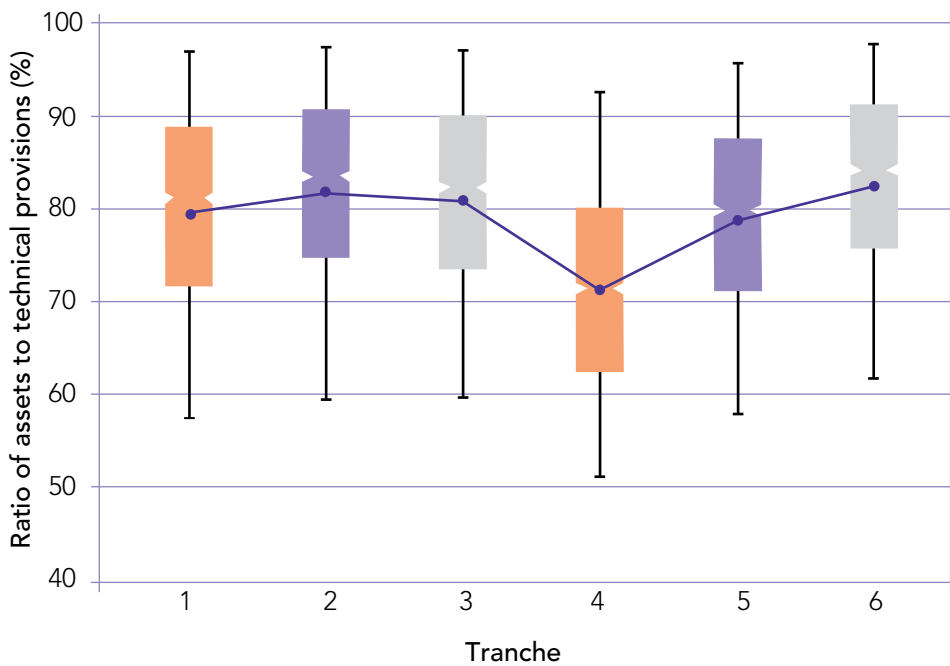


Figure 4: Ratio of assets to technical provisions (schemes in deficit only) by tranche

Source: The Pensions Regulator

Scheme security and contingent assets

In Tranche 6, 288 or 19% of schemes in deficit hold at least one contingent asset reported in respect of funding and/or in support of the Pension Protection Fund's (PPF) levy calculation, for which the latter requires PPF recognition. The number of Tranche 6 schemes in deficit holding at least one PPF-recognised contingent asset in respect of the 2012-13 PPF levy year is 157.

The majority of schemes holding contingent assets hold guarantees from sponsors and/or associated companies (214 out of a total of 288 schemes). Contingent assets are more common among schemes with sponsors attributed a D&B Failure Score of 86 or higher.

Contingent assets are assets on which a claim by the pension scheme would exist on the occurrence of one or more specified future events such as movements in corporate asset holdings, increased sponsor borrowing, sponsor failure, or the failure to achieve a specified funding level by a given date.

Contingent assets may, for example, take the form of security over property, escrow accounts or parental/group guarantees.

Unless such events occur, these assets are not available to the scheme to meet members' benefit payments. There are some cases in which a contingent asset that is reported in the recovery plan has not been formally recognised by the PPF in support of the scheme's PPF levy calculation.

Recovery plans

The average recovery plan length in Tranche 6 is 7.5 years compared to 8.4 years in Tranche 3 (see Appendix, Table 3.3). This implies that schemes have Tranche 6 recovery plans which end on average approximately two years later than their original Tranche 3 plans (see Figure 5).

On average, 50% of total deficit reduction contributions (DRCs) are expected to be paid within 3.4 years of the commencement of the recovery plan (see Appendix, Table 3.2). In terms of scheme characteristics and recovery plan length, points to note are:

- longer recovery plans are associated with larger schemes (by number of members) or sponsors attributed lower D&B Failure Scores
- shorter recovery plans are associated with schemes with fewer than 100 members, or lower scheme maturity (ie schemes with less than 25% of total TPs being in respect of pensioners (see Appendix, Table 3.3)).

Figure 5 shows the distribution of recovery plan length by tranche.

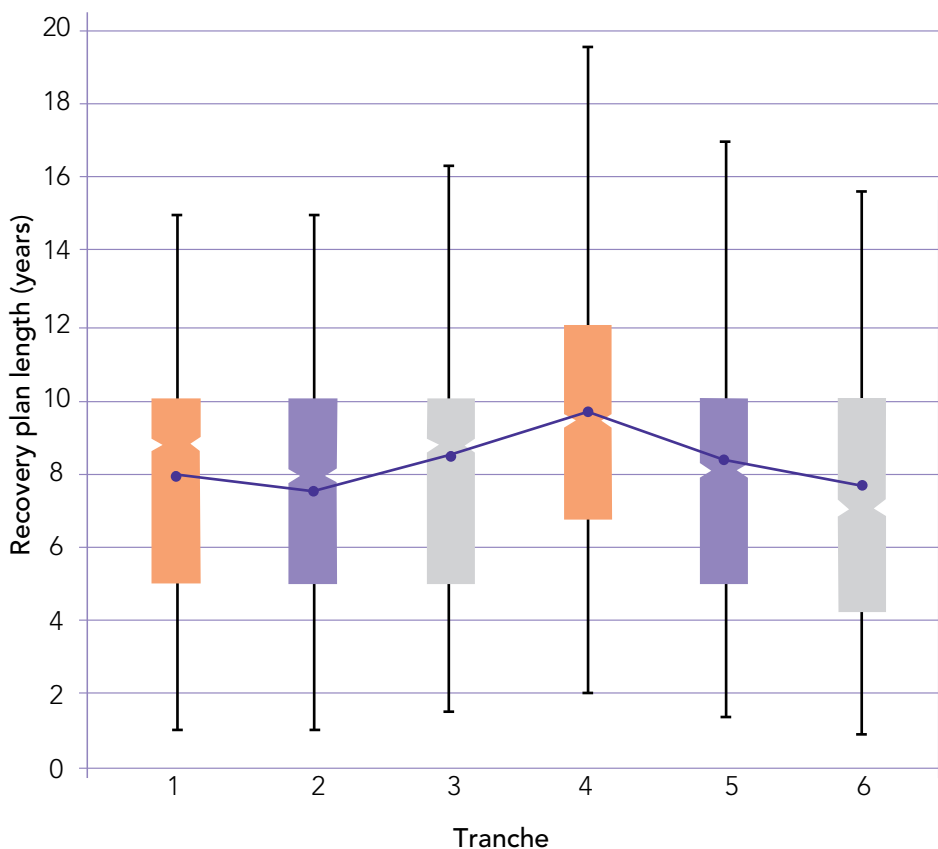


Figure 5:
Distribution of recovery plan length by tranche

See Figure 4, page 7 for key
Source: The Pensions Regulator

DRCs

For schemes in TP deficit, median annual DRCs⁶ (under the Schedule of Contributions (SoC) submitted with recovery plans) in Tranche 6 are 1.7% of liabilities⁷ for the top 10% (top decile) funded schemes measured on a consistent basis. This contrasts with a median value of 2.8% of liabilities for the bottom 10% (bottom decile) funded schemes (see Appendix, Table 3.4a).

Annual DRCs for schemes in TP deficit in Tranche 6 are on average 2.8% of liabilities for schemes with sponsors attributed D&B Failure Scores below 16 compared with 2.3% for schemes with sponsors attributed D&B Failure Scores of 86 or greater (see Appendix, Table 3.5). The corresponding average recovery plan length for these schemes are 10.3 and 7.3 years respectively (see Appendix, Table 3.3).

Figure 6 shows the range of average annual DRCs as a percentage of liabilities against funding levels for Tranche 6 schemes, while Figures 7, 8 and 9 show the distribution of DRCs as a percentage of liabilities, by funding level decile in respect of the second cycle tranches.

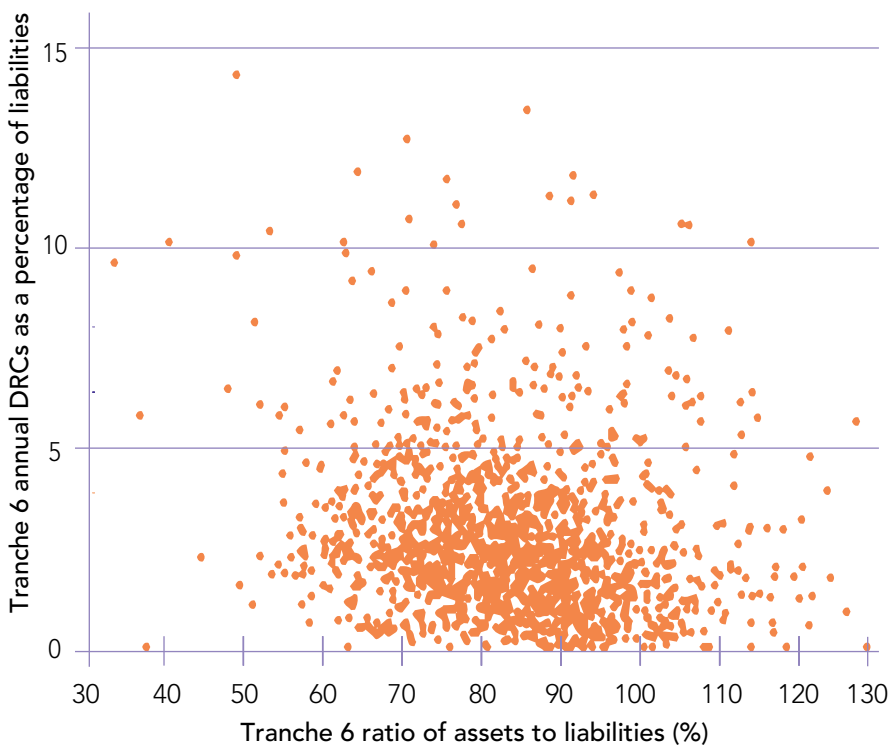


Figure 6: Tranche 6 distribution of average annual DRCs as a percentage of liabilities against funding level

Source: The Pensions Regulator

⁶ Annual DRCs are taken to be the average of the first four years of DRCs under the recovery plan.

⁷ Liabilities for all schemes are calculated using the Tranche 6 median real single effective discount rate.

DRCs are contributions made by sponsors to the scheme in order to address any asset to technical provisions deficit, in line with the SoC and recovery plan.

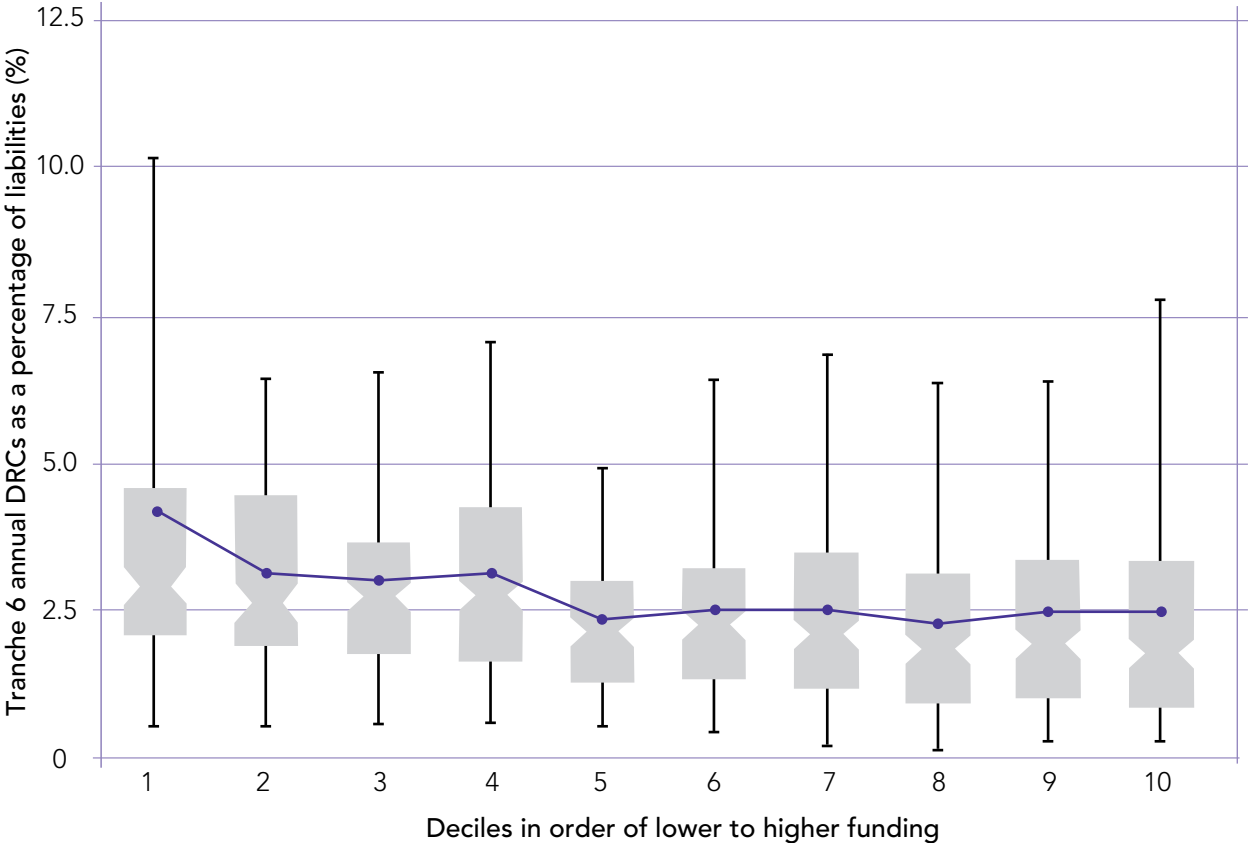


Figure 7: Tranche 6 distribution of annual DRCs as a percentage of liabilities by funding decile⁸

See Figure 4, page 7 for key
 Source: The Pensions Regulator

⁸ Liabilities for all schemes are calculated using the Tranche 6 median real single effective discount rate.

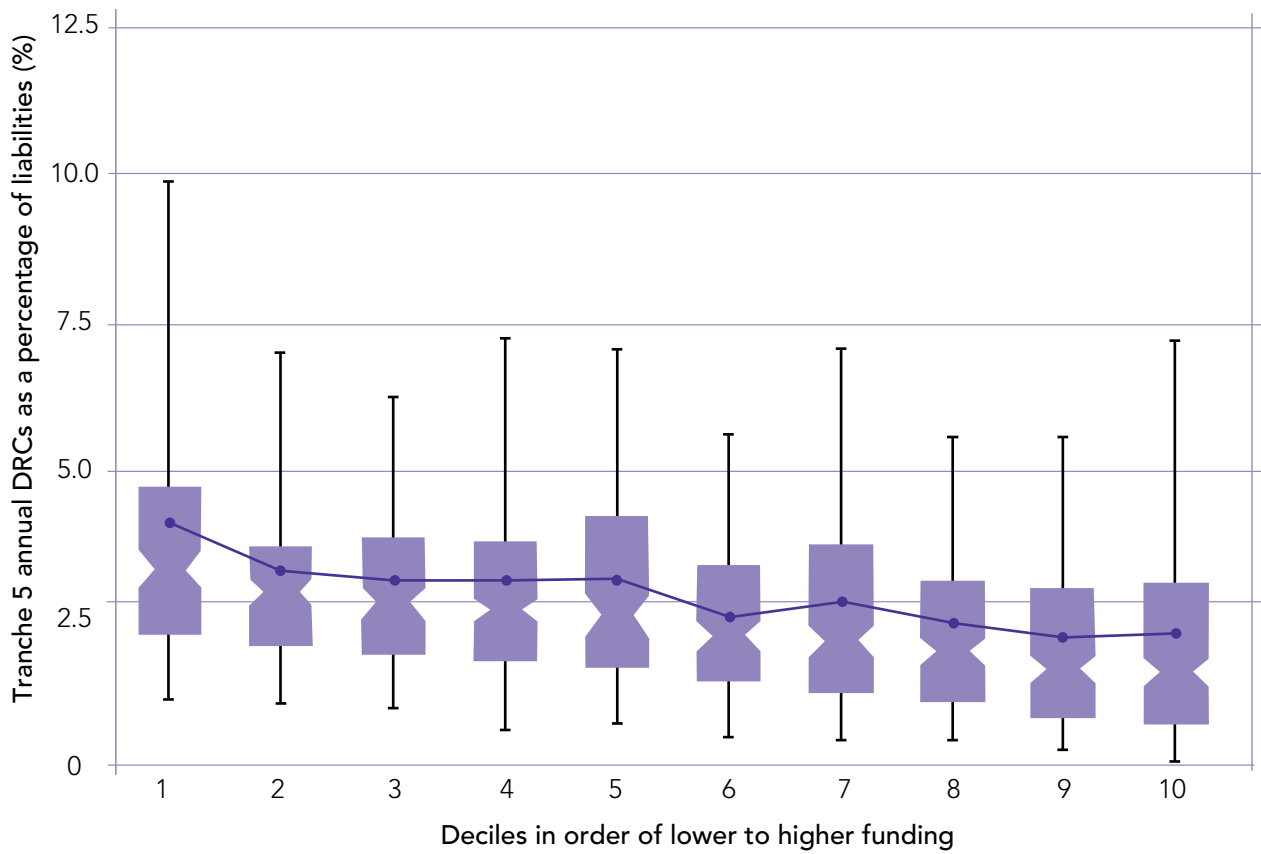


Figure 8: Tranche 5 distribution of annual DRCs as a percentage of liabilities by funding decile⁹

See Figure 4, page 7 for key

Source: The Pensions Regulator

⁹ Liabilities for all schemes are calculated using the Tranche 5 median real single effective discount rate.

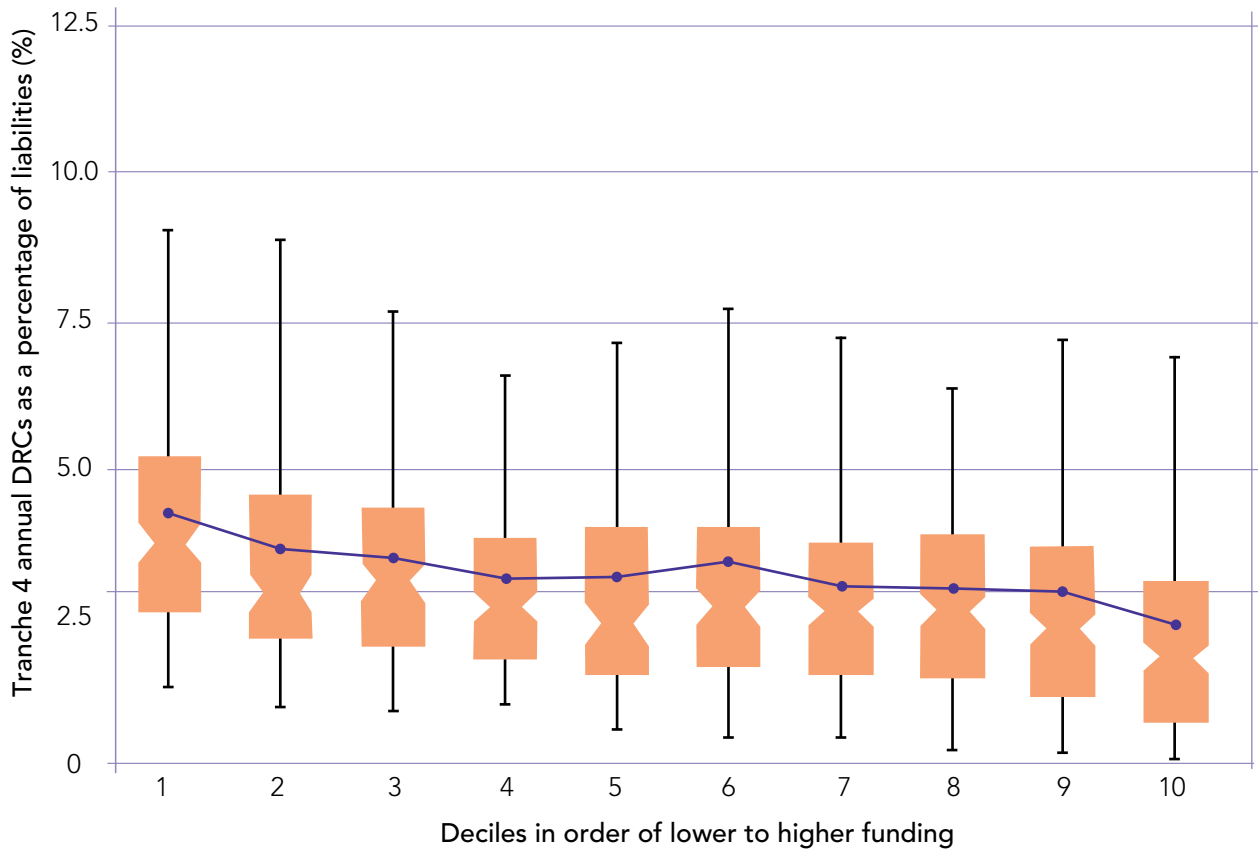


Figure 9: Tranche 4 distribution of annual DRCs as a percentage of liabilities by funding decile¹⁰

See Figure 4, page 7 for key
 Source: The Pensions Regulator

¹⁰ Liabilities for all schemes are calculated using the Tranche 4 median real single effective discount rate.

Discount rates

Figure 10 compares movements in the median nominal single effective discount rate (SEDR) over the past two funding cycles, with: movements in the conventional 20-year UK gilt yield; and, the yield on greater than 15 year AA-rated UK corporate bonds, for comparison. In terms of the distribution of the nominal SEDR and outperformance over conventional 20-year UK gilts for Tranche 6:

- the average nominal SEDR is 5.26%, compared with 5.69% in Tranche 3
- 50% of schemes have a nominal SEDR between 4.98 and 5.59
- the average outperformance over conventional 20-year UK gilts is 1.02%
- 50% of schemes include an implicit outperformance over conventional 20-year UK gilts that ranges from 0.74% to 1.32%; and
- the average spread over greater than 15-year AA-rated UK corporate bonds is -0.19%. (see Appendix, Tables 4.1 to 4.10).

Given their relative immaturity, on average, schemes remaining open to new members have the highest average nominal SEDR and outperformance assumption (see Appendix, Tables 4.3 and 4.4). In terms of the distribution of the real SEDR and outperformance over greater than five-year index-linked UK gilts for Tranche 6, points to note are that:

- the average real SEDR for Tranche 6 is 1.72%, compared to 2.15% in Tranche 3
- 50% of schemes have a real SEDR between 1.42% and 2.04% (see Figure 11)
- the average outperformance over greater than five-year index-linked UK gilts is 1.13%; and
- 50% of schemes have an outperformance assumption of between 0.82% and 1.44% over greater than five-year index-linked UK gilts (see Appendix, Tables 4.1 to 4.10).

Schemes with sponsors attributed D&B Failure Scores of 86 and greater have the highest average real SEDR relative to other schemes, while the average outperformance of the real SEDR over greater than five-year index-linked UK gilts is lowest among schemes with sponsors attributed D&B Failure Scores of 16 and below (see Appendix, Tables 4.5 and 4.6).

Figure 10 shows the monthly median nominal SEDR, annualised conventional 20-year UK gilt yields, and annualised greater than 15 year AA-rated UK corporate bond yields over the period September 2005 to July 2011. Figure 11 shows the distribution of the real SEDR by tranche.

Trustees choose discount rates on the advice of the scheme actuary and (for most schemes) agree them with sponsors. Two approaches are used by pension schemes in respect of the discount rate assumption: a 'single rates approach' and '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, the regulator has constructed an SEDR; a composite rate based on the single rate or, where a different rates approach has been adopted, constructed from both the pre-retirement and post-retirement rates (further details of which can be found in the Methodology section, p4 of the Appendix).

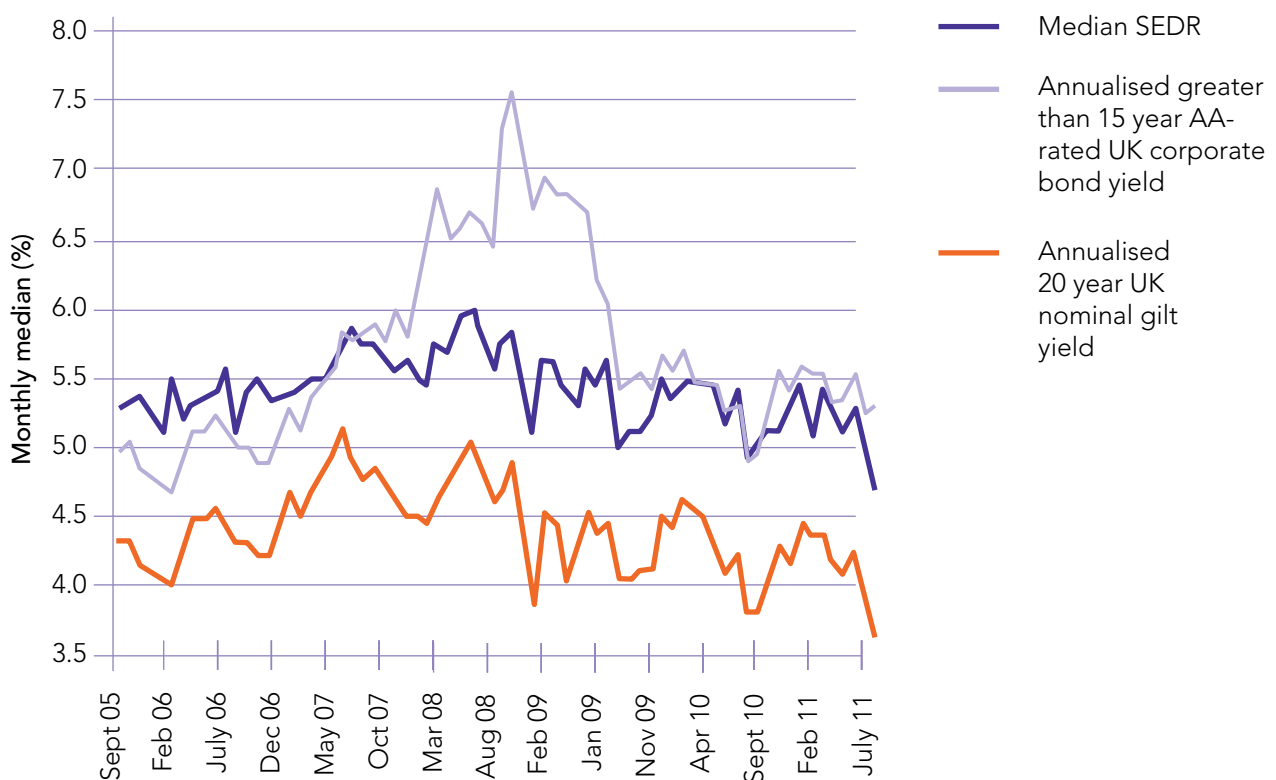


Figure 10: Monthly median nominal SEDR, 20-year UK gilt yields, and greater than 15-year AA-rated UK corporate bond yields

Source: The Pensions Regulator, Thomson Reuters, FTSE Group

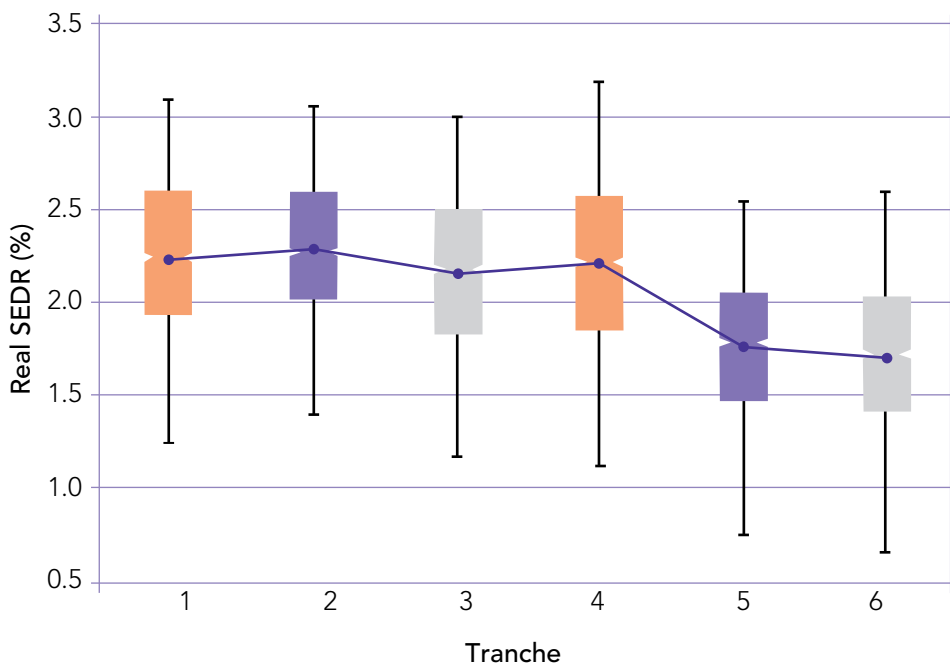


Figure 11: Distribution of the real SEDR by tranche

See Figure 4, page 7 for key

Source: The Pensions Regulator

Mortality

Figures 12 and 13 illustrate the overall impact on life expectancy of the various combinations of mortality assumptions adopted over Tranches 1-6.

Changes in mortality assumptions from Tranche 3 to Tranche 6 translate into an increase of 0.7 years in the average assumed life expectancy for current male pensioners aged 65 (see Appendix, Table 5.11). The corresponding difference in average assumed life expectancy for future male pensioners aged 45 is 1.1 years (see Appendix, Table 5.11).

In respect of Tranche 3 schemes in deficit:

- 53% adopted '00' series base table(s)
- 63% adopted the medium cohort projection; and
- 62% allowed for an underpin to future improvements (see Appendix, Tables 5.1 to 5.4).

By contrast:

- nearly four fifths (78%) of Tranche 6 schemes in deficit use 'S1' base mortality table(s)
- 78% use Continuous Mortality Investigation (CMI) projections; and
- 96% use an underpin or long-term rate of improvement (see Appendix, Tables 5.1 to 5.4).

Average assumed life expectancies are marginally higher in Tranche 6 compared with Tranche 5 (see Appendix, Table 5.11). This may be as a result of a greater adoption of CMI projections in conjunction with the use of larger long-term rates of improvement by Tranche 6 schemes compared to Tranche 5 (see Appendix, Table 5.4 and 5.5b). In general however, the increases in assumed life expectancies, for both current and future male pensioners, are small between Tranches 4, 5 and 6 (second cycle tranches) as compared to the increases observed between earlier first cycle tranches.

Larger differences in the life expectancies between first and second cycles might be generally explained by the increased use and size of underpins or long-term rates of improvement by second cycle tranches compared to first cycle tranches (see Appendix, Table 5.4).

The impact of the size of underpin or long-term rate of improvement adopted is particularly evident in the difference between assumed life expectancies for current and future pensioners. By way of example, the average assumed life expectancy for future male pensioners aged 45, and current male pensioners aged 65 is 1.4 years for Tranche 6 schemes using a long-term rate of improvement of 1% or less, compared to 2.7 years for schemes using a long-term rate of improvement of 1.5% (rates of improvement will have been used in conjunction with other factors – see Appendix, Table 5.12).

Figure 12 shows the distribution of life expectancies for current male pensioners aged 65 by tranche, while Figure 13 shows the distribution of life expectancies for future male pensioners aged 45, by tranche.

The sensitivity of technical provisions to changes in mortality is such that an additional year of life assumed adds approximately 3% to a scheme's liabilities.

There are two components to the mortality assumption:

- base mortality tables reflecting current and recent experience; and
- assumed rates of future improvement.

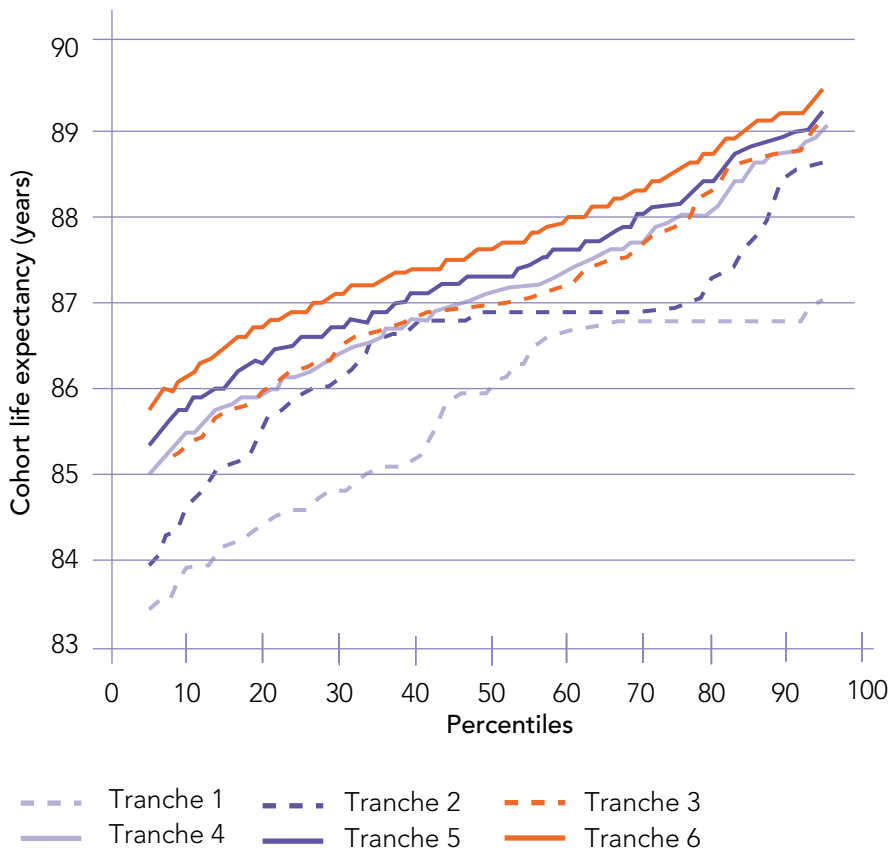


Figure 12: Distribution of assumed life expectancy for current male pensioners aged 65, by tranche

Source: The Pensions Regulator

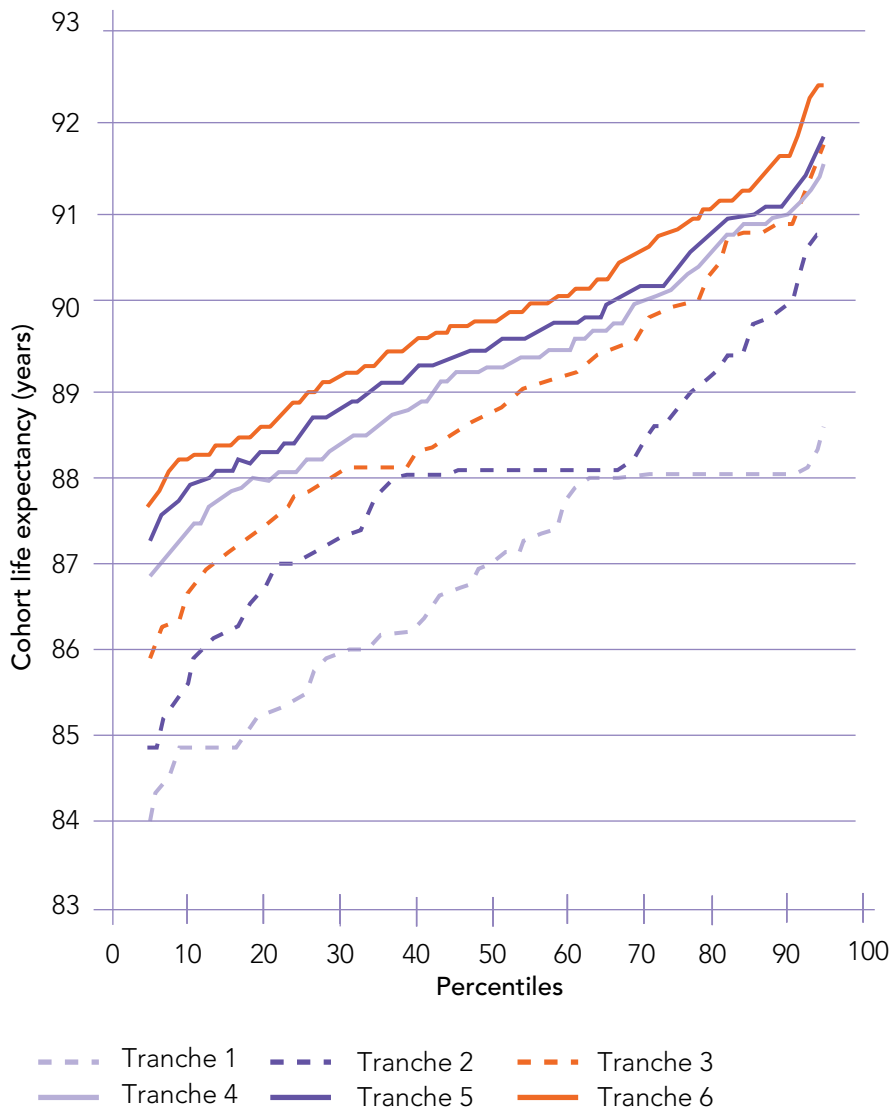


Figure 13: Distribution of assumed life expectancy for future male pensioners aged 45, by tranche

Source: The Pensions Regulator

In addition to staff at The Pensions Regulator who were involved in the production of these statistics; and staff at the regulator, the Department for Work and Pensions (DWP) and the PPF involved in quality assurance; the following is a list of job titles and organisations of people who have been granted 24 hours pre-release access.

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- Minister for Pensions, Private Office, Press Officer Lead Analyst, Statistician, Policy Lead DWP
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