MERCER

THE PENSIONS TRUST

SCOTTISH HOUSING ASSOCIATIONS' PENSION SCHEME

FRS 102 ASSUMPTION SETTING METHODOLOGY

MONTH ENDS FROM
31 MARCH 2022
TO
28 FEBRUARY 2023

welcome to brighter

Contents

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Purpose and Background

Purpose and scope

We have prepared this report for TPT Retirement Solutions Limited ("the Client").

This report has been commissioned by the Client. The sole purpose of this report is to provide the Client with a recommended approach to deriving key assumptions when preparing accounting disclosures under Section 28 of FRS 102 for employers participating in the Scottish Housing Associations' Pension Scheme ("SHAPS").

This report sets out a proposed approach for setting the assumptions for month ends between 31 March 2022 and 28 February 2023 ("2022/23 month ends").

The views expressed in this report are based on our latest opinions and experience of the wider practice of setting FRS 102 assumptions. This report does not contain any recommendations made specifically for any particular participating employer(s). As such, we have not taken into account any employer-specific information that we may otherwise have considered if recommending an approach to deriving assumptions on an individual employer basis. The contents of this report should not be taken as advice to individual employers as to what assumptions they should ultimately adopt, rather as generic (non-employer specific) recommendations to the Client as to what approach should be taken for setting "default" assumptions. Our understanding is that the Client's online accounting tool gives individual employers flexibility to adjust assumptions where they wish to do so.

Decisions required

In accordance with FRS 102, each employer will need to decide on the assumptions to be used for the preparation of their year-end disclosures, and ensure that their auditor is comfortable with the approach adopted. If you would like to discuss anything included in this report further then please let us know.

Impact of decisions

The assumptions at the year-end will affect the year-end balance sheet position and the following year's P&L cost. The decisions made do not typically affect the current year's P&L cost. Auditors are likely to focus on whether any approach at the year-end is a disclosable change in accounting principles.

Accounting standards

The accounting standards set out the underlying principles for the actuarial assumptions (e.g. assumptions should be based on a 'best estimate' of future experience), and clear direction on the basis for the discount rate. The assumptions also need to reflect market conditions as at the reporting date.

Reasonable range for assumptions

For each of the assumptions discussed in this paper, there is a range of acceptable decisions an employer could make, supported by different methods and approaches. Different assumptions within this reasonable range can have a material impact on the year-end position. The approach chosen may depend on an employer's objectives and where it wishes to position itself relative to other companies. This approach may also differ depending upon the characteristics of each employer's benefit obligations and the materiality of the disclosures to the overall accounts. We would be happy to discuss alternative assumptions and the rationale supporting them if the Client would like to explore such options, or provide advice to individual employers if required.

Relevance of funding assumptions

The selection of the assumptions to be used for accounting purposes is largely independent of the assumptions used for funding purposes. However, many of the same principles and data will be applicable to both the funding and accounting valuations, particularly in relation to the demographic assumptions.

Impact of climate change

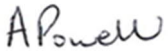
In line with the thematic review carried out by the FRC (Financial Reporting Council), employers may wish to consider the risk and impact of climate change in relation to their pension disclosures.

In terms of assumption setting, as the economic assumptions are set on a market related basis consistent with the principles of the accounting standards, they allow implicitly for climate change to the extent that the market allows for it.

The impact of climate change on demographic assumptions would primarily be expected to impact the mortality assumptions - particularly future mortality improvements. What that impact would be is sufficiently uncertain not to materially change our current view on long term mortality improvements, and overall we do not consider climate change to be any more material then many of the other uncertainties linked to future mortality expectations. This should be kept under review, along with other factors that affect longevity risk.

Significant events

This report does not consider any adjustments or alternative assumptions that may be required following a special event (e.g. a settlement or curtailment).



Antony Powell FIA

Mercer Limited

20 April 2022

Important Notes

Compliance with technical actuarial standards

This paper, and the work done in its preparation, is covered by and compliant with Technical Actuarial Standard 100 (TAS 100) which is issued by the Financial Reporting Council.

Confidentiality, scope and third parties

This paper is provided under the terms of the Project Agreement between the Client and Mercer dated 21 January 2022.

Mercer is providing this advice in its capacity as an adviser to the Client, not as an adviser to individual employers. The Client is ultimately responsible for the assumptions it uses when producing accounting disclosures and individual employers are ultimately responsible for selecting the accounting policies, methods and assumptions they wish to apply. Individual employers are responsible for obtaining formal confirmation from their auditors that their accounting policies are compliant with all necessary accounting standards.

The advice in this report has been supplied by Mercer on the following basis:

Unless otherwise stated, we have relied on the information and data TPT Retirement Solutions Limited have supplied to us in preparing the report and information from other third party sources, without independent verification. Save for where such third party is connected to, associated with or an affiliate of Mercer, we will not be responsible for any inaccuracy in the advice that is a direct result of any incorrect information provided to us. As such, Mercer (i) makes no representations or warranties as to the accuracy of the information presented by you or any third party and ii) takes no responsibility or liability (including for indirect, consequential or incidental damages), for any error, omission or

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This report contains confidential and proprietary information of Mercer and is intended for the use of the parties to whom it was provided by Mercer. Its content may not be modified, sold or otherwise provided, in whole or in part, to any other person or entity, without Mercer's prior written permission.

Unless agreed otherwise, no additional work will be performed after the date of this report nor will it be updated to take account of any events or circumstances arising hereafter.

Unless agreed otherwise in writing or as set out earlier, we do not accept any liability or responsibility to any third party in respect of this report.

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Summary of proposed assumptions

The following tables set out the proposed assumptions to use for the 2022/23 month ends, alongside the approach adopted for month ends between 31 March 2021 and 28 February 2022 ("2021/22 month ends") for comparison.

The benefit obligations for different participating employers in SHAPS will have different durations, and the financial assumptions used for each employer should appropriately reflect this.

Derivation of principal financial assumptions

	2021/22 approach	Proposed 2022/23 approach	
Discount rate:	Single equivalent discount rate derived using the UK Mercer Yield Curve for AA corporate bond yields and sample cashflows with appropriate duration.	Single equivalent discount rate derived using the UK Mercer Yield Curve for AA corporate bond yields and sample cashflows with appropriate duration.	No change in derivation.
Retail Price Inflation (RPI):	Single equivalent rate derived using UK Mercer implied inflation curve less an inflation risk premium of 0.2% p.a.	Single equivalent rate derived using UK Mercer implied inflation curve less an inflation risk premium of 0.3% p.a.	Increase in the inflation risk premium adjustment from 0.2% p.a. to 0.3% p.a.
Consumer Price Inflation (CPI):	Derived from the RPI assumption above, less a single equivalent "gap" for the expected average difference between RPI and CPI over the long term, derived assuming an RPI/CPI gap of 1.0% p.a. before 2030 and 0% p.a. from 2030.	Derived from the RPI assumption above, less a single equivalent "gap" for the expected average difference between RPI and CPI over the long term, derived assuming an RPI/CPI gap of 1.0% p.a. before 2030 and 0% p.a. from 2030.	No change in derivation.
Earnings growth:	CPI plus 1.0% p.a.	CPI plus 1.0% p.a.	No change in derivation.

Derivation of principal demographic assumptions

	2021/22 approach	Proposed 2022/23 approach	
Mortality: Base table	Pre-retirement: No allowance Post-retirement: 104% of S2PxA	As per the 2021/22 approach but updating for more recent analysis if available at 31 March 2022	Prior year assumption was based on scheme-specific Club Vita analysis. We propose no change, other than to allow for more recent analysis if available.
Future improvements	CMI_2020 [S=7.5; 1.25%] for males CMI_2020 [S=7.5; 1.25%] for females	CMI_2021 [S=7.0; A = 0.25%, 1.25%] for males CMI_2021 [S=7.0; A = 0.5%, 1.25%] for females	Allow for latest CMI model, update for the widespread use of the default smoothing parameter and initial data parameters to reflect scheme specific analysis.
Commutation	75% of members take the maximum cash at retirement.	75% of members take the maximum cash at retirement or updating if more recent analysis is available.	Prior year assumption was based on scheme-specific analysis. We propose no change, other than to allow for more recent analysis if available.
Other demographic assumptions	As per the most recent Technical Provisions assumptions.	As per the most recent Technical Provisions assumptions.	No change.

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Discount Rate

Deriving a discount rate

The discount rate is the rate of interest used to discount retirement benefit obligations. The accounting standard requires the discount rate to be determined by the yields on high quality corporate bonds at the measurement date. For this purpose, a high quality corporate bond is taken as a bond that has been rated at the level of AA or equivalent status. The currency and term of the corporate bonds should be consistent with the currency and estimated term of retirement benefit liabilities.

Since payments are made over many years into the future, in theory AA corporate bond spot rates are needed for all terms at which payments may be due. The assumed discount rate is then the single discount rate equivalent to discounting these liability payments, or cashflows, at the term-dependent spot rates. In practice, more pragmatic methods are often used.

Judgement is required when deriving the yield curve or discount rate, mainly in respect to the bond universe selected, the approach to fitting the yield curve and the approach to extrapolating the yield curve at long durations once there ceases to be a deep market in corporate bonds.

In the UK, the most common extrapolation approach looks at government bonds (gilts). Where gilts and corporate bonds have similar payment terms, there is strong evidence that their yields are correlated. The UK Mercer Yield Curve uses gilt curve extrapolation, but alternative extrapolation approaches are possible. Please let us know if you would like to discuss alternative approaches.

Recommendation

We propose using single discount rates which, when used to discount the projected benefit cashflows underlying a pension scheme with durations relevant to each employer, would give broadly the same result as using a full AA corporate bond yield curve to discount the same cashflows. This approach will therefore result in different single discount rates being derived for different employers, dependent on the duration of the relevant benefit obligations.

The yield curve used to derive the discount rates for 2021/22 month ends was based on the Mercer Yield Curve model, which includes information from all corporate bonds with an AA rating that met our criteria for inclusion. We believe this remains suitable for use for the 2022/23 month ends. Further details of the bond universe used and the construction of the Mercer Yield Curve can be provided if required.

The following table provides single equivalent discount rates by duration, derived using the recommended approach at various dates:

Duration	2021/22 approach	Proposed 2022/23 approach	
	As at 31.3.21	As at 30.9.21	As at 31.3.22
6 years	1.45% p.a.	1.51% p.a.	2.65% p.a.
10 years	1.86% p.a.	1.84% p.a.	2.74% p.a.
14 years	2.04% p.a.	1.96% p.a.	2.78% p.a.
18 years	2.14% p.a.	2.02% p.a.	2.79% p.a.
22 years	2.19% p.a.	2.04% p.a.	2.79% p.a.
26 years	2.22% p.a.	2.04% p.a.	2.77% p.a.
30 years	2.22% p.a.	2.02% p.a.	2.76% p.a.

Market indicator

Although we are not proposing to use the iBoxx £AA Corporates (over 15 years) index, it is a good indicator of how corporate bond yields have changed over the last 12 months (as shown in the graph below for the 12 months to 31 March 2022).

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Price Inflation

Deriving an inflation assumption

The headline assumption for price inflation is important as it is used to set a number of other inflation-linked assumptions. Examples include assumptions for inflation-linked pension increases in payment and pension increases in deferment for early leavers. It is also typically used as the basis for setting the assumption for earnings increases.

Retail Prices Index (RPI) Inflation

The RPI inflation rate has historically been based on the gilt implied inflation yield curve, reflecting the duration of a pension scheme's cashflows, in a consistent way to the discount rate. The gilt implied inflation yield curve is derived based on the market implied yields available from fixed-interest and index-linked Government bonds ('gilts') and represents the rate of RPI in the future that would give investors the same total return from these stocks. This 'market implied' rate is the starting point for the future RPI assumption.

This approach results in a risk that the 'market implied' rate is different from actual expectations for future inflation. In particular, the market implied rate may be overstated because some investors are prepared to pay a premium to hedge their inflation risk, and due to the excess demand and short supply of inflation protection in the gilt market, artificially increasing the market's perceived expectation of future inflation. The difference between market implied inflation expectations and actual (expected) inflation is known as an inflation risk premium.

Following a consultation process, the UK Government announced in November 2020 that the calculation of the RPI would be amended to match the Consumer Price Index including Housing (CPIH) from 2030.

CPIH is essentially the same as CPI but with an allowance for owner occupied housing. In the past, on average over the long term, CPIH has been almost the same as CPI inflation, and is expected to be materially lower than RPI.

Mercer view

We believe that RPI reform was largely priced in to the gilt-implied inflation curve at the time that the outcome of the Government consultation was announced in November 2020, which is supported by the very limited gilt market reaction to the consultation outcome.

However, there remains uncertainty over the extent to which supply/demand imbalances are distorting the longer end of the gilt implied inflation curve and therefore may require an adjustment to determine a best estimate of RPI.

Inflation risk premium

There is no objective method of determining the correct level of the future inflation risk premium adjustment (if indeed there is any), particularly when gilt yields are distorted. Before consideration of the RPI reform proposals, adjustments of up to 0.3% p.a. to the rate of future RPI implied by the gilt market are supported by academic research and research published by the Bank of England, and so may be considered reasonable. In theory, an inflation risk premium adjustment should vary by term and there is generally likely to be more inflation uncertainty at longer durations.

At the end of 2020, commentary from the UK Debt Management Office and LDI investment managers suggested that the supply/demand imbalance of inflation protection at terms after 2030 may be causing a greater inflation risk premium at longer durations than historic norms. In our view, this has persisted in 2021/22 along with greater fear of inflation risk arguably contributing to more demand for inflation hedging protection and causing a greater inflation risk premium. The following new evidence can be considered:

- The Bank of England's February 2022 Monetary Policy Report notes that market-implied RPI has risen above its medium term average in the UK, in contrast to the US and euro area where measures are similar to past averages. The report notes that the use of UK inflation markets for hedging large pension liabilities can at times cause these to move even in the absence of changes in inflation expectations, although market intelligence suggests recent moves in part reflect higher central expectations for inflation. The Monetary Policy Committee concludes that UK inflation expectations remain well anchored, suggesting that higher market implied RPI may be influenced by a higher inflation risk premium.

- The Government Actuary's Department commented in a report in September 2021 that an inflation risk premium of 0.25% to 0.5% pa would seem reasonable given the uncertainty of the impact of the announcement of the changes to RPI and the uncertainty over future price inflation as we emerge from the COVID-19 pandemic.

Recommendation

For 2021/22 month ends, we recommended using an inflation risk premium adjustment of 0.2% p.a. Given the significant increase in gilt market-implied RPI price inflation over the past year and the evidence above suggesting a higher level of demand for inflation protection in the UK may be contributing to a higher inflation risk premium, we recommend increasing the inflation risk premium adjustment from 0.2% p.a. to 0.3% p.a. for 2022/23 month ends.

As with the discount rate, setting RPI inflation assumptions based on the duration on the relevant benefit obligations will result in different RPI assumptions being derived for different employers.

The following table provides sample single equivalent RPI inflation rates by duration, allowing for the proposed change in inflation risk premium between 2021/22 and 2022/23 month ends:

Duration	2021/22 approach	Proposed 2022/23 approach	
	As at 31.3.21	As at 30.9.21	As at 31.3.22
6 years	3.39% p.a.	3.67% p.a.	4.41% p.a.
10 years	3.40% p.a.	3.54% p.a.	4.00% p.a.
14 years	3.35% p.a.	3.44% p.a.	3.77% p.a.
18 years	3.30% p.a.	3.36% p.a.	3.62% p.a.
22 years	3.26% p.a.	3.30% p.a.	3.51% p.a.
26 years	3.21% p.a.	3.24% p.a.	3.42% p.a.
30 years	3.17% p.a.	3.20% p.a.	3.35% p.a.

Consumer Prices Index (CPI) Inflation

The RPI/CPI gap

Historically, there has been no reliable indicator for market expectations of CPI inflation. Hence, the assumption for CPI has commonly been derived by making an adjustment for the expected long term gap between RPI and CPI. This has generally been viewed as more credible than fixing the assumption based on the Bank of England CPI inflation target. This may change going forward, especially from 2030, when RPI is moved to CPIH.

Historically the rate of change in RPI has been higher than CPI, on average. The difference results from the fact that the two indices are calculated in a slightly different way (the 'formula effect') and that the constituents of the indices are not the same.

Evidence as to the size of the gap (before any allowance for the RPI reform) includes:

- Analysis published by the UK's Office for National Statistics suggests that over the long term the 'formula effect' is the most significant cause of differences, and that the 'formula effect' is around 0.9% per annum.
- The Office for Budget Responsibility's (OBR) Economic and Fiscal Outlook reports have historically cited an estimated long run RPI/CPI gap of 1.0% p.a., although this reduced to 0.9% p.a. in December 2019. The March 2022 version of this report forecasts a 1.2% p.a. RPI/CPI gap over the next 5 years.

- The Bank of England has noted 'discussions with market participants suggest that the long-run wedge priced into inflation breakevens is around 0.9% to 1% on average'.

- The Government Actuary's Department suggest in a September 2021 report a gap between RPI and CPI of 1% p.a. before 2030

- Recent accounting assumption survey data suggests that the most common assumed gap between RPI and CPI has been 1% p.a., before allowance for RPI reform.

From 2030, when RPI will be aligned with CPIH, the CPI assumption can be derived by considering the long term gap between CPIH and CPI. The main difference between CPIH and CPI is the allowance made in CPIH for owner occupied housing, along with some differences in the weights given to different categories of goods within the inflation indices. Over long periods of time and economic cycles, this difference is expected to be at or close to zero.

Judicial review proceedings were instigated in April 2021 by trustees of some large UK pension plans to review the process by which the UK Government decided to align the RPI calculation with CPIH from 2030. The gilt and swap market do not appear to be giving much weight to the likelihood of this process being declared unlawful and RPI reform being abandoned or materially amended. Nonetheless, the residual uncertainty over RPI reform could be used to support a small gap between RPI and CPI post-2030.

Recommendation

We recommend single average RPI/CPI gaps based on a 1.0% p.a. assumed gap before 2030 and a 0% p.a. gap thereafter, suitably weighted to reflect each employer's exposure to CPI liabilities. We would expect this average assumption to reduce over time towards 0% at 2030 as less weight is given to the RPI/CPI gap before 2030

The following table provides single equivalent CPI inflation rates at various dates, derived by duration.

Duration	2021/22 approach	Proposed 2022/23 approach	
	As at 31.3.21	As at 30.9.21	As at 31.3.22
6 years	2.53% p.a.	2.83% p.a.	3.59% p.a.
10 years	2.74% p.a.	2.91% p.a.	3.39% p.a.
14 years	2.82% p.a.	2.94% p.a.	3.28% p.a.
18 years	2.85% p.a.	2.93% p.a.	3.21% p.a.
22 years	2.87% p.a.	2.94% p.a.	3.16% p.a.
26 years	2.87% p.a.	2.92% p.a.	3.12% p.a.

30 years	2.88% p.a.	2.92% p.a.	3.09% p.a.

As stated above, we recommend that CPI inflation rates are calculated using a single equivalent RPI/CPI gap derived by applying a suitable weighting to pre and post 2030 gaps to reflect each employer's exposure to CPI liabilities. Whilst the example rates above are based on weighting the recommended pre and post 2030 RPI/CPI gaps by duration, the appropriateness of this approach may vary for each employer. We would be happy to discuss this point further if required. The Client's online accounting tool will allow employers to vary this assumption, where necessary, to best suit their particular exposure to CPI inflation.

Market indicator

The following graph is a 12-month plot of the RPI inflation rate implied by the market up to 31 March 2022. The rates shown are 15-year projections published by the Bank of England (i.e. the market's expected average rate of RPI inflation that will be experienced over the next 15 years).

5
Earnings Growth

Deriving a real earnings growth assumption

The earnings growth assumption is generally set by reference to price inflation as, over the long term, there is evidence that general pay growth keeps up with increases in the cost of living. It is therefore common to set an assumption for earnings increases relative to the price inflation assumption (this is known as “real earnings growth”). Real earnings growth could be considered by reference to RPI or CPI inflation.

Real earnings growth is expected to be positive over the long term as it must take into account not only inflationary increases, but also promotional increases.

The Government Actuary’s Department noted in a September 2021 report that its best estimate of future national average earnings growth is CPI inflation plus 1% p.a. to 1.25% p.a.

Significant variation is possible in earnings growth depending on industry sector specific factors and the extent of promotional increases.

Recommendation

We propose that the “default” earnings growth assumption is set at 1.0% p.a. above CPI inflation. This is a central assumption that aims to broadly reflect long-term earnings growth expectations for SHAPS as a whole. The Client’s online accounting tool will allow employers to vary this assumption to best suit the particular profile of their own workforce.

This methodology is consistent with that adopted in previous years.

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Pension Increases

Inflation-related pension indexation

Deriving deferred revaluation assumptions

Assumptions are required for pension indexation before retirement that are based on RPI or CPI inflation, subject to a minimum or maximum level of annual increase measured over the whole period of deferment. Where the increase is linked to inflation, an assumption is set by taking the relevant inflation assumption and applying the caps and collars directly to this.

We recommend that the assumption for revaluation of deferred pensions is set equal to the relevant inflation assumption, subject to the maximum annual cap. This is consistent with prior years.

Deriving pension increase assumptions

Assumptions are required for pension indexation after retirement that are based on inflation and are subject to minimum and maximum amounts. Generally, for pension increases in payment the level of inflation is compared to the cap and / or collar in each individual year. To allow for this the assumption is typically set by considering the likelihood of inflation being above the cap or below the collar in future years, and applying an adjustment to the relevant inflation assumption to reflect this.

We propose allowing for the impact of caps and floors using a Black Scholes model with assumed annual volatility of 1.75% p.a.

CARE revaluation assumptions will be derived using a similar approach to that adopted to derive the pension increase assumptions

This is consistent with the approach taken in prior years.

7
Mortality

The mortality assumption

The mortality assumption can be broken down into two distinct parts:

- A 'baseline' assumption about current mortality rates that takes into account the profile of the membership.
- A 'future improvement' assumption about how these 'baseline' rates should be projected into the future.

Recommended approach for the baseline mortality assumption

The Trustee commissions a regular analysis of the membership profile for SHAPS using Club Vita. The characteristics (for example affluence, postcode and health at retirement) of the individual members are used to identify the best estimate mortality rates applicable to each member of the scheme. For 2021/22 month ends, a 104% loading was applied to the standard S2 “SAPS” tables to give broadly the same results as applying “vita curves” to individual members. For the purpose of the 2022/23 month ends, we recommend that this approach be retained. If a more recent Club Vita analysis is available by 31 March 2022, the baseline mortality assumption could be updated to reflect this.

Mortality rates before members retire are not expected to have a material impact on the defined benefit obligation. We therefore propose that it is assumed all members will survive to their retirement dates.

Future mortality improvements

The Continuous Mortality Investigation (CMI) model for projecting future improvements is updated each year to build in its latest analysis of mortality rates over the previous year. This includes both a re-estimation of observed past improvements and a new projection of future improvements.

The most recent version of the model, CMI_2021, was published in March 2022. In response to the COVID-19 pandemic which caused exceptional mortality experience in 2020 and 2021, the CMI 2021 model includes flexibility allowing users to place more weight on mortality data for individual years in forming the projections. The default parameters are to place no weight on the 2020 or 2021 data, and full weight on all other years, essentially setting aside the 2020 and 2021 experience. Therefore, all other things being equal, updating to the 2021 model using the default approach, would only expect to result in a small reduction to the life expectancies compared to the 2020 model.

The overall impact of updating to the CMI_2021 model however will depend on the parameters chosen, which requires judgement in respect of:

- the degree of responsiveness to each new year of data determined by the period smoothing parameter (s-kappa), with s-kappa of 7 and 7.5 most commonly being used for accounting purposes. An s-kappa of 7.5 gives less weight to recent mortality experience than 7, which will tend to make the mortality assumption less volatile from year to year;

- the long term improvement rate (i.e. the rate of mortality improvement likely to be experienced at each age, in about 20 years' time, tapering to zero improvement between ages 85 and 110), with a rate of 1.25% or 1.5% most commonly being used for accounting purposes;

- the optional “initial addition” parameter to allow the short term mortality improvement rates to be calibrated to reflect a plan’s membership profile; and

- the amount of weighting applied to individual years, including particularly the amount of weight attributed to 2020.

Given the new evidence, and the widespread use of an s-kappa of 7 within accounting disclosures at 2020 and 2021 year-ends, we believe that it would be reasonable to use an s-kappa of 7 for the 2022/2023 month end disclosures so as to give more weight to each year of new data. Although this would lead to slightly lower liabilities currently, it is likely to lead to more volatility in the mortality assumption from year to year. If strong mortality improvement rates were observed in future years, then an s-kappa of 7 could lead to higher liabilities than an s-kappa of 7.5.

The long term improvement rate is more uncertain and there is no core parameter. Lifestyle improvements and medical advances could lead to a significant increase in future mortality improvements, at least in the long term. Recent mortality trends are not a reliable predictor of trends 20 years from now, which may be more influenced by long term economic growth and healthcare. We remain comfortable with the previous year’s assumption for the long term improvement rate of 1.25% p.a.

The CMI model is based on general population data for England & Wales. There is evidence published by the Office for National Statistics that individuals in higher socio-economic groups, have seen better mortality improvements in recent history. The Trustee commissions Club Vita to provide analysis on longevity trends for its SHAPS membership, which indicated higher annualised mortality improvement for its membership than the core CMI model. Therefore, to better reflect the profile of the scheme membership, we recommend using an initial addition parameter of 0.25% for males and 0.5% for females.

The option to adjust weighting for individual years in CMI_2021 provides further flexibility in the model. The default approach of placing no weighting on 2020 or 2021 data and full weighting on all previous years in our view represents an appropriate approach, as 2020 and 2021 experience is unlikely to be a helpful indicator of future mortality improvements. At this time there is still considerable uncertainty

around the long term impact of the pandemic, hence it would be difficult to justify any significant changes to life expectancies based on the evidence of current data.

Recommendation

We recommend retaining the base mortality assumptions used for 2021/22 month ends unless more recent scheme-specific analysis is available.

For the purpose of 2022/23 month ends, we recommend using the latest CMI_2021 model, using a smoothing parameter of 7.0, an initial addition parameter of 0.25% for males and 0.5% for females and no weighting allowance being made for 2020 and 2021 mortality experience.

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Other Assumptions

Commutation

Deriving a commutation assumption

A high proportion of pension scheme members typically take the maximum available cash lump sum at retirement. It is possible that schemes can be structured so that cash can be taken from a defined contribution section first, which reduces the amount of pension that is commuted from the defined benefit section.

In theory, an allowance could be made for expected changes in the factors in future – for example, increases due to increases in life expectancy. However such an approach could be considered over-complicated and so is not commonly adopted.

A best estimate assumption would normally be set by examining the take up from recent retirements.

The assumption used for the 2021/22 month ends - that 75% of members take the maximum cash available to them – was based on a study commissioned by the Trustee in October 2015 into the take up rate of cash commutation at retirement and our understanding is that the latest available analysis also supports the continued use of this assumption.

Recommendation

We propose that the assumption used for 2021/22 month ends – that 75% of members take the maximum cash available at retirement using notional commutation factors at the most recently completed triennial valuation – is retained.

GMP Equalisation

A High Court ruling on 26 October 2018 clarified that an obligation exists to adjust benefits for the effect of inequalities caused by GMP earned between 17 May 1990 and 5 April 1997 (where applicable). A subsequent ruling on 20 November 2020 confirmed trustees also have an obligation to revisit and equalise statutory transfer value payments paid between 17 May 1990 and 26 October 2020 to address GMP inequalities (where applicable). The impact of these rulings will vary from employer to employer and we recommend companies discuss with their auditors how to allow for this in their accounting disclosures. Please let me know if you would like to discuss this further.

Other assumptions

We propose that no allowance is made for the award of any discretionary benefits.

All other assumptions are proposed to be consistent with those used for the most recently completed triennial actuarial valuation.

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