

Board for Actuarial Standards Pensions: Consultation Paper

Response from Derek Benstead FIA

4 Scope

- 4.11 I agree with your intention that the pensions TAS will apply to work in connection with occupational pension schemes which is almost always carried out by an actuary and which is used to make important decisions related to the financing of pension schemes or which might affect the level of benefits payable to members.

In particular, I think that it is important that actuarial opinions expressed by the Pensions Regulator be covered by the Pensions TAS, as these are very important in the decision making re the financing of pension schemes, and indeed could affect the benefit accrual of members. So far as I can see, TPR's actuarial opinions are brought within the scope of the pensions TAS by para 4.11. I have not spotted any other statement in section 4 that implies TPR output is within its scope.

6 Assumptions

General considerations

- 6.3 I agree with your rejection of the suggestion of setting benchmark assumptions for the reasons you state. In 8.32 you mention a suggestion that you provide specimen scheme funding reports. A "benchmark report" is no more appropriate than benchmark assumptions, for similar reasons. Actuaries should use their judgement about the appropriate wording of their reports for particular circumstances. No standard report can be universally applicable.
- 6.10 I firmly agree with your paragraph 6.10, that "assumptions should not be plucked out of thin air, but should be **based on evidence** and should be consistent ... assumptions should **reflect the state of the world at the effective date** of the calculations in which they will be used." [my emphases].

An actuarial valuation requires very many assumptions. A thorough exposition of the evidence and rationale for each and every assumption would be a very lengthy piece of work. I presume that you expect actuaries to take a proportionate approach and provide a detailed explanation of their advice in respect of the major assumptions and perhaps just brief commentary in respect of the minor ones.

Although this section of your paper is on general considerations, some of my response to it specifically discusses the discount rate, being the single most important assumption, and the one to which the need for evidence and reflection of the state of the world at the effective date most strongly applies.

It seems to me that scheme actuaries advising trustees do not always lay out the evidence for their recommended discount rate assumptions to any great depth so that the trustees can see clearly for themselves where the assumptions come from. Further, under one method in common use, the discount rate assumptions brought out do not readily reflect the state of the world at the effective date of the calculations. This latter point is particularly important where assets must be shown at market value.

The principles described in 6.10 are important to include, to encourage quality advice in this area.

For example, the “gilt yield plus x%” method of setting an expected return on equities (or property, or any other non-gilt asset, but I will say “equities” for ease) is poor on both these counts. The difference in expected return on equities and gilts is not a stable figure, so observations of past data (the evidence) are inconclusive. Having observed past data, the method cannot adjust itself for the purpose of determining a prospective expected return on equities consistent with their market value. The adjustment that the method incorporates is change to the yield on gilts, which contains little information about the expected return on equities. The method is not good at reflecting the state of the world at the effective date of the calculations.

If actuaries were required to more thoroughly describe the evidence basis of their recommended assumptions, and to show how they reflect the state of the world at the effective date, the weaknesses of the “gilts plus” method might be better understood and the method used less often.

- 6.12 Re the wording of the principle in 6.12, I ask whether the word “should” would be better exchanged for “may”. A pension scheme valuation is generally carried out every three years and, once the outcome is settled and signed off, say a year after the effective date, it is left to run until the next valuation is carried out. It is not clear to me that signing off taking account of events up to sign off date and leaving the scheme to run for the next 2 years, is necessarily much better than signing off taking account of events up to the valuation date only, and leaving the scheme to run for the next 3 years. Either way, most of the inter-valuation period is spent running with the outcome of the valuation without re-examination in light of the latest developments.

Using the word “should” rather implies that taking account of post-valuation material events should be the norm, whereas I think working with the conditions at the valuation date ought to be the norm, with the option to take account of post-valuation date events if desired, hence the suggestion of the word “may”. I would much rather work with a fixed set of results at the valuation date and focus with the client on the implications of those results, than try to work through my funding and investment advice on the shifting sand of ever changing figures.

Some valuation approaches give unstable results due to a major mismatch between the assets and the factors that drive the calculation of the liabilities. These approaches have ever moving targets and the position at date of sign off is probably no more important than the position about one year earlier (at the effective date of the valuation) or one year later.

Some valuation approaches match the liability calculation to the assets of the scheme for a stable balance sheet. In which case, the exact point in time at which a moderately stable asset to liability comparison is struck is unimportant, precisely because of the stability, and working with the position at the valuation date is satisfactory.

- 6.14 You state the important qualification to this principle in 6.15. In practice, the majority of schemes are too small for an analysis per 6.14 to be meaningful.

- 6.16 Again, I suggest replacement of the word “should” with “may”. I have yet to hear an opinion about the prospects for salary growth from the scheme sponsor that tallies with the evidence provided by the salary growth history.
- 6.18 I wonder whether there is a counter-example where adjusting another assumption is a reasonably transparent way forward. For example, trying to estimate all future expenses of a scheme is difficult. Some expenses are fixed, some vary with the scheme membership, some are proportionate to the assets and others are proportionate to the liabilities. Modelling the effect of expenses by a deduction from the discount rate is a simple method, that might be a satisfactory and transparent model, that tails off the expenses as the scheme declines in size.
- 6.19 I think I would like a slightly less absolute principle, perhaps by adding the word “Normally” to the front of the principle stated, in order to leave the door open to such an adjustment if the actuary perceives a situation where to do so is a satisfactory and transparent thing to do. Not that I expect that use of such an easement would be wide spread.

Discount rate

- 6.23 I wish to affirm strongly your statement “discounting in the context of a Scheme Funding exercise should...take account of the likely future returns from the scheme’s assets, which depend on the trustees’ investment strategy.”

Some actuaries I have heard or read appear to take it as axiomatic that the liabilities are independent of the assets. The context of such statements is usually the measuring of liabilities as either the cost to insure or the cost to provide the benefits while invested in minimum risk assets. In those contexts, the statement that the liabilities are independent of the assets is not an insight, but merely a restatement of the opening assumption, which is to cost the scheme by reference to some other investment strategy than the one it has actually got.

Scheme Funding exercises are on the premise that the scheme continues to exist, in which case the employer’s liability to contribute is the difference in value between the asset income and members’ contributions on the one hand and the liability outgo, including future accrual, on the other, plus expenses and levies. Your statement is a true principle and I wish to give it a reasoned affirmation in case others write in to deny it.

Discount rate and scheme funding: 6.20 – 6.35, 6.55 – 6.59

I won’t take these in numerical order, but I will build my arguments and refer to these paragraphs as I go.

Scheme Funding exercises must lead to the setting of prudent technical provisions. The law requires the Technical Provisions to be prudent overall, and the discount rate and mortality assumptions are required to be prudent individually. (6.56)

As a matter of principle, we can only see if an assumption is prudent, **and how much by**, if the best estimate value of that assumption is also identified. You quote TPR as mentioning this principle in 6.57, 3rd bullet point. I strongly recommend you incorporate this as an explicit principle in the TAS.

One can set an assumption without reference to best estimate and be confident that it is prudent if it is the most prudent possible. For example, by setting technical provisions as the buy out cost of the full scheme benefits. However, while we can be confident that the buy out value is prudent, the margin of prudence is not transparent if the best estimate value has not been identified, which is unsatisfactory.

In 6.59, you say that “estimates described as prudent should be accompanied by an indication of the level of prudence involved.” I affirm that. Put this together with the observation in 6.23, that “discounting in the context of scheme funding should take account of the likely future returns from the scheme’s assets”, and the inescapable conclusion is that, as a matter of principle, advice on the discount rate for technical provisions must identify the best estimate expected return on the actual assets of the scheme and ensure that the discount rate for technical provisions is a prudent margin below that.

How should the principle in 6.59 be applied? A proportionate application would not require a comparison of best estimate and prudent in respect of every assumption in a valuation. In a scheme funding context, comparisons might be made of prudent technical provisions with a best estimate value, to give the overall picture, and best estimate and prudent discount rate and mortality assumptions, as a minimum. This would fit with the requirements in law that you mention in 6.56.

It should be understood that the best estimate return on the actual assets of the scheme may take account of planned changes in the investment strategy. You make this point in 6.33.

Discount rate and a “standard comparator” rate: 6.28 – 6.32

In 6.28 to 6.32 you discuss the use of a “standard comparator rate” and in 6.31 you moot as a principle “the relationship between the selected discount rate and a low risk rate should be explained to the user”.

There are several important points I can make about this.

First, it is a legal requirement that the solvency position be calculated, as you note in 6.60. Given that the trustees are already to be provided with a solvency valuation, comparison of a discount rate to a “low risk standard comparator rate “ is redundant. The comparison that can already be drawn is between either the discount rate and the rate of return in the solvency basis, or simply the size of the technical provisions and the solvency value. The outcome of using a “low risk” discount rate is sufficiently similar to a solvency valuation that it is not necessary to add a requirement to compare an assumption to the low risk rate when there is already a requirement to prepare a solvency valuation.

Secondly, for which of the specific areas of work mentioned in 6.54 to 6.66 might a comparison of the discount rate to a low risk comparator rate be useful? I suggest none. For example, minimum cash equivalent transfer values require best estimate assumptions. We are required by law to show the assets at market value. The best estimate return on the assets consistent with the market value is, by definition, the internal rate of return. That is, the rate of return that values the projected income from the asset allowing for the probability of receipt and gets the market value as the answer.

The yield on gilts is the internal rate of return on gilts by another name. The yield on corporate bonds does not allow for default risk. By adjusting the corporate bond income for the risk of defaults, the yield is adjusted down to an internal rate of return. The income on equities can be modelled as the dividend yield, price inflation and real dividend growth and an estimated internal rate of return found. Likewise, rental income and rental growth can be estimated on a property investment and the internal rate of return found.

The best estimate return on a scheme's assets is the internal rate of return, a principle that could be usefully stated in the TAS. The task of determining the best estimate return on the assets for minimum cash equivalent transfer values is not informed by looking at gilt yields, to the extent that the scheme is not invested in gilts. Little information about the expected return on non-gilts is to be found in gilt yields.

For a second example, Scheme Funding calculations are required to be prudent, and this can only be demonstrated transparently by identifying best estimate (6.57), as I have already argued. The best estimate return on the scheme assets is the internal rate of return, so we need a discount rate for technical provisions which is lower than that, in order to be prudent.

In the general case of a discount rate that is higher than the yield on gilts, the task of deciding a prudent discount rate is not helped by looking at the gilt yield. Knowing that the discount rate is 1%, 1.5%, 2% or whatever more than the yield on gilts, only tells me that my discount rate is 1%, 1.5% or 2% imprudent relative to the yield on gilts. It gives me no information about how much the discount rate is lower than best estimate, which is what I need to know.

Thirdly, it is a common method to express a discount rate assumption as a gilt yield plus something. Common, but by no means universal. Other methods include 1) using the yield on an appropriate investment grade corporate bond, preferably less a margin for default risk, and 2) deriving the internal rate of return and taking a margin against it, as I have described. Not to mention 3) constructing a basis to reflect typical buy out quotations, for solvency purposes. The "gilts plus" method is but one method amongst at least four, it is not a principle to follow. The "principle" described in 6.31 has no place in the TAS, because it is not a principle at all, it is a method.

Of the four means of obtaining a discount rate I have just described, using bond yields (with appropriate margins, for example for default risk and reinvestment risk) is a credible method. The trustees could invest their assets as hypothesised by the basis and match the calculation of their liabilities. If the trustees do not invest in the matching bond portfolio, then the trustees also need to check that their actual portfolio can be prudently expected to deliver the bond based discount rate, and also beware a degree of instability in the balance sheet due to the asset to liability mismatch.

The internal rate of return method is robust, it takes account of the actual assets of the scheme and taking a margin against it ensures that the discount rate is prudent. Further, it produces a sound basis for contribution planning because the balance sheet comparison of assets and liabilities is as stable as it can be.

A solvency valuation is the soundest of all. Ideally, schemes would be solvent nearly all the time. Employer covenant has no value on the day a sponsor becomes insolvent and a scheme's wind up is triggered. Upon wind up, all that matters is how

solvent is the scheme. That schemes are typically far from solvent at present is a long story that I do not need to discuss here. The only point that needs to be made is that planning towards solvency is a sound principle.

What of the “gilts plus” method of setting assumptions? Trustees cannot invest to match liabilities calculated in this way. They can either invest in gilts, which stabilises the balance sheet, but guarantees an investment performance that is 2% (or whatever) behind the liability discount rate. Or they can invest in non-gilt assets to try to generate a “gilts + 2%” return, and have a very unstable balance sheet which does not give a firm foundation for deciding what deficit reduction contributions are needed. The severe asset to liability calculation mismatch ensures that trustees can have little idea how much of a deficit is an accident of the market positions on the valuation date, and how much needs to be taken seriously and paid off.

There has been a marked change in market conditions over the last couple of years. A “gilts plus” basis of valuation that told a client that its scheme was 100% funded as at 1 April 2007 is likely, for the same addition to gilt yields, to tell the client that its scheme is under 60% funded less than 2 years later. Such a rapid change in funding level is no basis for planning, and risks bringing the profession into disrepute.

To conclude, of the methods available for setting a discount rate, I would argue that “gilts plus” method is clearly the worst and it should not be codified into the method (not a principle) mentioned in 6.31.

Conclusions re a standard comparator rate

The two pieces of information that will do most to help trustees and sponsors understand their scheme’s funding position are the solvency valuation and the best estimate valuation, where the best estimate valuation discount rate is derived as the internal rate of return on the assets. These two valuations define each end of the funding spectrum: fully solvent at one end, and best estimate at the other. Knowing best estimate is essential for minimum transfer value purposes and for setting prudent technical provisions. Knowing the solvency position is essential for working towards proper benefit security. Requiring a third piece of information (the standard comparator) does not add anything useful to these two. Knowing where a discount rate sits relative to a solvency basis discount rate and a best estimate discount rate is all that is needed to see clearly where the discount rate sits on the spectrum of possibilities.

Setting a discount rate by adding something to a gilt yield is just one (poor) method among several, it is not a principle. A method should not be codified into a TAS principle.

The prospective best estimate return is, by definition and as a matter of principle, the internal rate of return on the assets. I think this is worth saying explicitly in the TAS.

Discount rate: further comments

- 6.33 It is clear from the argument I have already made that I agree with the principle in 6.33. However, I would add some additional words to 6.33 so that it reads “if a discount rate is related to the future returns on scheme assets its selection should

take into account the trustees' investment strategy and *may take into account* anticipated changes to that strategy.”

I generally find reporting to clients to be easier and more transparent if I provide a balance sheet solely on financial conditions and investment expectations as they are on the effective date, without building in changes after that date. The assets must be shown at their market value on the effective date, and being as consistent as possible on the liability side with the assets' market value aids transparency. I would rather the inclusion of anticipated changes to be something for discretion whether to include or not, than have a principle written in a way that could imply that inclusion of future changes is the norm.

As and when there is a post valuation date change to investment strategy, say, new funding advice is required, if the valuation funding advice was on the premise that the then investment strategy continued unchanged. I find this helpful, because any change of investment strategy compels fresh funding advice, which makes for well informed decision making. The cost of the new decision is evaluated at the time the decision is made.

- 6.35 Yes, I agree with this principle. It is especially relevant in current financial conditions. Taking account of reinvestment risk should be a normal part of deciding upon a prudent discount rate. In low market conditions, the discount rate for discounting future accrual should probably be lower than the discount rate for valuing accrued liabilities. Markets might rise, making the future purchase of assets to back accruing benefits more expensive.

Running costs

- 6.53 I suggest that the proportion of expenses associated solely with benefit accrual is small and hard to identify. Most expenses are already committed to by virtue of having a scheme with accrued benefits. I take it that you would have no problem with a decision to put all expenses in to the balance sheet, and not split out expenses notionally in respect of accrual, on grounds that to do so is prudent.

Putting expenses into the balance sheet is a sound principle. If a scheme is valued using the current unit method with expenses capitalised in the balance sheet, then the balance sheet is modelling whether the scheme has sufficient funds to continue as a closed scheme with no accrual and without recourse to further contributions. That is a sound, well constructed scenario to model. If the scheme is open to accrual, then the cost of accrual and salary growth is captured in the current unit method contribution rate.

Putting expenses in the balance sheet will also help trustees and sponsors of frozen schemes to compare the expected cost of continuing to run it with the cost of winding up. PPF levies can be up to 1% p.a. of the S179 liabilities of the scheme, which over the life of the scheme, would typically equate to about 20% of the liabilities, or thereabouts. Capitalised expenses of administration and professional advice for the life time of the scheme can also be a material proportion of the liabilities. Including expenses in the balance sheet aids a transparent comparison of the merits of winding up and continuing in force.

Transfer values – private sector schemes

- 6.63 That's a very natural principle, one that I am already implementing in my own advice. It works very nicely to identify best estimate assumptions, then to use that as a starting point both for specifying a minimum cash equivalent basis and for taking a margin against it for prudent SFO purposes. In this way coherent, consistent advice is given on the two issues.

Did you mean to omit the word "minimum" in front of the phrase "cash equivalent transfer values" in your proposed principle?

Roll forward calculations

- 7.13 It is very difficult to quantify the limitations of roll forward calculations. If you know of an inaccuracy, and could quantify it, then having quantified it you can remove the inaccuracy. By definition, the limitations of a roll forward are things you cannot quantify, and therefore are very hard to describe in a way that illuminates a decision whether or not to commission more accurate calculations.

Scheme funding – best estimates

- 8.14 I agree with the principle stated. Indeed, I do not know how trustees can make a clear judgement about the size of the margin of prudence without a best estimate comparator.
- 8.13 I note the point in 8.13 about the difficulty of determining a best estimate basis. I do not think the fact that it is difficult means that you should not try. The term "best estimate" does not mean "accurate estimate". It may entirely reasonably mean "pretty rough but the best estimate I can do". If you believe that it is difficult and that your best estimate is uncertain, then the appropriate reaction is to take a suitably wide prudent margin to reflect the uncertainty you feel.

Scheme funding - reports

- 8.32 No you shouldn't. Trustees need professionally prepared advice, not standard reports with the numbers filled in by an actuarial compliance officer. The notion that, wherever trustees chose to buy advice, they are likely to get a report with the same wording in it, seems very unhelpful to trustees. In 6.3 you rejected the idea of setting benchmark assumptions. A "benchmark report" is no more appropriate than benchmark assumptions. No standard report can be universally applicable. Actuaries should use their judgement about the appropriate wording of their reports for particular circumstances.

It seems to me that the preparation of a suite of reports encompassing the range of possible approaches to deriving actuarial assumptions and the range of methods for valuing liabilities, that is suitable for the wide variety of schemes there are, is a very large, very complex task, one that it is undesirable to attempt for the reasons given above.

Interpretation of The Occupational Pension Schemes (Scheme Funding) Regulations SI2005/3377 Regulation 5(4)(a)-(c)

I wish to raise this because it could affect the detail or tone of the Pensions TAS. These regulations say:

Reg 5 (4) The principles to be followed under paragraph (3) are—

(a) the economic and actuarial assumptions must be chosen prudently, taking account, if applicable, of an appropriate margin for adverse deviation;

(b) the rates of interest used to discount future payments of benefits must be chosen prudently, taking into account either or both—

(i) the yield on assets held by the scheme to fund future benefits and the anticipated future investment returns, and

(ii) the market redemption yields on government or other high-quality bonds;

(c) the mortality tables used and the demographic assumptions made must be based on prudent principles, having regard to the main characteristics of the members as a group and expected changes in the risks to the scheme,

My interpretation of these regulations is (4)(a) means that the economic and actuarial assumptions *collectively* must be prudent, and in particular (4)(b) the discount rate *individually* must be prudent and (4)(c) the mortality tables and demographic assumptions must be prudent.

The Pensions Regulator has stated its view that *every* assumption must be chosen prudently e.g. see “Good practice when choosing assumptions for defined benefit schemes with a special focus on mortality” February 2008 paragraph 1.9. If Regulation 5(4)(a) was intended to mean that *every* assumption must be prudent, then (4)(b) and (4)(c) are redundant. It is not necessary to say that the discount rate and mortality and demographic assumptions must be prudent in (4)(b) and (4)(c) if they are already required to be prudent by (4)(a). It seems to me that the reason why (4)(b) and (4)(c) are there is because (4)(a) does *not* require every assumption to be prudent. Rather, the natural interpretation of (4)(a) is that the assumptions collectively must be prudent, with (4)(b) and (4)(c) specifying some assumptions which individually must be prudent.

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