Government
Actuary's
Department

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By email only

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Dear Conrad,

Review of the SCAPE discount rate methodology

Thank for your letter of 17 January 2022 asking for my professional opinion on the Government's proposed response to the recent consultation on the SCAPE discount rate methodology used to set contribution rates for unfunded public service pension schemes.

You have explained that, after considering the responses to the consultation, the Government intends to:

- retain the current methodology of setting the SCAPE discount rate in line with long-term forecasts of GDP growth published by the Office for Budget Responsibility (OBR), without adopting any of the modifications considered in the consultation;
- align future reviews of the SCAPE discount rate with valuation cycles (one review per cycle);
- consider other measures to address the impact of this decision on stakeholders' interests captured by the 'stability' objective.

In summary, my professional opinion is that, taken together, the proposals meet the Government's objectives for the SCAPE discount rate as set out in the consultation and confirmed in your letter – noting, as you and many respondents have acknowledged, the tensions that exist between these objectives. I comment in more detail on the proposals and implications below.

Context

As explained in the consultation document, SCAPE is the methodology used to set employer contribution levels for unfunded public service pension schemes. The methodology is designed to ensure that the value of pension benefits being promised are recognised at the point at which they are built up, and that employers pay a charge that is appropriate to reflect this. It also aims to ensure that total contributions reflect any past over- or under-payments.

Because pensions are payable over many years into the future, the rate at which payments are discounted to determine employer contributions as part of the valuation process is highly significant to the level of those contributions. Even a small change in the SCAPE discount rate, whilst not affecting the timing or amount of future pension cashflows, nor implying a change in overall Government spending, can have a large influence on employer contribution rates and therefore employment costs relative to other forms of departmental expenditure. It is therefore important that the SCAPE discount rate is set at an appropriate level in order to best meet the Government's objectives as outlined in the consultation.

Objectives

You have confirmed that the Government's objectives for setting the SCAPE discount rate are in line with those proposed in the consultation document – "Fair reflection of costs", "Reflect future risks to Government income" and "Stability". As you have noted, some tensions exist between these objectives, which means that the methodology must be considered against them in the round. I set out below some commentary about how the proposed methodology meets these objectives.

Fair reflection of costs

The consultation document states that this objective is intended to ensure that the SCAPE discount rate is set so that total contribution levels reflect the value of benefits being earned today (as well as past over- or under-payments). This is to ensure that employers pay a charge that is appropriate for public service pension schemes, and that decisions by public service employers about employment levels take into account the full cost of pension benefits being provided.

I believe that it is appropriate to seek to quantify the costs of pensions that will be paid for many years into the future at the time that these benefits are accrued, and to reflect their time-weighted value through the process of discounting. There are many plausible bases on which such discounting may be performed, and the two methodology approaches considered in the consultation both reflect the time-value of money in a Government context in different ways, and both can be considered to be appropriate in this respect.

One is based solely on long-term future GDP growth expectations set by the independent OBR. The other is based on the Social Time Preference Rate (STPR), which is set by HMT and has two parts – "time preference" and "wealth effect" – the latter of which is comprised of the marginal utility of consumption and the expected growth rate of future real per capita consumption.

In my opinion, the GDP approach meets the "Fair reflection of costs" objective much better because it is more directly related to the expected growth in the tax base, which is the source of income from which future pension payments are ultimately funded. Expected long-term GDP growth is a good proxy for the growth in the capacity to pay future pensions, and the OBR's projections of this – which are independent of government – are a suitable method of deriving this assumption.

By contrast, the STPR is designed for the different purpose of supporting the economic assessment of proposals in central government. Furthermore, whilst a part of the STPR is related to GDP growth, any changes to this part appear to have been insufficient to affect the overall rate which has remained unchanged since 2003 through an extended period of changing economic expectations. I would question the suitability of using such a rate to fairly reflect the value of pension costs in the current changing environment.

I therefore consider that the GDP methodology is much more suitable to ensure unfunded public sector pension contributions are a fair reflection of the cost of benefits being built up.

Reflect future risks to Government income

I understand this objective is intended as a reflection that future tax revenue may turn out to be different from that expected. The Government should have as much confidence as possible that promises made today are on a sustainable basis, reflecting its ability to meet future payments in order to ensure fairness to both present and future generations of taxpayers.

The proposed GDP methodology is such that the share of GDP represented by contributions is expected to be equal to the cost of the associated pensions as a share of future GDP. This is intended to avoid passing a disproportionate cost of today's promises on to future taxpayers, helping to ensure intergenerational fairness. The STPR methodology is only loosely linked to GDP in this way, and as set out above any changes in expected future GDP growth have been insufficient to change the total STPR rate in recent times.

At this point in time, the STPR is materially higher than expected long-term GDP growth. If used to calculate employer pension costs, this would arguably represent a bigger risk that such contributions understate costs which would have to be recognised by future generations of taxpayers.

It is of course possible that this feature may not persist over the longer term, but it should be recognised that both future benefit expenditure and GDP growth are uncertain, and future pension costs may be higher or lower than today's contributions as a percentage of GDP. There is, accordingly in my opinion, a reasonable case for the inclusion of a margin for prudence in the rate used to reflect the value to today's taxpayers of the risk being borne by future generations of taxpayers. I do note, however, that HMG have indicated in consultation response that they will not adopt a margin of prudence or any other reduction to expected long-term GDP growth to account for risks to future Government income.

Stability

The consultation document explained that in order to best support Government and employers to make appropriate long-term decisions on workforce expenditure, large fluctuations in employer contribution rates should be minimised where these are not caused by changes in future expenditure on pensions.

There is a clear tension between this objective and the other two. A stable discount rate may be insufficiently reflective of risks in a changing environment, and a methodology that closely reflects risk may be unstable in a changing environment.

You have noted in your letter that the proposed GDP methodology is unlikely to meet the 'Stability' objective as well as the STPR methodology and will not in itself necessarily result in stable employer contribution rates over the longer term. Indeed, there has been considerable change in OBR's projections of long-term GDP growth in recent years, reflecting the general uncertainties about the longer-term prospects of the UK economy.

By contrast, the STPR methodology, although it is also subject to periodic reviews that might lead to change, might be expected to change less frequently over time as it has the potentially diversifying effect of being composed of more than one component, unlike the GDP methodology which just has one. Indeed, the STPR rate has remained unchanged over the last 18 years, despite a number of reviews during that period. Given the unprecedented economic upheaval that has been experienced during this time, it might be considered to have been unnaturally stable and insufficiently reflective of the changing long-term prospects to be used as a basis for setting contribution rates which are a fair reflection of the costs of providing pensions.

Trying to ensure stability in employer contribution rates or departmental funding requirements by adopting a discount rate that is less likely to change may be considered a somewhat artificial way to achieve this. Furthermore, even if the discount rate was very stable, this would not remove the possibility that employer contribution rates will change between valuations for various other reasons, such as changes to other actuarial assumptions and the impact of scheme experience. There are a number of different ways in which such stability can be achieved in order to best meet the Government's overall objectives, and I consider it is appropriate to look for other ways in which this can be achieved to reduce impacts on departments, which I discuss in the next section.

Effects on departmental budgets

In your letter you have stated that the Government will consider other measures to address the impact of the decision to retain the GDP-methodology on stakeholders' interests captured by the "stability" objective.

You have proposed that in future, reviews of the SCAPE discount rate will be aligned with the scheme valuation cycles, with the aim of conducting one review per cycle. I strongly support this proposal and agree that this approach should help to give more certainty to employers about the timing of any SCAPE discount rate changes, enabling better forecasting and budgeting for future changes to pensions expenditure. However, this does not mean the rate will not change at each valuation cycle, and the effects of this on departmental budgets still need to be addressed.

You have also noted that the Government will consider the sharing of risks of changes in employer pension costs arising from the 2020 valuation in recognition of the fact that current departmental budgets could not take into account new employer contribution rates from April 2024.

I am encouraged by this proposal and I can see the attractions to a system that seeks to immunise or limit the effect of SCAPE discount rate changes on departmental budgets at the point at which new contribution rates are implemented. However, I can equally understand the reasons why Government might want to retain flexibility in the way changes of this nature affect departmental spending.

Valuation cycles are not synchronised to Spending Reviews, and contribution rate changes are always likely to present challenges to departments when they arise. Establishing some principles of how this process may work in the longer term may therefore be helpful in addressing some of the concerns around stability that departments have expressed. GAD will be only too happy to assist HMT in exploring options in this regard.

Modifications

The consultation document considered two modifications that could be made to a methodology based on expected long-term GDP growth – allowing for term-dependent GDP growth, and allowing for actual GDP experience. You have confirmed in your letter that the Government does not intend to proceed with either of these modifications. I am broadly supportive of this approach of retaining a system that is not overly complex, in the context of an overall structure which is largely an intra-government funding measure, whilst accepting this results in a somewhat less accurate measure of overall pension costs.

- *Allowing for term-dependent GDP growth* – this approach would more accurately reflect the expected size of the future tax base in each future year of the projections, although the precise effect this would have upon employer contributions will depend upon how the balance of short-term and longer-term projections compare to the overall average and this can change over time. However, OBR tend to revise their short-term GDP forecasts more regularly, and more sharply, than the long-term averages. The effects of such an approach on cashflow projections can therefore be particularly significant in the short-term.

- *Allowing for actual GDP experience* – this approach would ensure that past over- or under-payments are determined with reference to the actual performance of the income stream from which pension benefits are ultimately paid out. It would more closely reflect the position which applies in funded pension schemes whereby if the assets underperform then an additional deficit is created which must be corrected by additional contributions (or future asset outperformance).

  Since the current GDP-based methodology was adopted in 2011, GDP experience has been lower than the SCAPE discount rate in force. Arguably, therefore, the employer contributions to public service pension schemes have been, with hindsight, under-estimated throughout this period, when compared to the GDP-measure against which they are assessed. The financial effect of this is carried centrally by HMT and there are no direct consequences for departmental spending or budgets.

The inclusion of either of these modifications could improve the outcome against both the “Fair reflection of costs” and “Reflect risks to future Government income” objectives, in particular as they should mitigate against the risk of future tax revenues being different to what is expected. However, recent experience has shown that such modifications would not score well against the “Stability” objective. Actual GDP experience has been particularly volatile in recent years, most notably during the period of the pandemic and the utility of reflecting this so directly in employer contributions to public service pension schemes should be considered very carefully.

On balance, whilst there are a number of merits to both modifications which would be technically defensible, these approaches would introduce an extra layer of detail and complexity into the process, the merits of which may be unnecessary given the broader context of the objectives of the SCAPE methodology and the approach to financing unfunded public service pension schemes. Accordingly, I consider it reasonable to not allow for these modifications.

I would note, however, that the effect of not allowing for these modifications is that experience variations are less visible and less easily quantified. Whilst employers are not exposed to the risk of underperformance of GDP, this risk is carried centrally by Government. This is an understandable position for Government, particularly given the economic circumstances experienced recently, but I suggest there would be benefits for HM Treasury to monitor how actual GDP compares with the assumed SCAPE discount rate over time and consider the extent to which any divergence should receive greater visibility.

Fiscal impacts

You have confirmed that the SCAPE discount rate will not be changing at the current time but will instead be reviewed at an appropriate point in the scheme valuation cycle, allowing for the publication date of relevant GDP projections by the OBR and the timetable for implementing the new employer contribution rates from April 2024. As noted in the consultation document, if the SCAPE discount rate was calculated using the most recent OBR projections, it would result in a rate of CPI+1.8% a year, as opposed to the rate currently in force of CPI+2.4% a year. Therefore, subject to changes in OBR projections before the rate is next set, it is likely that the discount rate in force for the 2020 valuations will be somewhat lower than that in force at the 2016 valuations. All else being equal this will result in an increase in the required employer contribution levels.

Additionally, it should also be noted that these financial consequences also affect independent providers with access to public service pension schemes – for example independent schools who participate in the Teachers' Pension Scheme, or contractors who provide public services and participate in public service schemes through the Fair Deal policy. Such employers may experience financial pressures with increasing contribution rates which may not be able to be matched by increased funding in the same way as for government departments.

It is worth noting that discount rates used to value funded defined benefit pension schemes have also reduced significantly over the decade. This has arisen for a number of reasons, in particular due to the changing economic environment over this period as bond yields have fallen to historically low levels, which has increased pensions costs for private sector employers. Meanwhile, contribution rates for unfunded public service schemes have also increased as the SCAPE discount rate has reduced over the same period. Although the approaches are different, these outcomes are both related to the worsening of the long-term economic outlook over the period, and so it is not unexpected that similar outcomes have been experienced.

Interaction with the cost control mechanism

The Government response to the consultation on the cost control mechanism, which was published in October 2021, confirmed that an "economic check" was being introduced to the mechanism in order to ensure consistency between benefit changes and changes to the long-term economic outlook. This process will consider the change in a discount rate based on the OBR's forecasts of expected long-term GDP growth, which will also form the basis for the SCAPE discount rate under the proposed methodology.

It is not strictly necessary for the SCAPE discount rate to use the same approach as the economic check in the cost control mechanism given the differing purposes and in particular the presence of the stability objective of the SCAPE discount rate. However, there is a clear rationale for using a consistent methodology, as an assessment which could ultimately lead to a change in benefits would preferably be consistent with the costs that are being placed on those benefits and subsequently met by employers. Using consistent discount rates will also aid stakeholder understanding and transparency in the valuation process.

Other uses of the SCAPE discount rate

Whilst the primary use of the SCAPE discount rate is to set employer contribution rates, the rate is also currently used for a number of other purposes. These include transfers into and out of the schemes, assessing the value of pension benefits in divorce proceedings, and the calculation of various other actuarial factors for member options.

As you have noted in the consultation document, whilst the SCAPE discount rate is commonly used for many such calculations at present, its use for most of these purposes is not formally prescribed. HMT should consider in due course whether the SCAPE discount rate remains appropriate for transfer factors. Similarly, scheme managers should consider, in consultation with their scheme actuaries, whether the SCAPE discount rate remains appropriate to use for wider actuarial factors.

Accordingly, whilst it is helpful to bear in mind these wider uses of the SCAPE discount rate when considering the review, I agree that with your position that these should not be relevant in determining the appropriate long-term methodology.

Conclusion

In summary, in the context of the three objectives for the SCAPE discount rate that the Government has outlined, I believe that the GDP-based approach proposed is the most appropriate methodology for setting a discount rate to be used for determining employer contribution rates for unfunded public service pension schemes. It is consistent with the “Fair reflection of costs” and “Reflect future risks to Government income” objectives, and whilst is less consistent with the “stability” objective the underlying concerns around stability should be able to be mitigated outside of the SCAPE methodology.

Compliance, limitations, and third-party disclaimer

This letter has been prepared in accordance with the applicable Technical Actuarial Standards: TAS 100 and TAS 300 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.

This letter is addressed to HMT. The purpose of this letter is to give my professional opinion on the proposal to retain the current approach of setting the SCAPE discount rate in line with long-term forecasts of GDP growth published by the OBR.

This letter must not be reproduced, distributed, or communicated in whole or in part to any other person without GAD’s prior written permission. I understand that HMT intend to publish this letter. Other than HMT, no person or third party is entitled to place any reliance on the contents of this report. GAD has no liability to any person or third party for any action taken or for any failure to act, either in whole or in part, on the basis of this letter.

Yours sincerely

Martin Clarke
Government Actuary

Appendix – copy of letter from HM Treasury to Government Actuary

HM Treasury

Conrad Smewing
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HM Treasury

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17 January 2022

Dear Martin

Review of the SCAPE discount rate methodology

1. In June 2021, the Government launched a consultation[1] on the methodology for setting the SCAPE discount rate, the discount rate used in the valuation of unfunded public service pension schemes to set employer contribution rates. Having considered the evidence submitted to the consultation, this letter outlines the Government's proposed response.

2. The consultation outlined three proposed objectives of equal weighting for the SCAPE discount rate in order to evaluate possible discount rate methodologies:

   - *Fair reflection of costs* – the SCAPE discount rate should ensure contributions are set at a level which reflect the value of benefits being earned, ensuring that employers pay a charge that is appropriate for public service pension schemes and that employment decisions take into account the full cost of employing people.

   - *Reflect future risks to Government income* – the SCAPE discount rate should reflect that future tax revenues may turn out to be different to what is expected.

   - *Stability* – the SCAPE discount rate should support Government and employers to make long-term decisions on workforce expenditure and minimise large fluctuations in employer contribution levels where they are not caused by changes in expected future expenditure on pensions.

3. Responses to the consultation displayed a high level of support for these proposed objectives. The Government has carefully considered these responses and concluded that these three objectives are appropriate for the SCAPE discount rate. The Government has given each objective equal weighting in its consideration of possible discount rate methodologies.

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996113/SCAPE_Discount_Rate_methodologyFD.pdf

4. However, the responses confirmed the Government's view that there may be tensions between the three objectives, and that it may not be possible for a single methodology to fully achieve all three objectives. Therefore, methodologies have been assessed against the objectives in the round.

5. The consultation proposed that the following two methodologies were the most appropriate to be considered:

   - a methodology based on expected long-term GDP growth (the current methodology);
   - a methodology based on the Social Time Preference Rate (STPR).

6. Respondents were asked whether they agreed that these were the most appropriate methodologies for consideration, or whether alternative methodologies should be considered.

7. The consultation invited respondents to provide views on how these two methodologies performed against the proposed objectives, including whether modifications should be applied to help them better meet the objectives.

Proposed response

8. Having considered the responses submitted to the consultation, and with regard to the stated objectives, the Government believes that the SCAPE discount rate should continue to be set based on expected long-term GDP growth, using forecasts published by the Office for Budget Responsibility (OBR), with no modifications applied at this time.

9. The Government believes that this methodology will best ensure that workforce decisions made today fairly reflect the costs of pension benefits and ensure that pension promises are made in a way that is sustainable and affordable for future taxpayers.

10. The Government acknowledges that a methodology based on the STPR would better meet the 'stability' objective, although no discount rate methodology can avoid employer costs changing at valuations due to changes to other demographic and financial assumptions. A methodology based on long-term GDP growth performs less well against this objective. As long-term GDP forecasts are revised periodically by the OBR, this methodology is likely to result in more frequent changes in the SCAPE discount rate between valuations, which can result in larger movements in contribution rates and make it harder for employers to predict future pension costs.

11. Responses to the consultation and the Government's analysis confirms an inherent tension between meeting the 'stability' objective and the other objectives. In this context, the Government believes that a GDP-based methodology best meets the overall balance of objectives. This evaluation is based on the assessed performance of that methodology against all three objectives, including its anticipated stronger performance against the 'fair reflection of costs' and 'reflect future risks to Government income' objectives compared to alternatives. Meanwhile, the Government will consider other measures to address the impact of this decision on stakeholders' interests captured by the 'stability' objective.

12. As proposed in the consultation, the Government will align reviews of the SCAPE discount rate with the scheme valuation cycle, with the aim of conducting one review per cycle. This will significantly reduce the likelihood of the SCAPE discount rate changing within valuation cycles, and so give employers greater confidence when anticipating future pension costs.

13. Second, the Treasury will consider whether, and how, to share the risks of changes in employer pension costs arising from the 2020 valuation in recognition of the fact that current departmental budgets could not take into account new employer contribution rates from April 2024. Due to the ongoing uncertainty as to outcomes of the 2020 valuations, discussions with departments will only take place when the outcomes of the 2020 valuations are more certain.

14. The consultation document considered some modifications that could be applied to a GDP-based methodology in the following areas:

- allowing for term-dependent GDP growth;
- allowing for actual GDP experience.

15. Following careful consideration of responses, the Government do not intend to proceed with either of these modifications. Whilst it is recognised that both of these approaches could provide more accurate reflection of expected future income, they could also cause a GDP-based methodology to perform even less well against the 'stability' objective than a GDP-based methodology with no modifications. The Government does not think this would achieve an appropriate balance between the objectives and could produce an inappropriate level of instability and complexity in the context of how public service pensions are financed.

16. As stated in the consultation document, the Government intend to carry out a separate exercise to review the new level of the SCAPE discount rate in line with the chosen methodology at a future date. This will be announced in due course and informed by views of relevant stakeholders, the expected publication date of relevant assumptions by the OBR and the timetable for the 2020 valuations and implementing new employer contribution rates in April 2024.

17. I would be grateful if you could offer your professional opinion on the proposed approach outlined in this letter.

Yours sincerely

Conrad Smewing

Director, Public Spending