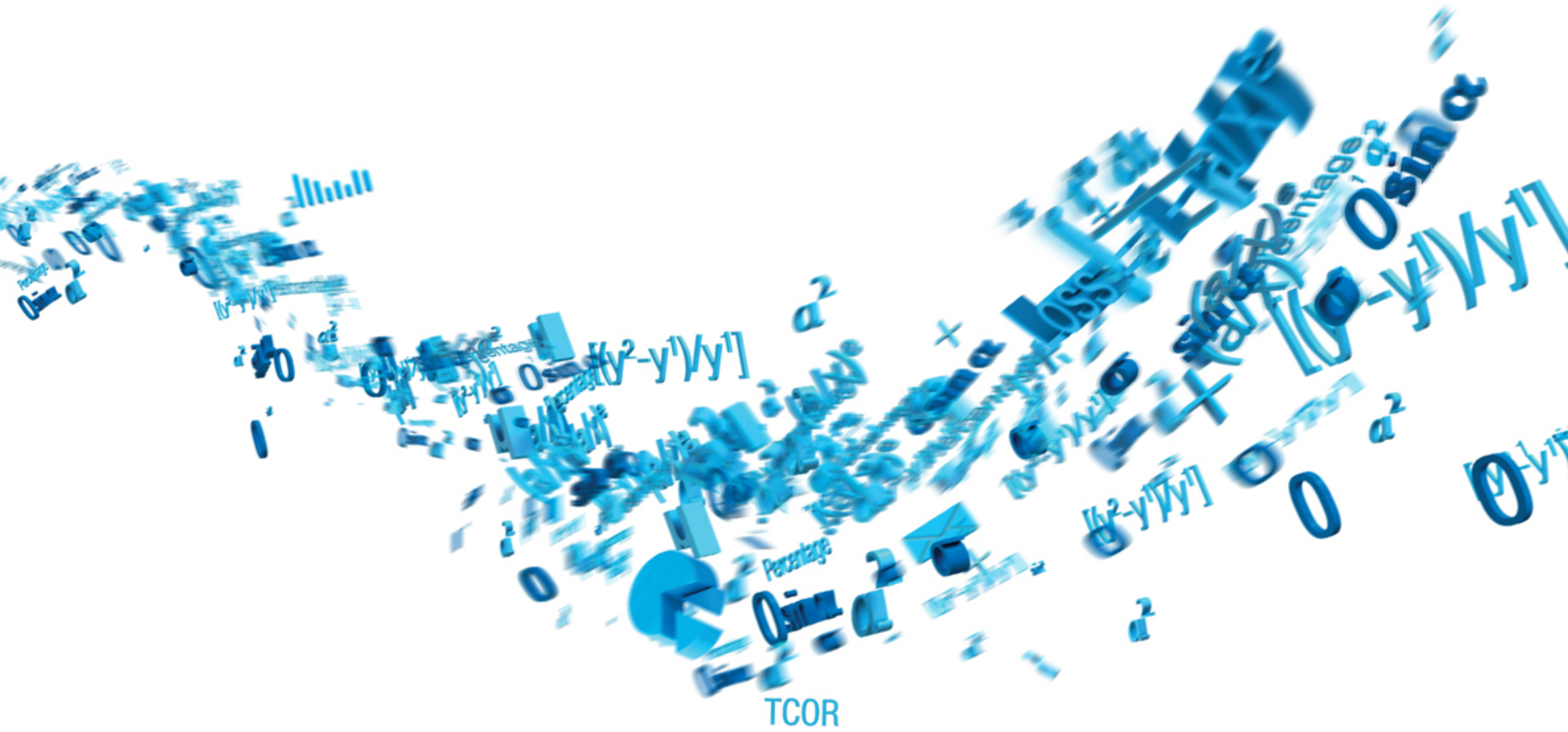

Universities Superannuation Scheme

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Executive summary

Introduction

This paper sets out our views, as adviser to Universities UK ("UUK"), on the USS's document: *"A consultation with Universities UK on the proposed assumptions for the Scheme's Technical Provisions"* (published on 7 September 2020).

The valuation is being carried out in difficult market conditions, and a time where many employers have other priorities to focus on as well as the USS.

Key points on Technical Provisions consultation

We believe employers may broadly support one of the various options put forwards (a Gilts+3.5% p.a. pre-retirement discount rate), and reject the others. With the illustrative Recovery Plans, the Trustee is revealing a very wide *range* of potential contributions outcomes – all of which are poor. There is also an unmissable subtext to the consultation – i.e. the Trustee wants the employers to agree to the various covenant support requests.

By being presented with a very wide range of outcomes, employers will not know how their answers to this first consultation will impact on the next stage of the valuation discussion when the Recovery Plan is consulted on. So, they do not know the consequences of particular choices on the overall outcome. This makes the whole consultation process difficult from an employer perspective. Overall, it seems inevitable that the valuation will be drawn out and somewhat iterative.

If employers are not able to agree to the covenant support requests or it is not plausible for them to do so, then the Trustee says that the total contributions for the current level of benefits will increase from 30.7% to 60.3%[1] of pay (or higher). This includes deficit contributions of 22.7% (or higher). Therefore, if the current contribution rate were maintained then, under the illustrative figures, there would only be 8% of pay (i.e. 30.7% - 22.7%) to spend on member benefits. We do not regard the illustrative figures as representing a credible scenario.

If the covenant is assessed as Strong, then the contribution rate is shown to be in the range of 40.8% to 60.7%[2] of pay (although we do not believe that 40.8% is the lowest credible answer, for reasons we explain). Our principal comments here are:

- The range is too wide to allow employers to judge the merits of agreeing to the covenant support requests (even if they are viable). The top end of the range is similar to the bottom end of the range of contributions for a Tending to Strong covenant – meaning, the employer covenant support may have almost no impact (or it may have a large impact – it is simply not clear).

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[1] 60.3% is taken from Table 9.7 of the Trustee's consultation

[2] 40.8% is taken from Table 9.7. 60.7% comprises a 59.7% contribution from Table 9.7, plus a further 1.0% from Table 9.6 (which applies if the Trustee chooses to allow for payroll growth of CPI+1% p.a.)

- The Trustee states that not all the illustrated figures would be possible save for employers providing additional (undefined) contingent security. This makes it even more difficult to decipher what contributions would be payable.
- The illustrative Recovery Plans all assume deficit contributions in excess of 10% of pay, the most employers are assumed to pay in an extreme scenario. This seems to make no allowance for affordability of contributions.

At this point, employers do not have a clear picture of the likely outcome of the valuation. As well as the vast range of contributions presented, there are further specific areas the Trustee draws out where clarity is not yet available:

- The covenant assessment will not be finalised until much later in the year. It depends on: a further PwC review in the autumn, the employer response to the covenant asks, and whether employers are prepared to provide further contingent security.
- The Recovery Plan has been taken out of the consultation, and the future service rate is also not being consulted on.
- The final result may depend on post-valuation experience.
- The assumptions would be reviewed if benefits are changed for future service. This could be a material point given the preliminary results.

On the proposed assumptions, we have no material comments other than for the discount rate.

As employers supported the Joint Expert Panel's (JEP's) recommendations, it would be reasonable for employers to support the Gilts+3.5% p.a. pre-retirement discount rate without the Trustee requiring all of the covenant support requests, corresponding broadly to the mid-point of the JEP range (updated for changes to market conditions since the December 2019 JEP report). This would result in a cost for new benefits of 29.4%, before allowance is made for deficit contributions. A slightly higher discount rate could also be justified for reasons we explain, although there is no suggestion that the Trustee would accept this.

On the covenant support requests, it is very much worth identifying what might be feasible here taking into consideration the implications for institutions, and this is discussed further in the UUK note (also issued today). Before committing, employers may require more clarity on what the outcome is. It may also be prudent for the employers to gain additional protections if covenant support is required, and share some initial thoughts in this paper.

Further information provided

In the remainder of this paper, we set out our thoughts on:

- Key background information.
- The Trustee's eight consultation questions.
- Next steps.

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1. Key background information

Introduction

In this section, we explore the following points that provide context for the Trustee's consultation.

- Role of the Trustee
- Role of the Pensions Regulator (TPR)
- Summary of Trustee's proposed approach
- Areas of uncertainty in proposed approach
- What valuation outcome would be under the JEP recommendations
- How employers can respond effectively to this consultation

Role of the Trustee

Under the Scheme Rules, the Trustee determines the valuation approach (meaning: method, assumptions, and resulting contributions). This is subject to taking its own actuarial advice, and subject to consultation with UUK as the representative of the participating employers.

In its consultation, the Trustee describes its "primary objective" as being to make sure that member benefits that have already built up can be paid. In our non-legal view, this matches legal advice we have seen received by other Trustee boards (on the relative importance of protecting past vs future benefits). It is also aligned with the Pension Regulator's statutory objective to protect already earned benefits.

We would however observe that if unreasonable contributions are imposed that do not take into account affordability, then this heightens the chances of industrial disputes, since ultimately employees would be affected. This may have consequences not only for sponsoring employers, but also to the covenant support available to the Trustee to protect members' accrued benefits.

Role of the Pensions Regulator

TPR oversees actuarial valuations, and once a valuation is completed it has the power to impose its own outcome for the cost of benefits and deficit contributions if it is not satisfied with the outcome determined by the Trustee. This would require a lengthy process in which TPR would need to convince the Determinations Panel of its point of view, and in practice TPR can offer its views to parties throughout the valuation in cases where it has material concerns to avoid this process.

TPR's main statutory objectives are to protect accrued member benefits, to protect the Pensions Protection Fund, and to promote the sustainable growth of employers.

Summary of Trustee's proposed approach

If covenant is rated Tending to Strong

If the employers are unable or unwilling to agree to the covenant measures (or if PwC otherwise rate the covenant as Tending to Strong following its autumn review), then the illustrative contribution is between 60.3% and 69.2%[3].

[3] 60.3% is from table 9.7 of the Trustee consultation. 69.2% assumes an 8-year Recovery Plan, but also a CPI+1% payroll growth assumption (and so uses information from table 9.6 as well)

Even taking the lowest end of the range, this would lead to contributions of 60.3% comprising 40.3% for employers, and 20.0% for employees (under the default 65:35 cost-sharing).

The 60.3% includes deficit repair contributions of 22.7%. This is problematic for the baseline scenario, i.e. what would happen were the employers not able or willing (to the extent they are feasible) to fulfil the covenant support requests. If we assume that the most employers and employees wish to contribute is the current rate of 30.7% of pay, then the illustrative figures would suggest employees receiving future benefits costing 8% of pay – barely in line with minimum automatic enrolment requirements, and much less than the employee contributions under cost-sharing. In short, members would leave the scheme *en masse*.

We struggle to see how the illustrations are helpful here, with the Trustee not considering affordability in the Recovery Plan illustrations. (Even TPR's letter (page 51), states that trustees should take into account affordability.) We are left with a "non-option" that is being presented in the consultation, which we do not believe is executable by the Trustee.

If covenant is rated Strong

There are 18 different contribution illustrations (3 different discount rates x 3 different recovery plans x 2 payroll increases). Our main comments are:

- The resulting contributions span a vast range of between 40.8% and 60.7% of pay for current benefits – so broadly an increase of between about 10% and 30% of pay, compared with the current contribution rate. The range is too wide to allow employers to judge the merits of agreeing to the covenant support requests (even if they are viable). The top end of the range for a Strong covenant is similar to the bottom end of the range of contributions for Tending to Strong.
- The maximum gap between the Strong and Tending to Strong case is (69.2%-40.8%)=28.4%. This contrasts starkly with the 4% gap between the "lower bookend" and "upper bookend" for the 2018 valuation (where the Trustee used the bookends to support a request for contingent contributions). Employers will not be used to seeing such uncertainty from the Trustee in what the result may be.
- There is more variation of the deficit within the Strong covenant bucket (i.e. between the three options here for the pre-retirement discount rate), than between Tending to Strong and (the most prudent end of) Strong. Some of the lower contribution figures are said to only be possible if the employers provide contingent contributions or a contingent funding structure, which are not specified. Therefore, it is simply not clear what the Trustee's illustrations represent.
- All the recovery plan scenarios assume deficit contributions of more than 10% of pay – the most employers are assumed to be able to afford in an adverse scenario under the "Risk Management Framework". The Trustee has not factored in affordability of contributions at this stage, a requirement of regulatory guidance.

Areas of uncertainty

Although there is no doubt that the Trustee is conducting a valuation in difficult times, we are left with a rather daunting list of areas where the Trustee's approach is subject to further review:

Table 1: Areas of uncertainty identified by Trustee that could impact on final assumptions

Area of uncertainty	What's the issue
1. Covenant assessment	Said to depend on: ▪ PwC covenant review "in the autumn" ▪ Employer response to debt monitoring, pari passu, and the rule change on employer exits ▪ Whether employers are prepared to provide further contingent security
2. Recovery Plan	Only illustrative figures are provided, contrary to USS's message in the March 2020 consultation (which said the Recovery Plan would form part of this conversation). As more technical points: USS say that the assumed payroll growth assumption will be reviewed as part of the covenant review, and provide two sets of illustrations based on CPI+1% or CPI+2%. USS also raise alternative formats of recovery plan (lump sum contributions for employers rather than % of payroll, and contingent contributions).
3. Future service rate (i.e. cost of new benefits)	Although the future service rate is shown based on the Technical Provision assumptions, this component is said not to be included in the consultation (so the consultation only covers the deficit calculation). In theory this keeps the door ajar for USS to apply some smoothing to the cost of future benefits.
4. Whether post-valuation experience allowed for	USS reserve their position on what "weight" to apply to post-valuation experience.
5. What assumptions apply if the benefits are changed for future service	If benefits change, then the Trustee states that the Technical Provisions assumptions may also change (p32), but does not give any clues as to how. *Note: For the 2017 valuation, the Trustee suggested less prudent assumptions may be appropriate if future benefits are reduced to reflect the lower build-up of future risk (which can be material over long periods).*

What the valuation outcome would be under the JEP recommendations

The JEP recommendations are relevant because an independent group of experts selected by UUK and UCU spent considerable time reviewing alternative approaches, calling for evidence, and interviewing key stakeholders including the Trustee, TPR and the respective advisers to UUK, UCU and the Trustee. In a subsequent UUK consultation, employers supported the recommendations. We comment now on how the proposals compare with the JEP recommendations.

Post-retirement discount rate

The JEP suggested setting the post-retirement discount rate equal to the self-sufficiency discount rate. The Trustee proposal is in line with this recommendation.

Pre-retirement discount rate

The JEP provided three illustrative discount rates: Gilts+2.5%, Gilts+3.0%, and Gilts+3.5% p.a. At the time, it was noted that Gilts+2.5% gave a similar deficit to the 2018 valuation approach (and a lower future service rate). On the face of it, these are the three rates illustrated by the Trustee for the Strong covenant case.

However, the JEP suggested that the pre-retirement discount rate is expressed as a CPI fixed margin, rather than relative to gilts, given that growth assets are held notionally for this part of the liabilities (rather than gilts or bonds). Since the JEP report was published on 13 December 2019, gilt yields have fallen by about 0.5% p.a. relative to CPI. In our view, the illustrative JEP discount rates would increase by around 0.5% (so Gilts+2.5% would become Gilts+3% etc.) when updated using the CPI+ approach. (Our expectations for growth asset returns over government gilts have also increased between 2018 and 2020 – on our assumptions, by over 1% p.a. So, the CPI+ approach is supported by how return expectations have evolved.)

If the Gilts+3.5% pre-retirement discount rate is adopted, then we would see this as being towards the middle of the JEP range (updated using the CPI+ approach). This would lead to a cost of new benefits of 29.4% of pay, and a corresponding deficit of £9.8Bn.

Recovery Plan

The JEP recommended a 15-20-year period, noting intergenerational fairness and the unusually long period of covenant visibility. It was also recommended that asset outperformance is allowed for – to share the expected investment gains above the prudent discount rate between the Scheme and employers/members.

We set out below our view of what Recovery Plan would apply (and the total resulting contributions) were the JEP recommendations to have been followed.

Table 2a: JEP-consistent recovery plans for Gilts+3.5% p.a. pre-retirement discount rate

Length (years)	Asset outperformance (0.5% illustrated)	Approximate deficit contribution	Approximate total contributions including future benefits
15	No	7%	36.4%
15	Yes	4%	33.4%
20	No	5%	34.4%
20	Yes	2%	31.4%

Notes:

- These figures relate to the Gilts+3.5% p.a. pre-retirement discount rate, assume payroll increases of CPI+2% p.a., assume the current benefit structure applies, and assume no smoothing of the future service rate. They are subject to verification by the Trustee.
- For asset outperformance, we have shown no asset outperformance for comparison purposes. We have also shown a 0.5% allowance (i.e. the assets are assumed to generate investment returns in line with the average discount rate each year, plus 0.5%). Based on information provided in the Trustee consultation, we estimate that this would be equivalent to allowing for around 1/3rd of the expected asset outperformance over the discount rate. This would be broadly midway between the 10% allowance used for the 2017 valuation, and the 50% used for the 2014 valuation.

We also, for reference, show overleaf what recovery plans would apply with a Gilts+3.0% p.a. pre-retirement discount rate. In our view, this would be at the lower end of the illustrated JEP range based on updated conditions at the valuation date.

Table 2b: JEP-consistent recovery plans for Gilts+3.0% p.a. pre-retirement discount rate

Length (years)	Asset outperformance (0.5% illustrated)	Approximate deficit contribution	Approximate total contributions including future benefits
15	No	9%	40.8%
15	Yes	6%	37.8%
20	No	6%	37.8%
20	Yes	3%	34.8%

It is clear from these figures that the Recovery Plan consultation may be more important than the Technical Provisions consultation, and therefore it is disappointing that the Trustee is not consulting on the Recovery Plan at the same time.

How employers can respond effectively to this consultation

The 2020 valuation is difficult in terms of the results, but also in terms of the sheer uncertainty of the outcome at this point. We see three broad paths:

1. Await better information before responding

Employers could choose to not engage with the consultation until additional information is provided that makes clear the impact of particular approaches.

This would be a high-risk strategy given the Trustee's power to progress and to implement a valuation outcome (subject to consultation), and the backstop contribution increase that applies from October 2021 (i.e. a total contribution rate of 34.7% of pay).

2. Respond as best as can, and expect more serious engagement when Recovery Plan and Schedule of Contributions are consulted on

Some employers may also be content to meet the Trustee covenant support requests as far as is plausible and to define their "risk appetite", and hope that this will lead to the best outcome possible. This will then lead to the "final" price of benefits being set later this year, along with potential information on different benefit structures. This is the Trustee's preferred approach.

Other employers might choose to engage with the technical aspects of the consultation, but potentially choose not to engage with some of the questions posed by the Trustee until later in the process when additional information is provided that makes clear the impact of particular approaches, particularly in relation to the covenant support requests and risk appetite.

This may then lead UUK to present whatever information it can to the Trustee based on varied employer responses, and to seek further engagement later in the year once the Trustee has narrowed down the information presented.

3. Support conditional on overall outcome

Employers could aim to meet the Trustee covenant support requests as far as is plausible, but with the support contingent on the Trustee accepting a particular approach to the valuation, e.g. a particular discount rate and Recovery Plan parameters in line with JEP recommendations; or that is offered in principle only at this stage subject to the overall approach being acceptable following the Recovery Plan and Schedule of Contributions consultations.

As a variation, employers could also seek to enshrine enduring value from the covenant support requests. This could involve putting a time limit on the support (which is reviewed at future valuations), or placing some restrictions on future valuation outcomes for the support to continue to apply. This would be a difficult debate as any conditions could themselves weaken the value of the additional covenant support, but could be explored if employers are concerned that the covenant support will be "banked" and that further incremental requests may follow at subsequent valuations.

2. Trustee's eight consultation questions

Introduction

In this section, we set out our thoughts on the Trustee's eight questions.

Question 1

The inputs and assumptions

We provide a detailed commentary on the assumptions in the Appendix.

Except for the discount rate, and the mortality base table, all the assumptions are set based on best estimate principles. This is the same approach as the 2018 valuation, and is reasonable in our view.

Mortality assumption

We are comfortable with the overall approach to setting this assumption which is consistent with previous valuations. There may be an opportunity to adjust the assumption for the potential impact of COVID-19, and we are seeing modest adjustments applied for other 2020 actuarial valuations. We recommend asking the scheme actuary to consider this further before finalising this assumption.

Discount rate – dual discount rate approach

For the discount rate, this is part "assumption", and part "methodology" using the USS's terminology. In respect of question 1, we assume that the dual discount rate approach is selected, and focus our comments on whether the particular discount rates chosen for pre- and post- retirement are appropriate.

According to the Trustee, the dual discount rate approach reduces liabilities by between £0.5bn (Gilts+2%) and £8.9bn (Gilts+3.5%). This seems to be assessed relative to the 2018 discount rate (expressed as Gilts+1.33% p.a.), rather than the 2018 approach updated to market conditions at 31 March 2020. (It's possible that this does not make much difference, but we have asked the Trustee to clarify.)

Post-retirement discount rate

For the proposed post-retirement discount rate of Gilts+1% p.a., this is in line with the self-sufficiency discount rate chosen by the Trustee at the valuation date. As such the Trustee will have an in-built escape path to self-sufficiency (since the Technical Provisions would become self-sufficiency liabilities were the Scheme closed to new accruals, and once every member had retired). We support this assumption.

Pre-retirement discount rate

In the previous section, we set out our view that Gilts+3% and Gilts+3.5% could be considered in line with the JEP recommendations.

To determine the assumptions, the Trustee has *taken "a rounded approach, reflecting a range of factors"*. This includes considering *"broader market practice"*, and a Trustee view that retaining a 67th percentile approach (which would lead to a pre-retirement discount rate of Gilts+4.5% and a post-retirement discount rate of Gilts+1.2%) would be *"outside the range we are prepared to accept for the valuation based on advice from the Scheme Actuary, taking into account our views of the* *employer covenant, … , and the proposed RMF risk metrics [considered in question 3].*"

It is not clear why additional prudence has been adopted compared with the 67th percentile approach used for the 2018 valuation. It is possible, given the focus on self-sufficiency risk in the three metrics (see question 3 below) that similar thinking to Test 1 has informed the approach chosen by the Trustee, but in a less explicit way.

We view moving from a 67th percentile to a 78th percentile for the Gilts+3.5% p.a. pre-retirement discount rate (and a 73rd percentile for the post-retirement discount rate) as representing a big step. (Note that the Gilts+3.0% p.a. and Gilts+2.5% p.a. discount rate would correspond to even higher percentiles than the 78th – these are not shown.)

The concept of taking a more prudent approach to confidence intervals is supported by the Pensions Regulator in its letter to the VMDF (page 50), and we were interested to see this comment as it is not obviously in keeping with more general guidance to industry through the 2020 Annual Funding Statement. We are not convinced that a higher percentile approach is justified by there being greater uncertainty about future investment returns (since this should be reflected in the modelling through a greater assumed volatility of returns). However, increasing the percentile would in our view be justifiable if there is less certainty about the future employer covenant.

A discount rate of Gilts+4.5% (with a Gilts+1.2% p.a. post-retirement) has been ruled out by the Trustee. However, it is not clear that Gilts+3.5% p.a. is the maximum discount rate the Trustee would accept. Some employers may wish to explore whether a higher discount rate could be achieved, and we observe that Gilts+4% p.a. could be considered consistent with the JEP range at the valuation date.

Considering the funding package as a whole, if a Gilts+3.5% p.a. pre-retirement discount rate is adopted, then this is best considered at the middle end of the JEP range (without requiring all of the covenant supporting measures).

For the strong covenant case, the Trustee is proposing the same underlying investment strategy for each of the three alternative discount rates. From an employer perspective, the additional risks to the employers of a higher discount rate are:

- Higher contributions may be due in future, if the assumed investment returns do not materialise.
- For a given contribution rate, a higher level of DB benefits will likely be provided for future benefits. This may increase the variability of valuation outcomes in £ terms, particularly over longer periods, since deficits can arise in respect of future benefits as well as past benefits.

For the tending to strong case, we view the proposed assumption of Gilts+2% p.a. as being overly cautious (due to the jump in the level of prudence included, particularly alongside a material "de-risking" of the investment strategy).

Question 2

The methodology

For "methodology", we understand that this refers to the proposed move to the dual discount rate approach.

Our overall view is that we can see merit in moving to a dual discount rate as explained in our 17 March 2020 note, and we understand that this has been supported by employers. At the time, we raised three areas where further work was needed:

What discount rate is used at valuation date

We have commented on this in response to the Trustee's first question.

Link between funding and investment strategy

We were uncomfortable in the first consultation with the assertion that a dual discount rate approach "implies" an investment strategy of 55% growth assets.

Interestingly, the VMDF work (i.e. the modelling requested by UUK and UCU, and the results provided by USS) largely showed that there was no merit in de-risking the scheme while it remained open. The Trustee provides its own perspective on page 42 and 43, which in short is a lack of faith in modelling over longer periods. Although we note the existing valuation approach adopts a 67th percentile return from the Trustee's modelling over long periods.

For this consultation, the Trustee has continued to assume that there would be an initial de-risking (equivalent to broadly disinvesting £7Bn of growth assets) for modelling purposes – i.e. when calculating what percentile different discount rates correspond to. However, it has deferred any consultation on the investment strategy until later in the process. The Trustee will need to consult formally with employers on any change to the investment strategy.

How the pre-retirement discount rate evolves over time

Compared with the 2018 approach, it is no longer clear what the estimated valuation results would be on different dates.

Our preference is to follow the JEP recommendation of fixing the pre-retirement discount rate relative to CPI. This reflects the weighing towards growth assets in the portfolio, and the relative lack of gilts. This is a simplified approach and may not fully capture likely Trustee behaviour in certain scenarios, but stakeholders will need to know how the valuation position is developing over time, and this is not clear from the consultation.

The Trustee states that they have monitored the position, and that experience was not favourable between 31 March 2020 and 30 June 2020. But it is not clear how the Trustee has measured the deficit at the later date, or how the position has developed more recently. The Trustee should provide transparency on how the funding position will be monitored.

Question 3

The risk management framework

At present, the Trustee reports back various risk metrics to the JNC on a monthly basis. In addition, Test 1 is used currently to determine the discount rate. Under the proposed risk management framework, the Trustee defines three new metrics (Metrics A, B and C). The explicit link from Test 1 no longer applies. We assume that the metrics replace the current information provided to the JNC.

The three metrics are all grounded in the self-sufficiency liabilities. We note that the Trustee has adopted a long-term investment strategy commensurate with a long-term covenant. The Trustee is deliberately running an investment strategy that is very volatile and unpredictable on a self-sufficiency basis. We therefore struggle to understand the primacy of self-sufficiency in the Trustee's proposed risk management framework, if this is out of line with how the Trustee actually manages the Scheme assets.

While it is positive that the new metrics do not directly drive the valuation outcomes, for any risk management framework to be intelligible, one still needs to know how it will be applied. This is the main aspect that appears lacking for now. In particular:

- How will the Trustee use the metrics to drive decision-making on contributions and investment strategy?
- What would be the implications for employers of preferring a different approach, or different parameters?

We are disappointed that the Trustee's three metrics have not been discussed with the stakeholders earlier this year. The VMDF would have been an ideal technical forum to provide feedback to the Trustee.

Worked example of Three Metrics

To try to explore how they might work, we have worked through the three metrics with the Gilts+3.5% pre-retirement discount rate. The tests then work out as follows:

Table 3: USS's Three Metrics – applied to Gilts+3.5% p.a. discount rate

Metric	USS Formula	Result at valuation date (†)	USS RAG-rating at valuation date (‡)
A	"Affordable risk capacity" – "Gap between Self-sufficiency and Technical Provisions"	£12.8Bn i.e. 38-(101.5-76.3)	Green if > £8Bn Red if < £6Bn
B	"Affordable risk capacity" – "Self-sufficiency deficit"	£3Bn i.e. 38 - 35	Green if > £6Bn Red if < £0
C	"Available risk capacity" – "Self-sufficiency deficit"	£30Bn i.e. 65 - 35	Green if > £19Bn Red if < £8Bn

(†) We have assumed that "affordability risk capacity" is the present value of 30 years' worth of 10% of payroll (increasing at CPI+2%); that the pre-retirement discount rate of Gilts+3.5% is used; and that the available risk capacity is £65Bn.

(‡) For the Tending to Strong case, £8Bn would be replaced by £7Bn; £6Bn by £5Bn; and £19Bn by £15Bn, in the RAG-rating

We set out technical comments on the three metrics overleaf. In practice, the common themes are not understanding what the Trustee will do with the traffic light ratings, and how any employer input on the risk framework would impact on Trustee actions.

Metric A: Long-term headroom to self-sufficiency

The stated aim of Metric A is to ensure that, once the scheme is fully funded on a Technical Provisions basis, then the gap to self-sufficiency could be bridged by cash contributions if required. This is obviously redolent of Test 1. The key difference is that Metric A is not used explicitly to set the discount rate. The Trustee will use it to monitor the strength of the Technical Provisions funding target.

As with our previous comments on Test 1, the main technical issue is that it is very sensitive to parameters where it may be difficult for employers to give a view.

We also observe that the gap between green and red is quite small. All of the components of Metric A are sensitive to small movements in interest rates. We are also unsure how the boundaries of £6Bn and £8Bn have been calculated, and observe on page 68 that the Trustee plans to revisit these calculations *"before reaching any final conclusions"*. Finally, a small change in the assumed risk capacity (e.g. assuming 2 years shorter or longer) could cause the metric to crash from green to red, or vice versa. All in, Metric A looks very sensitive.

We can gain some insights into how the Trustee may apply Metric A from the exposition on page 29. Here, the Trustee states that:

- Metric A would be red/amber for Tending to Strong. Unlike Test 1, the discount rate does not seem to be adjusted. While this is welcomed, it is not clear what the practical consequences of Metric A are.
- For the Strong covenant cases, then Metric A is *"less constrained"* with the headroom being *"slightly more limited"* for the gilts+3.5% p.a. pre-retirement discount rate. For what it is worth, we could knock £4.8Bn off the deficit (i.e. £5Bn rather than £9.8Bn) and the traffic light for Metric A would remain green. This would correspond to a Gilts+c.4.5% pre-retirement discount rate (which would result in a deficit of about £5Bn, and a future service rate of about 25.1%). In of itself, Metric A would seem to allow a 67th percentile pre-retirement discount rate, which the Trustee appears uncomfortable with (p26).

Metric B: Short-term headroom to self-sufficiency

Metric B is similar to Metric A, but with the Technical Provisions element substituted with the actual assets (and so it does not depend on the discount rate adopted). This makes it much more volatile than Metric A, although the gap between red and green is now £6Bn rather than £2Bn.

Metric B appears like one of the metrics that the Trustee is currently providing to the JNC (the "affordability ratio" of self-sufficiency deficit divided by the value of 10% of pay for 30 years).

In terms of how the metric might be used:

- For the Tending to Strong covenant case, Metric B is red. The Trustee concludes that this *"suggests a relatively short Recovery Plan is needed"*. Other factors, principally the long period of covenant visibility, shorter-term affordability and intergenerational fairness, would suggest a longer Recovery Plan so this tension would need to be resolved in the Recovery Plan consultation should the Trustee conclude that the covenant is Tending to Strong.

- For the Strong covenant case, the Trustee rates the metric as amber/red, and states that *"there is less pressure… but the current headroom for the self-sufficiency deficit appears to be approaching the limit".* On page 16, the Trustee provides some further comments on when it might move to self-sufficiency funding. This seems to exclude cases where *"mitigation is available"*, and the Trustee states that the scenarios are sufficiently extreme *"that there is likely to have been institutional failures across a substantial portion of the HE sector".*

Metric C: Short-term capacity constraint

The third metric is like what used to be called Test 3 (which compared the net assets of the sector with the deficit on an economic basis plus a 99% shock).

In Appendix D (page 69), the Trustee states that in an extreme scenario, it wants to be able to move to a self-sufficiency approach to protect accrued benefits, which it describes as consistent with its primary legal duty.

In terms of how the metric might be used:

- For the Tending to Strong case, the Trustee states that any *"significant worsening of this metric could indicate that we would need to consider whether to move the investment strategy towards self-sufficiency".* Our interpretation of "significant worsening" here is that the metric would be £54bn-£35Bn=£19Bn, and that this would be £12Bn away from showing a "red" traffic light (i.e. it would need to fall to below £7Bn for the Tending to Strong case).
- For the Strong case, Metric C indicates adequate risk capacity in all cases.

Our main questions again are how the results of the metric would be used to make decisions. What would happen if the metric were red or amber?

We appreciate that our comments for this question are particularly technical. Taking the Risk Management Framework as a whole, it is important that the Trustee provides clarity for employers as to how the metrics will be used and applied, before meaningful views can be given.

Question 4 ***The figures for the Technical Provisions***

The figures for the Technical Provisions are a function of the answers to questions 1 and 2. Clearly the results are very poor.

The precise figures for the Technical Provisions basis should not matter, provided that a sensible smoothing approach is then applied to the information at the valuation date. In this context smoothing means through the Recovery Plan, and potentially some smoothing of the future service contribution rate.

While the Recovery Plan is not being consulted on, the Trustee has provided illustrated figures which have been determined based on guidance from TPR and advice from the scheme actuary. We have not seen the advice from the scheme actuary. TPR provided input to the VMDF on the Recovery Plan (Appendix A to the Trustee's consultation).

Here, TPR makes five points which we address in turn below (using our labelling of a) to e)).

a) A strong covenant means the ability to pay higher contributions. TPR would not expect a long Recovery Plan for a Strong or Tending to Strong covenant

It is ultimately up to TPR how it "defines" the covenant classifications. We do believe though that the USS covenant is unique. In TPR's consultation on the new code of practice on funding, it states that a typical covenant is visible for 3-5 years. The assessed 20-30-year visibility is very different to what TPR is used to, and we believe legitimises a longer recovery plan than would apply for a typical strong employer. With the cost-sharing Rule, long periods help maintain intergenerational fairness, and the modelling we requested for the VMDF showed that smoothing helped to keep contributions stable for different cohorts of members over time.

b) The starting point is usually to keep the same end-date for the Recovery Plan

We do not agree with this element of TPR's position. For an open scheme with a long-term investment strategy, the valuation results will be very volatile from one valuation to the next – because the assets are intentionally and possibly permanently mismatched. The only way to sensibly manage this volatility in our view is to have appropriately long recovery plans. It would be very unusual in an open scheme with a growth-oriented strategy to reach the expected position at the next valuation date. What we have this time is the direct result of the Trustee's investment mismatch and how this has performed over the last three years. Therefore, the starting point should not be the current Recovery Plan end-date – and TPR should accept that Recovery Plan periods will need to change, otherwise schemes like the USS are simply not going to be viable.

In addition, in UUK's response to the Trustee's consultation on the 2018 recovery plan (letter dated 11 September 2019), UUK noted that the context for the 2018 valuation was quite specific and it was only on that basis that employers considered the recovery plan proposals to be in any way acceptable. UUK also stated that employers did not believe that the outcomes reached on the 2018 recovery plan should set any kind of precedent or template for what they might consider reasonable and justified at the next and subsequent valuations.

c) Trustees should take into account affordability, and the change in deficit could result in the Trustee agreeing to extend the Recovery Plan

We agree that the Trustee should consider affordability. This is also consistent with recent COVID-19 guidance from TPR and we understand that around 10% of UK sponsoring employers are currently suspending deficit contributions. At present, the Trustee does not appear to have taken affordability into account.

d) A long Recovery Plan combined with a significant element of investment outperformance would remove much of the prudence in the Technical Provisions assumptions

We agree that an overall funding approach can be weakened by a long Recovery Plan in tandem with significant asset outperformance. It is worth noting though that if the Trustee adopts a 0.5% p.a. asset outperformance assumption (alongside a Gilts+3.5% p.a. pre-retirement discount rate), then the overall approach would still be more prudent than the 67th percentile, which would be more prudent than the confidence interval used for the 2018 valuation. Therefore, we believe such an approach could be justifiable to TPR.

e) To become comfortable with a long Recovery Plan, TPR would require some contingent support that underpins affordability

The suggestion for contingent support is consistent with general TPR messaging in the annual funding statement. We do not believe contingent support is necessary given the characteristics of the covenant support of USS employers and where the Trustee has a unilateral contribution power, since the Trustee does not need employer agreement to increase contributions in future. (Indeed example 12 of TPR's March 2020 consultation on the code of practice acknowledges that a unilateral contribution rule is part of trustee evidence that they have properly managed risk.)

In summary – clearly the Trustee is operating in a regulated environment and will need to take into consideration the views of its regulator. However, we can see the merits of the JEP recommendations for the Recovery Plan, and why the JEP came to the conclusions it did having considered feedback from representatives of all the stakeholders.

Question 5

Whether employers are willing to agree to debt monitoring and pari passu arrangements and the long-term rule change required to support a strong covenant. (We anticipate that UUK will be issuing a separate consultation to employers on the rule change.)

The central thread of the Trustee consultation is to press hard for resolution on these issues. These are covered in more detail in the UUK note.

The main issues from our perspective are:

- Employers will want to make sure that any requests are reasonable, and do not impact on the running of their institutions. We understand that comments have been provided to USS on the debt monitoring and pari passu arrangements, and that these are with USS to consider and potentially revisit their covenant support request.
- Some employers may want to understand more clearly the implications of providing the additional covenant support on the overall valuation outcome.

- Some employers may be concerned that the value of the covenant support asks will be eroded over time, perhaps as quickly as at the next actuarial valuation. The employers could seek additional protections to try to avoid this eventuality e.g. (i) Time limit the covenant support, for example to coincide with the period of the Recovery Plan (which would also help the Trustee to justify putting more weight on affordability considerations), with the support revisited at future valuations; (ii) Modify the Trustee's contribution powers in certain circumstances, for example that certain contributions requests must go through the Rule 76 process including cost-sharing; (iii) Additional covenant support falls away in some limited circumstances where the Trustee takes certain defined actions in future, e.g. requesting a shortening of Recovery Plan for existing deficit, or spreading any additional deficit over a shorter period than a defined amount. None of these options would be an easy path to take as the Trustee would be advised that any restrictions would reduce the value of the covenant support, but this could be taken forward in a working group (e.g. the Rule Change working group) if of interest to employers.

Finally, we have one lay comment on the suggestion in the 28 August 2020 letter from Bill Galvin (USS CEO) of making changes to the Schedule of Contribution (which the Trustee will consult on later). We understand this to be a reference to enforcing the *pari passu* requirements by imposing contributions on individual employers in particular circumstances. If such changes were implemented, then this may lead to employers not being treated equitably. Suppose the strongest employer takes action that in the Trustee's view means it is then only the 20th strongest employer. If the Trustee seeks to impose penal contributions on this employer, then it is treating this employer differently compared with the 320 or so employers that are still no stronger than this individual employer. We would question whether this would be a proper use of a modified contribution power. This is a non-legal view, and we suggest UUK considers taking legal advice here.

Question 6

Whether employers have any further feedback on the possibility of additional contingent support

We believe that the Trustee should acknowledge that requesting additional covenant support or cash will not necessarily result in positive outcomes for members. In particular, covenant restrictions could make it harder for institutions to compete globally; and additional cash contribution requests may be detrimental to some members either due to the potential for job losses, or the extent of benefit reform. Such measures may also bypass the scheme's cost-sharing arrangements.

The Trustee raises two ideas – contingent contributions, and contingent structures. We comment on these below along with our thoughts on having a contingent element to benefit design.

Contingent contributions

We last discussed contingent contributions in detail with the Trustee in 2018. This concluded with UUK gaining employer support to a proposal, and the Trustee then preferring an approach with no contingent contributions.

Looking at this afresh, we note that the Trustee can change the contribution rate from 30.7% to a much higher figure (potentially 69.2%) in one valuation cycle (and can decide to bring forward a valuation under the Rules). We are therefore sceptical that contingent contributions (which might lead to contributions increasing by 1%-2% a year, under proposals discussed by the Trustee and employers in 2018) would be assigned much value, though employers may welcome a concrete proposal from the Trustee.

Contingent funding structures

On contingent funding structures, the main issue from the example provided by the Trustee is that it would require employers to pay contributions to an alternative structure. But then the “win” of lower contributions to the Scheme seems incredibly hollow if it is accompanied by similar contributions to another vehicle.

As per our opening comment to this question, members would also likely be affected as the contributions to the alternative structure would then not be available to spend by institutions on pension benefits, jobs, or pay increases etc.

However, in the spirit of leaving no stone unturned, employers may welcome further clarity from the Trustee in terms of what the impact of specific example structures would be on the contributions required to the USS (along with the details of any contributions required to contingent structures so that the total costs are clear).

Contingent elements of benefit design

Another direction to potentially explore is the concept of risk-sharing within the benefit structure. In commenting on intergenerational fairness and equality in the second JEP report, the panel noted that intergenerational fairness is not an exact science, but a workable approximation is that the valuation outcome – in terms of impact on contributions and/or benefits – should not impose a disproportionate burden or advantage on any one cohort of members, or make the Scheme unattractive to particular generations.

As an example, one risk-sharing approach for benefits would be to replace guaranteed inflationary increases with an aspiration to provide inflation protection, and potentially above inflation growth if higher investment returns are achieved than those (prudently) assumed by the Trustee. This could lead to the current benefit design being maintained if investment returns are sufficient in future, while providing the Trustee with a material “safety valve” over time.

Such an approach would require consultation, and there would need to be an agreed mechanism with stakeholder involvement to ensure that positive investment returns are applied equitably.

Question 7

The level of financial support employers are collectively able to give the Scheme, and their affordable risk capacity (and risk appetite, if different), specifically:

a) the percentage of payroll available (We assume 10%)

b) the length of time over which that is available (We assume 20 years under a tending-to-strong covenant, and 30 years under a strong covenant)

c) the cost of future pension provision to employers acceptable to the sector in an adverse scenario (We assume 15% of payroll. This is on top of the 10% of payroll available for deficit recovery contributions. This gives a total rate of employer contributions of 25% of payroll)

d) the growth of the sector payroll over the longer term (We have used CPI+2% before, but we have shown alternatives)

For a), this question is difficult to contextualise against a backdrop where the Trustee presents 24 recovery plan scenarios, with the minimum recovery plan contribution equal to 11.4%. This is more than the "affordable risk capacity" employers are being asked to comment on here.

For b), employers generally supported the JEP recommendations which included a recommendation of a 15-20-year recovery plan. Employers may have views on how long payments could be made in more extreme scenarios. This question would be easier for employers to address if the Trustee were to provide clear illustrations of how different responses would impact on the contributions requested.

For c), if the covenant were Tending to Strong with a minimum recovery plan payment of 22.7%, then a 15% future benefit would lead to total contributions of 37.7%. This would lead to employer contributions of about 25.6% and employee contributions of about 11.1%. This would likely lead to many opt-outs. We believe the Recovery Plan illustrations needs to be reconsidered by the Trustee to ensure internal consistency. In the meantime, employers may be able to give a view on what is the most they would be prepared to pay for in extreme circumstances, though again the question would be easier to respond to with conviction if the consequences of different answers were made clear.

For d), the growth of the sector payroll has an impact on the Recovery Plan consultation (with a higher increase corresponding to a lower deficit contribution as a percentage of pay). Employers may be able to provide feedback on payroll growth over the next 30 years for their institutions (note this is growth of total payroll for each employer so allowing for new entrants and leavers, rather than just a view on average pay increases over the longer term). We note that the level of "opt-outs" will also have an impact on the sector (pensionable) payroll.

Question 8 **How we should determine employers' collective risk appetite, and any alternatives if you don't think the approach based on affordable risk capacity is reasonable**

From an employer perspective, we believe the focus should be on:

- What contributions employers (and employees) need to pay, assuming the USS runs on as a going concern.
- What circumstances might lead the Trustee to focus on funding the scheme on a self-sufficiency basis, and what actions would the Trustee then take.

On the first point, we believe the problem to be solved may be relatively simple to frame. Our understanding is that, subject to verification during the consultation, the current level of contributions is at the limit of what employers and employees wish to pay. If this is the case, then we should be triangulating around what benefits can be afforded for this level of contributions and for particular investment strategies (and potentially including risk-sharing to help promote intergenerational fairness). This would be more useful to employers than pondering questions about whether the contribution rate should be 50% or 69.2%. On the second point, the Trustee thinking came under some scrutiny within the VMDF. In particular, the investment strategy being pursued by the USS is a long-term strategy commensurate with the long-term nature of the employer covenant. However, the strategy offers little protection to short-term fluctuations in the self-sufficiency position. We welcome the clarification from the Trustee that they would only seek to move to a self-sufficiency position in extreme scenarios likely corresponding to the multiple failure of strong sponsoring employers.

In our view, it is right to consider the USS over long periods commensurate with the employer covenant. In addition, since the contribution rate is revisited at triennial actuarial valuations, the mechanism for how this is done should be factored into any realistic modelling of cash contributions over time.

To establish the risk of contributions changing, we need to be able to estimate the cash contributions at future valuations. To do this, we need to know:

- How Technical Provisions are calculated at future dates
- The extent of "smoothing" of the Future Service rate
- How the Recovery Plan is determined

We provided our thoughts on this to the VMDF. In brief:

- Our suggestion was to model the pre-retirement discount rate by fixing it relative to CPI (so CPI+x, with x kept constant). Our view is that while this will not necessarily be perfect or capture every scenario, it provides transparency for the basis, and provided that there is adequate smoothing in converting the results to a new contribution rate, then some variability could be tolerated.

- For the Future Service cost, we suggested modelling a smoothing mechanism where a 10% corridor applies. This means that a contribution increase (or decrease) would only apply to the extent that it sits outside a corridor based on the contribution rate at the previous valuation (e.g. if the contribution rate was 30%, then there would be no change unless it was more than 33% or less than 27% at the next valuation).
- For the Recovery Plan, we suggested aiming for a JEP-consistent approach of 15-20 years with allowance for asset outperformance. For modelling purposes, we suggested that 30-60% of outperformance was allowed. And then smoothing should be applied so that the Recovery Plan contribution is not changed if this still results in a credible Recovery Plan.

The Trustee has provided some modelling based on this approach to the VMDF, which they have published in a document entitled "*Scenario Testing & Stochastic Analysis: as discussed at the VMDF*" dated 28 August 2020. The modelling showed that the smoothing mechanisms largely did their job and led to a much more stable pattern of contributions at successive valuations.

Having better clarity on how the contribution rate would behave at the future valuations would provide information that could be used to decide between different investment strategies or potentially benefit approaches.

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3. Next steps

Response deadline for employers	This paper is prepared for Universities UK, and we have given permission for it to be shared with USS participating employers on the understanding that the report is solely for the benefit of Universities UK and we do not accept any responsibility for any other party relying on it. USS is now seeking employer views on the potential range of the inputs put forward in their recent technical discussion document. Responses should be emailed to UUK (pensions@universitiesuk.ac.uk) as soon as possible and no later than 5pm on 30 October 2020. Universities UK will be submitting a response on behalf of employers in its role as the representative body for USS employers in the scheme. This response will be informed by employer views as well as advice from Aon as actuarial advisers to Universities UK.
Compliance note	The advice in this report and the work relating to it complies with Technical Actuarial Standard 100: Principles for Technical Actuarial Work (“TAS 100”) and Technical Actuarial Standard 300: Pensions (“TAS 300”). The recipient of the report is UUK.

Appendix

In the tables below, we summarise how the main assumptions proposed by the Trustee have changed since the 2018 valuation, and add a further column with Aon comments (highlight in red).

Issue	2020 assumption	2020 assumption compared to 2018 assumption	Impact on the liabilities at 2020 compared to 2018	Aon comments
Financial assumptions				
1. Discount rate	The Trustee proposes a dual discount rate approach based on gilt yields, i.e. different rates pre- and post-retirement. The proposed post-retirement discount rate is gilts+1% p.a. A range of pre-retirement discount rates are put forward, depending on covenant strength and support for risk, from gilts+2% p.a. for tending to strong to gilts+3.5% for the strongest covenant.	The 2018 valuation used a single discount rate pre- and post-retirement based on CPI. The allowance for gilt yield reversion has been removed. The 2018 discount rate was equivalent to gilts+1.33% p.a. and was based on a strong covenant.	According to the Trustee, the DDR approach reduces liabilities by between £0.5bn (gilts+2%) and £8.9bn (gilts+3.5%).	The dual discount rate approach is in line with the JEP recommendations. We have always been clear that our support was conditional on the right parameters being applied. The removal of gilt yield reversion is reasonable in principle and simplifies the assumptions, although increases the level of prudence. The best estimate returns from which the discount rates are derived appear reasonable. USS provide a confidence level for each discount rate i.e. the chance of achieving an investment return at least in line with the discount rate.

The post-retirement discount rate is based on a notional self-sufficiency portfolio of 90% gilts/bonds and 10% growth assets, which seems reasonable. The confidence level is 73%, which is higher than at the last valuation (67%) and so appears more prudent, however this seems to be a function of unusual market conditions at the valuation date and realistically we would not expect any higher discount rate. We note that Gilts+1% p.a. is broadly in line with an average discount rate for a Technical Provisions target. It does not look excessively prudent.

The self-sufficiency discount rate is less cautious than the suggested range of Gilts+0.5% to Gilts+0.25% set out in TPR's consultation on the Code of Practice on Funding. The Trustee justifies this through modelling work carried out that demonstrates there would only be around a 5% chance of additional contributions being needed if this level of funding were reached and a self-sufficiency investment strategy pursued. (We have not seen this modelling.)

We therefore recommend supporting Gilts+1% p.a. as the post-retirement discount rate, and note that this produces a lower liability than the Gilts+0.75% assumed in the JEP's second report.

Strong covenant case

The pre-retirement discount rate of gilts+3.5% (strongest covenant) is based on 10% bonds, 90% growth assets. The confidence level is 78% compared to 67% at the last valuation, so is more prudent now. We provide a more detailed commentary in the main body of the report (in our comments on Question 1).

Issue	2020 assumption	2020 assumption compared to 2018 assumption	Impact on the liabilities at 2020 compared to 2018	Aon comments
				Tending to strong case The pre-retirement discount rate of gilts+2% (tending to strong covenant) is based on 32% bonds, 68% growth assets. The confidence level is 85%, so again is more prudent than the last valuation (67%). In our view this is more prudent than needed for a tending to strong covenant and could be challenged.
2. Inflation assumptions in respect of CPI	Market implied inflation for RPI reduced by: 1.1% p.a. in the period to 2030, linearly reducing by 0.1% p.a. from 2030, to a long-term difference of 0.1% p.a. from 2040. Single-equivalent CPI assumption is 2.1% p.a. No allowance for the inflation risk premium (IRP, the market willingness to overpay for inflation protection).	The 2018 assumption allowed for an IRP of 0.3% p.a. The reduction for CPI was 1.0% p.a. at all terms. The changes reflect proposed reforms to the RPI index from 2030, which are not currently allowed for in market implied inflation.	Increases liabilities	It is difficult to construct CPI from market implied RPI given the potential index changes. The construction of the CPI assumption is different to what we would propose, but the resulting single-equivalent rate of 2.1% is only marginally higher than the rate we would calculate of 2.0%. Nevertheless, the single equivalent discount rate is slightly higher than the rate that was rate used for the 2018 valuation and we do not believe expectations of CPI have changed. Therefore, we would have proposed that adjustments were made such that the single equivalent rate remained at 2.0%, consistent with the Bank of England target. Like the 2018 valuation, we observe there remains a small margin for prudence in the pension increase assumption with no explicit adjustment for the impact of members not receiving full benefit for CPI if this were to be above 5%.

Issue	2020 assumption	2020 assumption compared to 2018 assumption	Impact on the liabilities at 2020 compared to 2018	Aon comments
3. Salary cost growth assumptions †	CPI + 2% p.a.	No change	Neutral	For a career average scheme such as this, the salary increase assumption is less relevant to the liabilities. However, it does affect both the so-called "affordable risk capacity" and the deficit recovery contributions, which are expressed as a percentage of pay. All else being equal, a higher salary increase assumption would result in a lower deficit recovery contribution and a higher "affordable risk capacity". USS specifically invites employers' feedback on this assumption (Aon is unable to comment whether CPI+2% p.a. is a reasonable forecast).

†Salary cost is the pensionable pay paid to members of the scheme by employers, it does not include any additional payroll costs such as national insurance or pension contributions. The salary cost refers to the total payroll so depends on the number of members and their grades in future, as well as pay increases

Issue	2020 assumption	2020 assumption compared to 2018 assumption	Impact on the liabilities at 2020 compared to 2018	Aon comments
Main demographic assumptions				
4. Mortality assumptions	The Trustee proposes to adopt the same mortality assumptions pre- and post-retirement whereas previously they were different. The base tables have been updated to more recently available tables, with scaling factors based on	Overall, assumes higher mortality than adopted for the 2018 valuation, resulting in lower liabilities and contribution requirements. The assumed long-term rates are unchanged.	Reduces the Technical Provisions by about 3% or £2.7bn, with the impact broadly split between base table and future improvements.	The analysis appears reasonable and thorough. However, while there is a reduction in liabilities, we believe that overall the assumption is at the prudent end of best estimate. An explicit margin of 2% has been made to the scaling factors for prudence, in line with the 2018 valuation. We understand that this is included so that the demographic assumptions are demonstrably set in line with prudent principles, although our understanding is that all assumptions besides the discount rate are meant to be best estimate.

Issue	2020 assumption	2020 assumption compared to 2018 assumption	Impact on the liabilities at 2020 compared to 2018	Aon comments
	updated scheme experience. CMI 2019 projections (A=0.5%, S_k=7.5) for future improvements, with long-term rate of 1.8%/1.6% p.a. for males/females.			In addition, no allowance has been made for the potential impact of COVID-19. This is likely to lead to some additional prudence applying relative to best estimate assumptions (perhaps by about 3% in scaling factor terms, or 1% in liability terms). While not material compared with the discount rate discussion, given that ultimately the budget for new benefits will be driven by what's left after the recovery plan is determined, we believe this is worth asking the Trustee to consider further. The parameters 'A' and 'S_k' are highly technical and subjective. The proposed parameter values reflect that individuals in high socio-economic groups generally experience higher improvements than the general population. We agree with this principle and alternative parameter values that could reasonably be adopted are not likely to impact the liabilities by much. The assumed long-term rates were based on scheme experience for the 2018 valuation and do not appear to have been revisited. The proposed rates are within Aon's best estimate range (although more cautious than a typical scheme assumption), and we were content with the analysis carried out by the previous scheme actuary to establish this assumption.

Issue	2020 assumption	2020 assumption compared to 2018 assumption	Impact on the liabilities at 2020 compared to 2018	Aon comments
5. Retirement age	Normal health: Distribution of retirement ages between 60 and 65 Ill health: For over 60, the scale is capped at the rates for age 60	Normal health: No change Ill health: Reflects a lower recent rate of ill health retirements over 60	Not a major change	Not a major change and reflects experience. Looks reasonable.
6. Dependants' pension assumptions	Revised to reflect scheme experience	Updated approach for proportion of members leaving a dependant and lowered the age difference of the dependants of female members by one year	Modest reduction to the Technical Provisions	Not a major change, reduces the deficit and reflects experience. Looks reasonable.
7. Withdrawal assumptions	Revised to reflect scheme experience	A modest increase to the assumed withdrawal rates	Not a major change	Not a major change and reflects experience. Looks reasonable.
8. Cash commutation and transfers out	No allowance	No change	No change	Not a significant assumption given the scheme provides a standalone lump sum. Looks reasonable.
The proposed changes to the demographic assumptions other than mortality in aggregate reduce the deficit by £0.4bn				

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About Aon

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