USS

3 March 2021

USS briefing: Prudence in the 2020 Valuation

The requirement to incorporate prudence into the valuation of defined benefit (DB) pension schemes is a way of managing the risk associated with the funding of DB benefits.

The principal risk that the Scheme faces is that it will not have enough funds to pay all the pensions already promised to its members, which are due to be paid out over the course of the next 70-plus years.

In this briefing note we discuss prudence in the context of the 2020 valuation. Prudence in the valuation means that there is much greater than a 50% confidence level that our funding target, the technical provisions (TP) liability, will be achieved.

We note that prudence, like risk, is a multifaceted concept, the assessment of which requires the use of several different lenses. We also note that comparisons of prudence across different valuations are fraught with challenges.

Nevertheless, we present a comparison between the 2017, 2018 and 2020 valuations through the use of different lenses:

- Lens 1: The discount rate relative to our best estimate for future investment returns. This is expressed as a confidence level greater than 50%.
- Lens 2: The TP liability relative to our best estimate liability.
- Lens 3: The TP liability relative to the self-sufficiency liability.
- Lens 4: The impact of investment outperformance in the recovery plan in terms of the reduction in contributions.
- Lens 5: The headroom in the employers' affordable risk capacity above the TP distance from self-sufficiency.

The conclusion from this comparison is that, taking account of the different prudence lenses and the differences in circumstances and context (such as market conditions, covenant strength and the self-sufficiency deficit at the valuation dates), **the level of prudence in the 2020 valuation is not obviously materially higher than that in the 2017 and 2018 valuations**. Neither is it obviously materially lower.

For the purpose of this comparison we are using Scenario 2 for the 2020 valuation, as this reflects the central scenario in the 'Rule 76.1' report.

Note that comparing Scenario 2 with previous valuations is not a like-for-like comparison, because it corresponds to a tending to strong covenant. Both the 2017 and 2018 valuations related to a strong covenant capable of supporting more risk-taking. In particular, stronger covenant support from the employers was assumed for the 2018 valuation than we have anticipated in Scenario 2 for the 2020 valuation.

If we were to use Scenarios 1 or 3 instead, the conclusion would be the same. For example, according to the prudence lenses for Scenario 3, again taking account of the differences in circumstances, the level of prudence is not obviously materially different from in the 2017 and 2018 valuations

Note that in Scenario 3, despite the covenant being rated strong as it was in past valuations, the additional covenant support measures fall short of the support requirements on which the 2018 valuation was based.

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1. Why prudence matters

Prudence matters because, firstly, it's a legal requirement. The regulations governing Occupational Pension Schemes require the actuarial and economic assumptions that are used when calculating a scheme's Technical Provisions to be chosen prudently, taking into account an appropriate margin for possible adverse experience.

- The regulations specifically require the discount rate to be chosen prudently, taking into account the yield on assets and anticipated future investment returns and/or the market redemption yields on government or other high-quality bonds. The mortality and other demographic assumptions should also be based on prudent principles which reflect the main characteristics of the members of the scheme, and expected changes in the scheme's risk profile. (The Pensions Regulator (TPR) provides guidance on the principles to consider when assessing prudence in its Code on Funding defined benefits.)

Secondly, prudence reflects the very nature of the financial commitments being made to USS members. Employers are promising members a set inflation-linked income for life in retirement, regardless of what happens to the economy, or the HE sector in future. These promises are the means by which our members will live their lives in retirement, be that today or several decades from now. The confidence they can have in the money being there – month in, month out – is key to the promise being made and therefore critical to the confidence they can have in the Scheme.

This promise is reflected in the confidence we need to have in our funding assumptions and the relevance of low-risk assets as a benchmark that reflect the market price of 'certainty'. Modelling of future investment returns is in no way an exact science: even over long horizons, investment returns do not follow easily predictable patterns and extrapolation from history is fraught with danger. Taking risk in the way we plan to pay our members' benefits – in an effort to make them as affordable as possible – must be commensurate with the ability and commitment of their employers (collectively) to fund them if the risks are not rewarded. Here, we must recognise that taking too much risk could weaken the very financial support we are actively relying on. That is, the size of the potential payments required in future could be beyond the means of employers to fund without a significant impact on their core functions.

2. Where have we applied prudence in recent USS valuations?

There are two places where we make express adjustments in our assumptions for prudence: in a very modest explicit adjustment to our life expectancy (or mortality) assumptions and, more substantially, in the discount rates used to value the liabilities of the Scheme. As with all our other assumptions, our starting point in both instances is our 'best estimate' (based on professional advice). The best estimate corresponds to a 50% confidence level that we have made sufficient allowance for a particular assumption.

Specifically, we start with our best estimate for the life expectancy of members (based on analysis and advice from the Scheme Actuary) and make an explicit adjustment for prudence to take account of the potential for life expectancy to be higher than this. This adjustment is modest compared with that used in determining the discount rate. Its impact on the TP liability in the 2020 valuation is relatively small (around £0.5bn).

Similarly, to incorporate prudence into the discount rate we start with our best estimate for future investment returns (or 'expected returns'). We make an adjustment for prudence to take account of the potential for realised future investment returns to be lower than this best estimate (based on advice from the Scheme Actuary). The resulting estimate for prudent future investment returns is what we call the discount rate.

As we are using a dual discount rate approach for the 2020 valuation, there are actually two discount rates: one for valuing pension benefits *after* retirement and one for valuing benefits *before* retirement. This (along with other changes to the valuation methodology) makes it more challenging to compare prudence in the discount rate with past valuations. Nevertheless, we calculate a 'single effective discount rate' that averages the effect of both discount rates on all benefits.

When viewed as a margin subtracted from our best estimate predictions, the impact of prudence in the discount rate on the TP liability in the 2020 valuation is very significant (around £15.4bn - £20.1bn). This corresponds to an 82% - 86% confidence level on the pre-retirement portfolio and 73% on the post-retirement portfolio.

The range here reflects the indicative investment strategies being considered for the pre-retirement portfolio, as described in the Technical Provisions consultation document. Note that some of this prudence is essentially given back through the allowance for investment outperformance in the Recovery Plan (see below). No such allowance was made in the 2018 valuation.

3. Prudence in the valuation must be viewed through several different 'lenses'

Looking at prudence purely in terms of the assumptions for life expectancy and discount rates focuses only on valuation *inputs*. It is more instructive to view prudence through a wider set of lenses that also considers its impact on valuation *outputs*.

One of the key valuation outputs impacted by prudence is the Technical Provisions (TP) liability. Comparing the TP liability to the best estimate liability, for example, shines a light directly on the impact of prudence on the outcome of the valuation. The closer the TP liability is to the best estimate liability, then the lower the amount of prudence in the valuation. This is a very important lens on prudence.

Alternatively, comparing the TP liability with the self-sufficiency liability provides an indication of how close the valuation's funding target is to this low-risk, safe strategy.

Recall that self-sufficiency is our benchmark for risk (see pages 20 and 65 of the TP consultation document and pages 21-22 of the March 2020 Discussion Document). This is because if there were no covenant, the Scheme would need to be funded to at least the self-sufficiency level in order to provide benefit security. So, the closer our funding target (the TP liability) is to self-sufficiency, the greater the amount of prudence there is in the valuation. This is, therefore, another important lens on prudence.

As mentioned above, making an allowance for investment outperformance in the deficit recovery plan effectively reverses some of the prudence in the TP liability that comes from the discount rate. This partial reversal of prudence is not evident in the two TP-related lenses discussed above. It can, however, be taken into account by looking at the reduction it leads to in the resulting contribution rate, or in the confidence level associated with the TP discount rate.

Another lens on prudence involves comparing the current *targeted* distance to self-sufficiency (i.e., the distance between the TP liability and the self-sufficiency liability) with employers' 'affordable risk capacity' (a measure of the covenant – see below). This comparison reflects the ease with which the Scheme could move to fund on a self-sufficiency basis if it needed to do so (once fully funded on a TP basis). The greater the headroom in the affordable risk capacity above the distance to self-sufficiency, the more prudence there is in the valuation. To the extent that the affordable risk capacity is not large enough to provide adequate headroom above the distance to self-sufficiency, the valuation is less prudent.

In summary, it is necessary to view prudence through a number of different lenses, which importantly include the impact on valuation outcomes as well as inputs.

The five key lenses that we use to provide a rounded perspective on prudence in the valuation are:

- **Lens 1:** The discount rate relative to our best estimate for future investment returns. This is expressed as a confidence level greater than 50%. Note that all measures of prudence are model-dependent, but this one is particularly so, as it relies on estimating the distribution of future returns.
- **Lens 2:** The TP liability relative to our best estimate liability.
- **Lens 3:** The TP liability relative to the self-sufficiency liability.
- **Lens 4:** The impact of investment outperformance in the recovery plan in terms of the reduction in contributions.
- **Lens 5:** The headroom in the employers' affordable risk capacity above the TP distance from self-sufficiency. (This is related to Metric A in the IRMF.)

We exclude a direct comparison of best estimate and prudent life expectancy from this list as this difference is modest. Section 6 of this briefing note provides a table of these lenses for the 2017, 2018 and 2020 valuations.

In assessing the overall level of prudence in the 2020 valuation, we have also considered our approach for previous valuations (see 'Comparing valuations' below). Recall that TPR's view was that the 2017 valuation was "at the limit of what we regard as being compliant with the requirement for prudence under the Pensions Act 2004". In its letter of October 2019, it stated that the 2018 valuation was also "at the limit of what we consider to be compliant".

These valuations are therefore key reference points, or benchmarks, as to what "funding the Scheme on a prudent basis" means from TPR's perspective. Along with considering the advice from the Scheme Actuary and our covenant advisors, we have been engaging extensively with TPR throughout the 2020 valuation process. We seek to understand its views, and what assumptions might cause it to consider a valuation insufficiently prudent and therefore potentially non-compliant with the Pensions Act 2004.

We recently held a series of detailed and robust discussions with TPR to explain our position on the Rule 76.1 report and the scenarios set out in our Trustee Update. We discussed areas of our proposals that TPR felt would not be prudent enough to comply with Part 3 of the Pensions Act 2004. Scenarios 2 and 3 represent the limit of what we understand TPR would regard as compliant – subject to the relevant covenant support measures being agreed and fully implemented. You can read **TPR's views here**.

4. Prudence and managing risk – our Integrated Risk Management Framework (IRMF)

Having an Integrated Risk Management Framework (IRMF) is a regulatory requirement. It is a key aspect we have considered in arriving at the proposed outcomes for the 2020 valuation and their associated levels of prudence.

The IRMF has been designed to reflect financial market conditions and the extent to which employers have the capacity to take risk in the way the Scheme is funded. As set out above, self-sufficiency is the strategy that we would need to follow if there were no employer covenant. It is our benchmark for risk.

In the IRMF, the employers' 'affordable risk capacity' is linked directly to the strength of the covenant and compared against the distance between the TP and self-sufficiency liabilities – see lens 5, above. This comparison, which is reflected in Metric A of the IRMF (and in a slightly different way in Metrics B and C, as well) is a measure of the amount of prudence in the valuation.

In the words of the Joint Expert Panel (JEP), self-sufficiency *"is a useful concept…it provides a reference point for judging whether a scheme is over-reliant on the sponsor covenant" (JEP 1, page 8)*.

We look to avoid a position where the cost of funding a move to a 'self-sufficiency' approach is greater than employers' affordable risk capacity. This would effectively mean our only option to fund the pensions promised to our members in full was the hope that uncertain investment returns would materialise. And, again, we only need to look at the emergence of COVID-19 to appreciate how circumstances can change for the worse.

In other words, there is a limit to how much investment risk – or 'advanced credit for future investment returns' – we are prepared to take in funding our members' pensions. That limit is set by aiming to ensure the self-sufficiency deficit can always be met by the employers' affordable risk capacity.

Together with the move to a dual discount rate approach, this is consistent with the long-term funding objective proposed by the JEP on page 58 of its second report:

- *"USS aims to be fully funded on a Technical Provisions basis where Technical Provisions are valued on a low-risk self-sufficiency basis for post-retirement years and on a prudent on-going basis for the pre-retirement years. The Scheme will also ensure that, at all times, the proximity to full self-sufficiency assessed on a low-risk basis can be supported by employers over an appropriate time frame if the Scheme were to be closed to future accruals."*

This is another reason the level of prudence in the discount rate can change between valuations, and why it is not simply a case of adjusting our best estimate by a constantly fixed margin.

5. Comparing our approach to previous valuations

There is no point of principle that means we want to increase the level of prudence for the 2020 valuation.

Comparing the level of prudence in different valuations is not an exact science, because of the different lenses on prudence and the need to evaluate it in the round. This is made even more challenging when the valuation methodology has changed, as it has between 2018 and 2020 valuations.

For the **2017 valuation**, we included a margin of around £0.3bn for prudence in the mortality assumptions, and we described the confidence level (or percentile) for the discount rate as being 67% or at the 67th percentile. The latter implied a 2/3 probability that future investment returns would be at least as large as the discount rate – or, alternatively, a 1/3 probability that future investment returns would fall short.

Reaching that outcome involved the following process. First, we determined the distance to self-sufficiency that employers were comfortable to target in 20 years' time. This effectively determined the maximum amount of risk that could be taken in funding the Scheme on the basis of what was called 'Test 1'. This was a different approach to the IRMF that is being used for the 2020 valuation (which instead involves a check at the end of the process to ensure the outcome is in a suitable range).

For the **2018 valuation**, we again included a margin of around £0.3bn for prudence in the mortality assumptions, and we described the confidence level for the discount rate as again being 67%, or at the 67th percentile. In that valuation we followed a similar process to the 2017 valuation, including the use of 'Test 1'.

In addition, in order to reduce risk and prevent an increase in the amount of prudence in the 2018 valuation, we introduced requirements for additional covenant support. The valuation outcome was conditional on these requirements. They are similar to, but stronger than, the additional covenant support measures currently being considered for the 2020 valuation. Without the commitment we received from UUK to implement these measures, the level of prudence (and hence the TP deficit) in the 2018 valuation would have been higher.

For the **2020 valuation**, we conducted a thorough review of the methodology used in the 2017 and 2018 valuations. We also established the Valuation Methodology Discussion Forum (VMDF) involving representatives from UUK and UCU. As a result of considering the feedback from stakeholders, the JEP and the VMDF, we decided to make changes to the methodology. Principal among these changes were (i) the introduction of a dual discount rate approach and (ii) the removal of 'Test 1'.

The latter has directly led to the potential to take more investment risk over the long term in funding the Scheme, as well as permitting a more refined approach to the IRMF.

The 2020 IRMF introduces three key risk metrics (see Appendix D of our Trustee Update) which compare in different ways the risk capacity of employers with the distance to self-sufficiency. The outcomes for these metrics have provided another perspective on the amount of risk – and hence the level of prudence – in the valuation. These risk metrics together with the five prudence lenses above have informed our decision-making on the discount rates for each of the different covenant support scenarios.

Another factor that has been considered in the assessment of the required level of prudence in the 2020 valuation is the financial market environment on the valuation date (31 March 2020 – see our separate **briefing note** for more on this).

On this point, TPR made the following comment:

- *"Setting discount rates for schemes with a 31 March 2020 valuation date is a challenge because of the impact of Covid-19. We might expect higher expected returns versus the yield on gilts compared to the recent past, however, there is a lot of uncertainty around the future economic situation and the long-term expected investment returns. This would suggest that the Trustee should take a more prudent approach than they might otherwise do if they followed a similar approach as for the 2018 valuation in terms of confidence intervals." (TPR letter to Valuation Methodology Discussion Forum, 10 July 2020 – see pages 50-51 of the TP consultation document)*

Table 1: Comparing key elements of the 2017, 2018 and 2020 valuations ('TP' denotes Technical Provisions, 'SS' denotes self-sufficiency)

	2017 Valuation	2018 Valuation	2020 Valuation Scenario 2
Assets (£bn)	60.0	63.7	66.5
TP liability (£bn)	67.5	67.3	82.6
BE liability (£bn)[1]	54.8	54.3	62.5 - 67.2[2]
SS liability (£bn)	82.4	84.5	101.5
TP deficit (£bn)	7.5	3.6	16.1
SS deficit (£bn)	22.4	20.8	35.0
Affordable risk capacity at valuation date (£bn)	30.5	31.0	27 – 30[3]
Length of the recovery plan	17 years	10 years	10 years
Investment outperformance in the recovery plan	c.0.1%	0%	0.75%

[1] These figures for the BE liability are based on Technical Provisions mortality assumptions.

[2] The range for the BE liability for the 2020 valuation reflects the fact that the investment strategy has not yet been fully determined.

[3] The range for the affordable risk capacity for the 2020 valuation reflects the uncertainties in its input parameters.

6. Comparing prudence in different valuations

In this section we consider two key sets of inputs needed to make a holistic comparison of prudence:

- The prudence lenses discussed above.
- Context factors. These include differences in methodology (discussed above), differences in market conditions on the valuation date, differences in covenant strength and covenant support measures, and differences in the values of risk metrics in the IRMF (specifically, the self-sufficiency deficit).

Considered in the round, we believe that the level of prudence in the 2020 valuation is appropriate for the circumstances of the 2020 valuation, just as the prudence in the 2017 and 2018 valuations was appropriate in their circumstances.

In general, caution needs to be exercised in making direct comparisons between valuations. This is particularly so in the case of the 2020 valuation where a number of important contextual factors are different. These differences include the financial conditions at the valuation date, the covenant strength rating and the valuation methodology. However, we attempt to explain below how the levels of prudence can be compared on a more like-for-like basis and make some observations of financial conditions since the valuation date, in particular, and how these have impacted prudence.

Table 2 compares the prudence lenses discussed above in the 2017, 2018 and 2020 valuations. Note that the interpretation of the results in this table requires some appreciation of the context factors mentioned above.

A particular focus of our discussions with stakeholders has been on lens 1 – the confidence level associated with the TP discount rate. In isolation, this suggests the 2020 valuation is more prudent than the 2017 and 2018 valuations. It is important to note that this is a particularly model-dependent lens, which depends on the model for expected investment returns and the distribution of those returns. This is illustrated by the differences between the discount rate confidence levels calculated using USS' model (lens 1a in Table 2) and that of the Scheme Actuary's firm (Lane, Clark & Peacock – LCP) approximate analysis (lens 1b).

Furthermore, a comparison of discount rate confidence levels across valuations is complicated by changes in methodology relating to the construction of the distribution of investment returns under the Fundamental Building Blocks (FBB) model.

The 2017 and 2018 valuations used a combination of 10-year and 20-year return distributions, allowing for the time profile of expected returns relative to CPI, and the weighting of the return in each future period by the size of the corresponding benefit.

By contrast, the 2020 valuation uses a 30-year distribution of investment returns. **Using a similar approach to the 2017 and 2018 valuations would result in confidence levels for both the discount rates for the 2020 valuation that were 73% - 79% (some 7% - 9% lower than confidence level for the pre-retirement discount rate indicated in Table 2)** depending on the investment strategy. The approximate analysis by LCP also indicates lower confidence levels at 31 March 2020.

Note furthermore that re-examining the **confidence levels for Scenario 2 as calculated by USS' model at 31 December 2020 give levels that are 10% - 15% lower (i.e., *less* prudent) than those at 31 March 2020**. This suggests that the greater prudence in this lens on the valuation date 31 March 2020 can be justified.

If we adjust for the investment outperformance in the deficit recovery plan, lens 1c shows that the degree of prudence in the TP confidence level is somewhat lower than the headline figure in lens 1a, but it still indicates greater prudence than in previous valuations. Note that again the LCP analysis suggests lower confidence levels, more in line with previous valuations (lens 1d).

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Table 2: The prudence lenses and context factors for the 2017, 2018 and 2020 valuations.
('TP' denotes Technical Provisions, 'SS' denotes self-sufficiency)

Prudence lenses and context	2017 Valuation	2018 Valuation	2020 Valuation Scenario 2
Lens 1: **Confidence level of TP discount rates**			
Lens 1a: Confidence level using USS' model for investment returns	67%	67%	Pre-retirement: 82% - 86%[1] Post-retirement: 73%
Lens 1b: Confidence level using LCP's approximate analysis	N/A	N/A	Pre-retirement: Broadly 5-10% lower[2]
Lens 1c: Confidence level allowing for investment outperformance in the recovery plan using USS' return model	67%	67%	Pre-retirement: 76% - 84%[1,3]
Lens 1d: Confidence level allowing for investment outperformance using LCP's approximate analysis	N/A	N/A	Pre-retirement: Broadly 10% lower[2,3]
Lens 2: Ratio of TP to best estimate liabilities (TP/BE)	123%	124%	123% - 132%[1]
Lens 3: **Comparing TP and SS liabilities**			
Lens 3a: Ratio of TP to SS (TP/SS) as %	82%	80%	81%
Lens 3b: Distance of TP to SS (SS–TP) in £bn	£14.9bn	£17.2bn	£18.9bn
Lens 4: Reduction in contributions from investment outperformance in recovery plan	c.1% of payroll	-	7.1% of payroll
Lens 5: **Headroom in affordable risk capacity above TP distance from SS**			
Lens 5a: Headroom as %	51%	45%	29% - 36%[4]
Lens 5b: Headroom in £bn	£15.6bn	£13.8bn	£8bn - £11bn[4]
Context 1: Financial market conditions at the valuation date	Broadly stable	Broadly stable	Volatile
Context 2: Covenant strength rating	"Strong"	"Strong"	"Tending-to-Strong"
Context 3: Self-sufficiency deficit	£22.4bn	£20.8bn	£35.0bn

[1] The ranges shown for lenses 1 and 2 for the 2020 valuation reflect the fact that the investment strategy has not yet been fully determined.

[2] Reference to LCP confidence levels is based on approximate analysis rather than full stochastic modelling, which gives lower confidence levels than those obtained from USS' model.

[3] This analysis involves calculating the pre-retirement discount rate that would produce broadly the same aggregate contribution rate with no investment outperformance. The confidence level of that pre-retirement discount rate has been assessed on the FBB assumptions.

[4] The ranges shown in lenses 5a and 5b for the 2020 valuation reflect uncertainties in input parameters in the calculation of affordable risk capacity. The headroom excludes the allowance for asset transition and demographic risks.

Why has the confidence level of the discount rate increased? For the 2020 valuation, the confidence level is not a predetermined input into the determination of the TP discount rate. Rather, it is a consideration for, and an output of, our decision making on the appropriate discount rate to be used.

In fact, there are multiple inputs into the Trustee's determination of TP discount rates beyond the confidence level. These include covenant, expected investment returns, potential investment strategies, market conditions at the valuation date, the self-sufficiency deficit, advice from the Scheme Actuary, regulatory requirements and guidance, and the view of TPR. These inputs are all considered in a balanced way in the decision process, without any one input taking precedence.

The confidence level of the TP discount rate is only one indicator of the level of prudence in a valuation, and it does not give a complete picture. Only combining this lens with the other prudence lenses do we get a more rounded perspective.

On lens 2, the 2020 valuation has about the same or slightly more prudence than 2017 and 2018 valuations, depending on the final investment strategy.

On lens 3, the story is similar, showing about the same prudence in terms of the ratio (lens 3a) but less prudence in terms of the difference between TP and self-sufficiency liabilities (lens 3b).

By contrast, lens 4 suggests that in terms of contributions the investment outperformance means that the Recovery Plan is less prudent than in 2018 (noting that both are of the same length).

Finally, lens 5 compares the TP distance from self-sufficiency to affordable risk capacity (and is related to Metric A in the IRMF). This suggests that the 2020 valuation is less prudent (or rather 'higher risk') than in past valuations. In particular, lens 5a shows that the headroom has fallen from 45% of the affordable risk capacity in 2018 to 29%-36% in 2020. Lens 5b translates this reduction in headroom into a monetary amount showing a fall in headroom from £13.8bn in 2018 to a lower level of £8bn - £11bn in 2020. (Note that this particular headroom calculation does not account for the required risk buffer used in Metric A of the IRMF, which would further reduce the headroom.)

The different lenses in Table 2 provide a mixed picture. This suggests that **the amount of prudence in the 2020 valuation is not obviously materially higher than in previous valuations given the circumstances**. Neither is it obviously materially lower.

The above qualification, "given the circumstances", is important. It is necessary to understand certain key differences in the contexts of the different valuations, as indicated in the last three lines of Table 2.

First, the 2020 valuation has a date at which financial market conditions were extremely challenging and volatile, which, if anything, would be cause for slightly greater prudence than at other dates. (This is supported by the fact that USS' calculated confidence levels for the same pre-retirement discount rate are 10% - 15% lower on 31 December 2020.)

Second, the covenant rating for Scenario 2 in the 2020 valuation is tending to strong, as opposed to strong in 2017 and 2018. Furthermore, the additional covenant support measures are much weaker than those on which the 2018 valuation was based. Both of these points would also be cause for requiring greater prudence.

Thirdly, the 2020 self-sufficiency deficit (a key risk indicator in the IRMF, captured in Metrics A, B and C) has increased by more than 50% since 2018, at the same time that the affordable risk capacity has marginally fallen. This too would present grounds for requiring greater prudence in 2020.

Finally, note that if we were to use Scenario 3 for the 2020 valuation instead of Scenario 2, the result of the above comparison would be broadly unchanged. In particular, Scenario 3 has slightly less prudence than Scenario 2 in terms of lenses 1, 2 and 3, but slightly more prudence in terms of lenses 4 and 5.

7. Conclusion on prudence relative to past valuations

We understand the importance of explaining the final position we have reached, which has been based on extensive input and advice from the Scheme Actuary and our advisors, as well as engagement with TPR.

As we have sought to illustrate above, prudence should not be considered through a single lens or a face-value comparison of metrics. Rather, it is ultimately a subjective judgement factoring in a broader set of metrics and a wider set of contextual factors.

As a result, we conclude that, when considered in the round, the level of prudence in the 2020 valuation (under Scenario 2 in the 'Rule 76.1' report) is appropriate given the circumstances of the valuation, as was the case in the 2017 and 2018 valuations.

This judgement takes into account key contextual factors, including the differences in financial market conditions on the valuation dates, differences in the covenant, and differences in key risk metrics such as the self-sufficiency deficit.

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