USS Valuation – Questions and Answers

Universities UK

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Understanding USS

What kind of pension scheme is USS?

USS is an occupational pension scheme, which is offered by all pre-92 universities and related institutions, some post-92 universities (on a specific, limited basis) and several other organisations associated with the higher education sector. It is a private pension scheme. This means that the scheme is not underwritten by the Government, and is supported instead by over 350 employers which back it.

USS currently offers “defined benefit” pensions, what does this mean?

USS is the largest private pension scheme in the UK (by fund value) still allowing new defined benefits to be built-up. ‘Defined benefit’ is a type of pension offer whereby an employer promises a specified pension payment and/or lump sum at retirement, which is calculated through a formula based on a member’s salary and length of service.

Defined benefit is distinct from ‘defined contribution’. In a defined contribution scheme, members have individual saving pots that both they and their employer pay into. At retirement, members draw their pension savings from their fund which consists of all of the contributions paid in plus the investment returns that have been earned. They can then choose whether they wish to take out all their retirement savings as a lump sum, through an annuity (or pension), or for example under other options such as drawdown.

USS is a hybrid scheme, meaning that it offers both defined benefit and defined contribution benefits. Members earn a defined benefit pension on salary up to £55,550 (2017/18 threshold) and defined contribution benefits on salaries above this threshold.

Who funds USS?

USS pensions are funded by employer and member contributions, and by investment returns. Employers pay the equivalent of 18% of your salary towards USS, and you currently pay 8%. Your own contributions to USS are deducted from your gross earnings, meaning that you do not pay tax on your pension contributions (if you are a tax payer).

Contributions alone are not enough to pay the benefits promised. Your benefits are also funded through investment returns. If contributions and investment returns prove insufficient to pay out defined benefit pensions when they fall due, employers (and scheme members through the cost-share formula) must make up any difference. Employers offering defined benefit pensions therefore carry a significant level of risk, and ultimately bear responsibility for payment of the promised benefits.

Who runs USS?

The USS trustee, supported by its committees, directs and controls the scheme. The day-to-day job of running the scheme is delegated to the group executive. UCU nominates three of the twelve people on the USS trustee board, Universities UK

nominates four, and there are five independent trustees. More information on the trustee board and its committees can be found on the USS website.

Who decides on the scheme rules and what benefits are offered?

Any changes to the scheme rules and by extension the benefits that are offered through USS must be decided on in the Joint Negotiating Committee (JNC). The JNC is made up of five Universities UK (employer) representatives, five UCU (scheme member) representatives and an independent chair.

What is the difference between USS and the Teachers' Pension Scheme?

Staff at some universities (particularly post-92 universities) are in the Teachers' Pension Scheme rather than USS. This scheme is very different from USS.

TPS is a statutory, unfunded scheme backed by the UK tax payer. In contrast, USS is a private (non-statutory) scheme directly backed by higher education institutions with, in relation to its defined benefits, a fund set aside (from employer and member contributions, plus investment return) to pay benefits. This means that USS employers carry the risk that the fund providing the defined benefits is insufficient to deliver the promised benefits, whereas TPS benefits are ultimately underwritten by HM Treasury. Unlike USS, TPS is not reliant on investment performance. TPS also has different valuation requirements and is not subject to the approach that the USS trustee must follow.

USS's challenging funding position

What is happening to USS and how will it affect my pension?

Every three years USS is required to carry out an actuarial valuation. During a valuation, the USS trustee establishes how much money needs to be paid for the current level of benefits and whether sufficient money is likely to be available to pay out benefits when they fall due.

The USS trustee has indicated that to continue to offer current benefits, contributions would have to rise by approximately £1 billion per annum. The JNC therefore had to consider how the cost of that increase should be met. Employers put forward a proposal for benefit reform to ensure that USS remains sustainable and affordable. Following negotiations with UCU, employers revised their proposal. This revised proposal has now been adopted by the JNC and will be subject to consultation with members in March. Importantly, it should be noted that benefits already built up in the scheme are protected by law and cannot be changed retrospectively. More details on the negotiation and the benefit reform proposals are outlined in other answers.

Why has the cost of future defined benefits increased so much since the last valuation?

The cost of future defined benefits in USS has increased by more than a third since the last valuation. This is primarily due to lower expectations for economic growth, and specifically lower expectations for future investment returns. This is a problem faced by the vast majority of UK funded defined benefit schemes. The increased cost of making new defined benefit promises is one of the main financial challenges at this valuation.

Why is the scheme in deficit?

The deficit at the valuation date (31 March 2017) is estimated at £6.1bn and is similarly driven by exceptionally challenging economic conditions.

In 2014, Universities UK agreed a recovery plan to remove the deficit over 17 years through deficit recovery contributions paid by USS employers from 1 April 2016 (and some planned additional investment return). Universities UK did not expect the deficit to be fully addressed by March 2017 but the increased deficit is a sign of the higher level of risk involved in funding a much larger pension scheme by size of liabilities than was predicted three years ago.

Have other schemes within the higher education sector also been affected?

Until relatively recently the higher education sector offered final salary pension benefits to the vast majority of employees. However recent reforms have seen increasing divergence in the pension schemes offered in the higher education sector. Most have been reformed in one way or another, though the scale and shape of that reform would have depended on the specific circumstances and status of the different schemes.

Comparisons have been drawn between USS (predominantly for pre-92 institutions) and the Teachers Pensions Scheme (TPS) (for post-92 institutions, amongst others). However, this comparison is misleading, without recognising that the TPS is underwritten by the Government.

Is the scheme going to collapse?

No. USS is supported on a collective basis by over 350 employers that are committed to the scheme. The scheme is designed so that the risk being run by the USS trustee is monitored, and does not exceed the risk capacity of the sponsoring employers. This is one of the reasons why changes are needed now.

It is clear that the risk the USS trustee is running in the current economic environment is very high and that action must be taken to put scheme funding back onto a sustainable footing. If this risk is not addressed, USS employers and members may be asked to pay an unaffordable amount to plug any gap. This would impact on the generosity of the pensions employers could offer in future, and would require funds to be diverted from other central activities, such as teaching and research and would likely lead to other pressures on higher education institutions and not least on jobs.

This is why the JNC has decided that a reform of benefits is needed in order to ensure the scheme is secure and sustainably funded, and to not put at risk the wish to provide excellent pension provision for employees for the long term. Universities can't afford to pay more into pensions without diverting money from other areas, such as teaching or research.

Negotiations on benefit reform

Why did employers propose benefit reform?

The USS trustee is responsible for setting the contributions required for the current benefits and has concluded that contributions must rise, substantially so. The cost of providing the defined benefits (DB) component of the overall USS future service benefits has risen by over a third since the last valuation. This means that to maintain current benefits overall contributions towards USS would have to increase by approximately £1 billion per annum.

USS employers pay 18% of salaries towards USS. This is a high level of employer contribution and reflects a clear and continued commitment to offering high quality retirement benefits. Over the past three valuations, employer contributions to USS have risen by almost 30% (from 14% in 1997 to 16% in 2009, and then to 18% in 2016). Employers are not in a position to increase their regular contribution further, and it is clear that many employees would find an increase beyond the current member contribution of 8% of salaries challenging too.

The trustee (and indeed pensions law) requires the increased cost in future service benefits to be addressed at this valuation, and the Pensions Regulator and trustee will also need to agree a credible plan to address the increased deficit. Benefit reform is necessary to ensure the scheme is on a stable and sustainable footing for the long-term. It is not in employers' or in members' interests to increase cost or risk to an unsustainable level. Controlling cost and risk is important in order to ensure that accrued benefits are secure and to enable employers to continue to make substantial contributions towards future pension benefits.

Who decides on benefit reform?

USS is governed by a clear set of scheme rules. Any changes to these rules need to be decided on through the Joint Negotiating Committee (JNC). The JNC brings together an equal number of representatives from Universities UK (UUK) and the University and College Union (UCU). The JNC has an independent chair who oversees discussions between employer and member representatives, and can choose to cast a deciding vote if agreement between both parties cannot be reached. Both UUK and UCU have to agree to the appointment of the independent chair.

Were employers willing to negotiate with UCU?

UUK and UCU representatives met over 35 times to discuss the 2017 valuation, and agreed to extend deadlines on various occasions to allow more time for discussions with UCU. UCU was keen to feed into the process of setting the valuation assumptions, and an agreement between UCU and UUK was reached to delay the scheduled consultation with employers on the valuation assumptions from May 2017 to September 2017.

In addition, extensions to the negotiations on benefit reform were also agreed. A decision was initially meant to be taken in the JNC on 30 November, but employers agreed to an extension to 18 December and then 19 December 2017 to allow UCU time to develop a specific proposal. Despite the late tabling of UCU's proposal, employers agreed to a further extension to 23 January. Four meetings took place in early January 2018 before a decision on reform was made.

On the basis of engagement with UCU, employers modified their proposal between December and January, introducing six specific elements to respond to issues raised by UCU. Employers' revised proposal to the JNC is available on Universities UK's website and this outlines the modifications from the original proposal clearly. In particular, employers agreed to explore a framework by which UCU and UUK could consider the possible reintroduction of DB in the future, as well as explore other risk-sharing options such as Collective DC benefit design for future valuations.

UUK has suggested further talks with UCU on four important areas to:

1) Explore alternative models for risk sharing, which might provide higher certainty about retirement benefits to USS members. An example of an alternative scheme is Collective DC (CDC), which is currently not possible under UK legislation, although this may change in the future.
2) Explore a well-defined framework for the future re-introduction of meaningful DB if economic and funding conditions improve, taking advantage of the flexibility of the hybrid model.
3) Explore how deficit recovery contributions can be kept as low as possible, so that a greater proportion of employer and employee contributions supports future benefits.
4) Engage with stakeholders on the way that any investment de-risking is to be implemented by the USS trustee, for example to ensure that any specific portfolio de-risking approaches deliver the most benefit for the associated expected reduction in target return.

Did UCU formally table a proposal?

Yes, late on in the negotiation period UCU tabled one proposal formally to the JNC in December 2017, and resubmitted this proposal (unrevised) in January 2018. UCU proposed reducing the accrual rate from 1/75th to 1/80th and keeping all other benefits the same. This would have required a 35% increase in member contributions and for employers to pay around £500 million more towards USS every year. This proposal would have meant employees contributions rising from 8% to 10.9% and employers' contributions having to rise from 18% to 23.5%.

Why could employers not agree to UCU's proposal?

Most employers made clear that they were not in a position to pay more in regular contributions towards USS. Over the last decade, employer contributions towards USS have already risen by 30%, and a further increase would have required a significant diversion of funds from other areas. Employers described that an increase in contributions would impact teaching and research, and would likely lead to other pressures on higher education institutions and not least on jobs. Most universities can't afford to pay more into pensions without diverting money from other activities, such as teaching or research, reducing universities' positive impact in the areas most central to their core mission and purpose. Increasing contributions could damage the high standards that students, research funders and others rightly expect, and could undermine the sustainability of some institutions.

Furthermore, employers do not believe that their employees would want to pay significantly more for a reduced pension benefit. Raising employee contributions to unaffordable levels could cause some members to opt-out of USS altogether.

Instead, employers asked for a sustainable and affordable solution that would continue to offer attractive benefits and maximise options for the future.

Is the decision made in the JNC final?

The USS trustee has received and approved the JNC decision and has now instructed the USS executive to support all USS employers to undertake a consultation with scheme members and affected employees – and their representatives – on the proposed scheme changes. This consultation, which will run 64 days, provides an opportunity for all affected employees to examine the proposed changes and share their views with their employers. At the end of this consultation, Universities UK, and the USS trustee, will review the comments from affected employees and their representatives, and from employers, and consider whether any modifications should be made to the proposal which, once again, would be ultimately decided upon by the JNC.

Once any proposals are finally decided upon, following the consultation, the JNC will work with the USS trustee to agree the detailed changes that will need to be introduced into the scheme rules. The USS trustee must adhere to the statutory timetable in order that the valuation is submitted to the Pensions Regulator by 30 June.

Changes to USS benefits

What was decided in the JNC?

The JNC decided in favour of a revised proposal put forward by Universities UK. The full proposal is available on Universities UK's website, and this will be set out in detail for members and their representatives in the consultation. Overall, USS will from an agreed implementation date (expected to be 1 April 2019) offer defined contribution (DC) pension saving on all salary. Importantly, the hybrid scheme structure will be maintained, meaning that DB could potentially be reintroduced in future.

USS employers want to continue to ensure that they offer high-quality retirement benefits to their employees, now and in the future. The following features were proposed to help achieve this.

- Employer contributions: Employers continue to be committed to a very high overall contribution of 18%.

- Market-leading DC: The proposed new arrangements will still be market leading pension provision, with employer contributions almost double the average in the private sector (proposed at 13.25%), along with an extremely valuable employer-funded subsidy of investment management charges.

- Protecting members in case of death and ill-health: There is no change to the provisions for death and ill-health and there will continue to be full DB style cover for members who suffer death in service or incapacity. This provides members and their families with substantial value, and certainty, in the most difficult of circumstances.

- Encouraging all USS eligible employees to save for their retirement: Employers propose designing a new lower-cost USS option for members. Employers want to offer a pension scheme that works for everyone, and are concerned that some employees are unable to afford the high member contributions that USS currently requires. The proposal will allow employees to choose a lower and more affordable level of pension saving (4% is suggested), whilst still benefitting from the full employer contribution.

- Flexibility for employers who can pay more: Employers have the flexibility to make additional pension contributions if they so wish. A uniform proposal is put forward by UUK in accordance with the mutual structure of the scheme, however the existing scheme provides employers with a power to make special employer contributions, and this will continue to be made known to institutions.

- Attractive DC design and post-retirement options through USS: The USS trustee carried out a survey of thousands of its scheme members to shape its DC product design (the USS Investment Builder), and its investment funds continue to perform strongly. UUK is working with the USS trustee through the JNC to undertake a review of retirement, and is also committed to working with stakeholders to fully explore new and innovative post-retirement options that can be genuinely attractive for members. In addition, it is critical that stakeholders work jointly on understanding what support members with DC savings require.

Are DC benefits worse than DB benefits?

DB and DC pension saving each have their own advantages. Neither is fundamentally good or bad, and much depends on the level of contributions that are made under either approach. A bad DB scheme, for example, could be one with a very low accrual rate, and a bad DC scheme would be one with low levels of contributions. Both scheme configurations are different, and have different attributes. DB is attractive because it offers a promised formula for the calculation of benefits to members, however in difficult and unpredictable economic circumstances such promised benefits can be extremely expensive to provide. In the current climate, if USS employers were to offer a DB-only scheme, even with considerable contributions of an overall 18% of salary, they would only be able to afford a very

unattractive accrual rate, meaning that members would build up limited DB pensions each year under the promised formula.

With DC schemes members build up a fund based on how much both the member and the employer contribute and on the investment returns those contributions generate. It can offer excellent outcomes for members especially if investment returns are good. DC also offers greater flexibility and choice to members in terms of how they wish to save for their retirement and drawdown their retirement savings. With significant employer contributions, the investment charge subsidy and the USS trustee's expertise in appointing fund investment managers which can deliver strong growth for members, the USS DC offer will be market-leading.

What happens to the benefits I have already built up?

Benefits for past service are protected by law and cannot be changed retrospectively. The proposed changes will therefore not affect the benefits that you have earned up to an agreed implementation date (expected to be 1 April 2019).

Are employers proposing paying less towards pensions?

No, the overall amount employers have committed to pay towards USS benefits is 18% of salaries. Employers have committed to maintaining this level of contribution until at least 2023.

How will the 18% employer contribution be made up?

Employers will continue to pay 18% of salaries in total towards USS. This contribution includes a proposed contribution of 13.25% of salaries directly to your DC pot (alongside your own contribution). This is almost double the average employer contribution to DC in the private sector.

The overall 18% figure also includes the cost for employers of paying for defined benefits in the eventuality of death in service or incapacity, offering the investment management charge subsidy, paying the trustee's administration costs, and making up the funding deficit on promised benefits.

How much will I pay to participate in USS once benefits are reformed?

As a standard you will continue to pay 8% of salary towards your USS benefits. However, employers want to offer a pension scheme that works for everyone. For this reason, it is proposed that USS should offer the option for members to elect to pay less (4% of salary is suggested), whilst still benefitting from the full 18% employer contribution.

UCU have suggested that I could be £200,000 worse off once benefits are reformed, is this true?

The figure is being quoted without any indication of the assumed level of investment return, which is probably the most important assumption in any calculation. Despite our requests to UCU for these details they have not been forthcoming. What we do know if that the figure relates to an example where someone, not currently a member

of the scheme, retires on an annual salary of over £100,000 in today's terms, so it is certainly not a normal career profile.

Critically this illustration also fails to recognise that, in a world where there is no change to pension benefits, there would be an enormous increase in cost for employers and employees to maintain current benefits. This would have far-reaching consequences and would lead to pressures on higher education institutions and not least on jobs.

It is true to say that benefits built up in the future will be lower. UUK commissioned its own modelling from its advisor Aon, and this work suggests that under the proposals, and including standard state pension entitlements, current members should continue to receive retirement incomes equivalent to 80-90% of those that would, hypothetically, have been received under the current benefits. All of the workings, including the full assumptions, are shown in the modelling on UUK's website. Further modelling from USS, including an interactive benefit modeller will be included in the employee consultation on benefit reform, which starts in mid-March.

Can I pay more to continue my current benefits?

Member contributions only meet a proportion of the cost of current benefits. If the current level of defined benefits continued to be available this would represent an additional cost of at least 11% of salaries (member contributions are currently 8%). Universities UK does not see a way in which employers or employees could afford that level of increase in cost, particularly as some members are indicating that they have affordability concerns at the current contribution rates. In addition, even if members could afford higher contributions to provide defined benefits, the benefits that are provided are still ultimately underwritten by employers and the risk exposure at the moment is too high.

What if the funding position dramatically improves before the next valuation?

The proposed changes are designed so that the DB section of the scheme is 'dormant' rather than closed. This means that, if the economic conditions were favourable, defined benefits could be reconsidered. Universities UK and UCU will review the situation in the JNC at the next scheme valuation in 2020. Universities UK have made clear in their revised benefit reform proposal to the JNC that they wish to discuss with UCU the conditions under which defined benefits could be reintroduced.

How can I share my views on the planned benefit changes?

In mid-March 2018, all employers will launch a consultation on the planned benefit changes with USS members and other affected employees, and their representatives. The consultation is scheduled to run for 64 days, and will include information and modelling to help you understand what the planned changes will mean for you.

Is there prospect of changes to the proposal in the light of the consultation?

Yes. A priority for employers is to offer valued and sustainable pensions to their employees, now and in the future. Employers will listen carefully to the views of members through the forthcoming consultation. Our focus now is to work with UCU

and USS to shape the details of the new benefit structure so that it offers flexibility, choice and market-leading DC pensions that are attractive to employees. The USS trustee will then consider and propose modifications to the JNC based on the outcome of the consultation.

If I'm contemplating retirement, should I do so before the changes come into effect?

The planned benefit reform will only affect benefits earned after the implementation date (1 April 2019). All benefits earned before are protected by law and will not be changed retrospectively. The changes proposed at this valuation are in part to make your accrued benefits even more secure by safeguarding the sustainability of the scheme. For this reason, the planned benefit reform should not impact directly on your decision on when to retire.

Would I be better off choosing my own pension independently?

USS will offer market leading and attractive tax-efficient benefits that are likely to be much more generous than options you could gain access to on the open market. USS members not only benefit from the contributions they pay themselves, but also from a high employer contribution rate (which includes payments from USS employers to cover the administration costs of the scheme, generous death-in-service and ill health cover, and an investment management charge subsidy). Importantly, if an employee decides to secure his or her own pension scheme independently, they would not be able to benefit from the same employer contribution. In almost all cases, USS employers cannot offer the possibility of paying towards a different scheme for their employees (due to the exclusivity rule).

What information should I consider if I am deciding whether or not to take strike action?

UCU have indicated that they called industrial action because of employers' failure to reach an agreement with UCU to protect pensions. However, if you are considering strike action it is important to be aware of the following.

Reforms are necessary to ensure that USS remains sustainable

The 2017 valuation presents a huge challenge for USS employers and employees. The deficit at the valuation date (31 March 2017) based on current benefits is estimated at £6.1 billion and is driven by exceptionally challenging economic conditions. These facts cannot be ignored and meaningful action is needed now to ensure that employers can continue to offer valued and sustainable pensions to their employees, now and in the future. The Pensions Regulator requires that a credible deficit recovery plan is agreed by June 2018.

Pension benefit changes are necessary to put the scheme back on a secure footing, and that the proposed strike action will only serve to unfairly disrupt students' education.

This is a position that neither employers nor members want to be in. However, employers have very carefully considered the situation and designed a solution intended to ensure the scheme's sustainability whilst still offering valuable pension

benefits. The option of reintroducing DB or alternative style benefits remains open in future if economic conditions improve.

Employers and UCU worked hard to reach agreement, but UCU was unable to move from its position

Throughout the valuation process UUK sought to have meaningful negotiations with UCU however it is clear that their official policy, as adopted in a special conference resolution on 9 November 2017 and reaffirmed on 22 January "to refuse to accept detrimental changes to the USS pension scheme" limits their ability to engage and negotiate with employers on benefit reform. UCU's proposal to the JNC, tabled in December 2017 and again in January, further reflects that the only outcome acceptable to UCU would require members to pay over 35% more for a reduced benefit and a very significant increase in employer contributions. This is clearly unacceptable to employers but also to many members.

Work on the 2017 valuation has been ongoing since autumn 2016. Over the past year employer representatives (UUK) and scheme member representatives (UCU) met more than 35 times to discuss USS's challenging funding position. A decision was initially meant to be taken in the JNC on 30 November, but employers agreed to an extension to 18 December 2017 and then 19 December to allow UCU time to develop a specific proposal. Despite the late tabling of UCU's proposal, employers agreed to a further extension to 23 January. Four meetings took place in early January 2018 before a decision on reform was made at a meeting of the JNC on 23 January. UUK cannot be accused of failing to engage.

The proposal adopted by the JNC was a modified employers' proposal and there is still scope for further discussions with UCU on a number of key aspects for the future of USS including risk-sharing alternative models, the approach to de-risking and developing a framework for considering the re-introduction of DB if conditions improve. It should be noted that these areas for future negotiation would not, it is proposed, alter the position reached by the JNC in response to the 2017 valuation, acknowledging that the proposal itself is subject to consultation.

There are ways for you to influence the benefit reform process

The valuation process has now moved on to a very important next phase of consultation with scheme members and affected employees, and their representatives. Employers will listen carefully to the views expressed. Our focus now is to work with UCU and USS to shape the details of the new benefit structure so that it offers flexibility, choice and market-leading defined contributions (DC) pensions that are attractive to employees.

You should speak to your employer relating to the practical implications if you decide to take strike action.

Valuation methodology

Employers say that they want to control risk – what exactly are these risks?

Pension risk in DB schemes is a serious concern for scheme trustees and employers, and also increasingly for scheme members (both current and future). It is important to note that the reliance placed on the sponsoring employers has grown

significantly since the last valuation, it was £23bn at the valuation date (compared to £14bn at the 2014 valuation). Benefits that have already been built up are protected by law, it is therefore inherent in DB scheme design that employers must meet the ultimate costs of providing these benefits. It can of course be challenging to determine just how much defined benefits will ultimately cost once they fall due, often many decades in the future. A large number of variables affect the cost of defined benefits, including future investment returns, inflation rates and how long members live.

The key risk for employers is therefore that promised benefits will cost more to provide than expected, which would lead to a substantial and unexpected financial burden on employers in the future. This affects members, as – given that employers have a limited budget for pensions – an increased cost towards the past will preclude employers from offering the same high contribution towards future pension savings. It also has implications for the future sustainability of the employers themselves.

Why can't the trustees take more investment risk and aim for higher returns to avoid having to pay extra contributions or make benefit changes?

Targeting higher returns increases the risk of unsustainable losses in adverse markets. This would result in the trustee having to call on employers for even higher contributions – potentially including large one-off payments – threatening the future of some institutions as well as the scheme.

Why has the trustee changed its assumptions since September?

In September 2017, the USS trustee proposed a set of assumptions upon which to calculate the scheme's liabilities as at the actuarial valuation date, 31 March 2017. Due to the size of USS, small changes to assumptions can have a big impact on the valuation outcome.

The initial assumptions proposed by the USS trustee required taking more risk than at the previous valuation. Based on the valuation assumptions developed at the last valuation in 2014, the USS deficit at March 2017 would have been £12.7 billion. The revised assumptions that the USS trustee consulted on in September 2017 would have significantly reduced the deficit to £5.1 billion.

The USS trustee already takes considerably more risk than almost all other trustees do because the scheme is supported by over 350 strong and long-standing employers. However, many employers felt that the additional risk proposed by the trustee by weakening its valuation assumptions went too far. The independent Pensions Regulator and the USS trustee's covenant advisors, PwC, also expressed some concerns on this issue.

Based on the feedback received to its consultation, the USS trustee revised its approach to incorporate a level of investment de-risking over the first ten years of the funding plan (none had been proposed by the USS trustee initially). This de-risking would provide greater protection should another adverse event occur, but also slightly reduces expected future investment returns. This results in an increase in the scheme deficit and cost of future service benefits. The deficit now stands at £6.1 billion based on the trustee's latest, and finalised, position.

I've heard that increases in life expectancy have slowed down – has this been taken into consideration?

Yes – the USS trustee has reviewed its mortality assumptions in detail for the 2017 valuation based on scheme experience and the latest views on life expectancy. Overall, this has reduced the liabilities, but only marginally so.

I have seen different approaches put forward by UCU's actuary First Actuarial which say that rather than there being a deficit the scheme is in surplus, please explain?

The USS trustee must make a professional, informed judgement of the assumptions used to value the scheme, and the level of risk that can be run. If the valuation could be carried out on what is known as a 'best estimate' basis, the scheme would have a surplus and be affordable within the current combined employer and employee contribution rate. However, the Trustee has a legal duty to take a "prudent" approach – that is set down in the Pensions Act 2004 – taking into consideration the possible risk exposure to employers if an adverse scenario occurs. These adverse scenarios are not remote possibilities. In fact, the scheme has faced a series of serious, unexpected adverse scenarios in recent years. Interest rates remain persistently low, and for example the UK's withdrawal from the EU has created significant economic uncertainty both generally, and for higher education sector employers specifically.

Even if it were lawful, the approach proposed by First Actuarial would place much too great a risk on employers and would not provide sufficient evidence that accrued benefits are secure. The approach would not be acceptable to the USS trustee and scheme actuary, employers or the Pensions Regulator, and would not be in the best interests of scheme members.

First Actuarial also argue that taking more risk is manageable because USS is cash flow-positive and that, in the longer term, holding more return-seeking assets results in a high likelihood of the current benefits being affordable. The difficulty with First Actuarial's argument is that holding return-seeking assets carries risk that they will not deliver the expected returns and that, in the words of the USS trustee in its formal response to First Actuarial "the existence of positive cash flows alone is not a sufficient guarantee of future success. Positive cash flows can still be consistent, as is the case for the scheme, with a continuing building-up of risk, which eventually could grow beyond what the employers can cope with, thereby threatening the security of members' benefits."

With different actuaries making different assumptions that reach significantly different conclusions why doesn't the USS trustee take a second opinion?

There are different methods of valuing pension scheme liabilities, and there are also a large number of variables that the trustee needs to make reasonable assumptions about. It is therefore understandable that differences of view exist. However, this should not lead to doubt that USS faces a significant funding challenge.

In reaching the final valuation assumptions the Trustee and its actuaries have considered and modelled the potential impact of a huge range of possible outcomes, and called upon the expertise of independent advisors as required. The Trustee's valuation work has been comprehensively resourced. There has also been a detailed, formal consultation on the assumptions with Universities UK, which was

reviewed thoroughly by Universities UK's actuary Aon. It is unlikely that another firm of actuaries could reach a different conclusion (that pension costs have risen significantly) without introducing significant additional risk which would not be acceptable to the Trustee or the employers.

UCU have raised a number of concerns regarding the USS valuation methodology since 2014. As a result, Universities UK and UCU worked together over a significant period to better understand the valuation methodology, and raised a number of questions for the trustee, which received a full response. No alternative methodology was proposed by UCU when requested by the USS trustee in February 2017.