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How to value a pension fund for an ongoing pre-92 higher education sector that is not about to become insolvent

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UCU commissioned First Actuarial to compile a 43-page response to the USS consultation on the Actuarial Valuation (AV). "UCU/FA"[1], as I shall refer to this response, is a significant and well-argued statement that sheds light, not just on the current USS valuation, but also more generally on large multi-employer pension schemes for schools, universities, and other institutions that are an enduring part of society. Here is a note on this document, which I hope will be accessible even to those unfamiliar with the technicalities of a pension fund valuation. My reflections all arise from the following key passage:

> 1.8 The October 2014 [USS AV] consultation paper reveals more detail of the trustee's approach than was previously available. We have conducted the debate as if the trustee's approach to setting a discount rate[2] is to be used in an "ongoing" valuation. However, it is clear from this paper that the trustee's focus is on a "self-sufficiency" valuation, which is a proxy for a buy out solvency valuation. These two kinds of valuation (ongoing and self-sufficiency) are not the same, and it has not helped the conduct of the debate that the distinction has not been made clear from the start.[3]

An ongoing valuation "assumes that the scheme continues to exist" (2.1). By contrast, a solvency valuation "assumes that the scheme terminates" (2.3) and "is relevant when a scheme is wound up" (2.7). A solvency valuation is closely related to a 'self-sufficiency' valuation. Both are "based on minimum risk, low return assets **regardless of cost**" (2.5, their emphasis), by which they mean regardless of the *opportunity cost* of foregoing the benefits of return-seeking investments such as equities (stocks and shares).[4]

According to UCU/FA, "It seems clear from the October paper that the trustee's focus is on the self-sufficiency concept, seemingly to the exclusion of the ongoing concept." (2.10) Given, however, the enduring nature and solvency of the higher education sector for next 20 years and beyond, as revealed by the Ernst and Young 'covenant' review, UCU/FA maintains that "the primary focus of

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[1] The official name of the document is "Report to the USS paper: 2014 Actuarial Valuation A Consultation on the proposed assumptions for the scheme's technical provisions and recovery plan", November 2014. It is publicly available here: http://www.ucu.org.uk/media/pdf/9/k/ucu_usstrusteeconsultationresponse_nov14.pdf

[2] Note from MO: The setting of the appropriate 'discount rate' is one of the major controversies in the dispute over USS pensions. Below I explain what is meant by the 'discount rate'.

[3] Similarly, "as we have learned from the October paper, the trustee has not been advocating an ongoing valuation at all." (6.14) (All parenthetical references in this note are to the numbered sections of UCU/FA.)

[4] See 2.6. For reasons explained in 2.8, a 'self-sufficiency' rather than a 'solvency' valuation is more relevant to a scheme such as USS, which is 'too large for the insurance market's capacity to provide annuities' for a buy out.

the trustee should be on the scheme as an ongoing arrangement for at least 20 years" (2.12).

UCU/FA also writes:

> The most likely outcome, especially given the last man standing structure of the scheme (let's say >99%) is that USS continues to exist as an ongoing scheme, at least collecting contributions from employers, asset income from the scheme's investments, and paying benefits to members – and probably remaining open to new members and collecting ongoing contributions too. The least likely outcome (let's say <1%) is that self-sufficiency becomes USS's basis for operation. And yet the approach used by USS concentrates on the 1% scenario and not the 99% scenario. (2.14)

UCU/FA then notes that the approach of the USS trustee might be appropriate to the many private sector DB schemes that are now closed, but that it is wholly inappropriate when applied to USS itself:

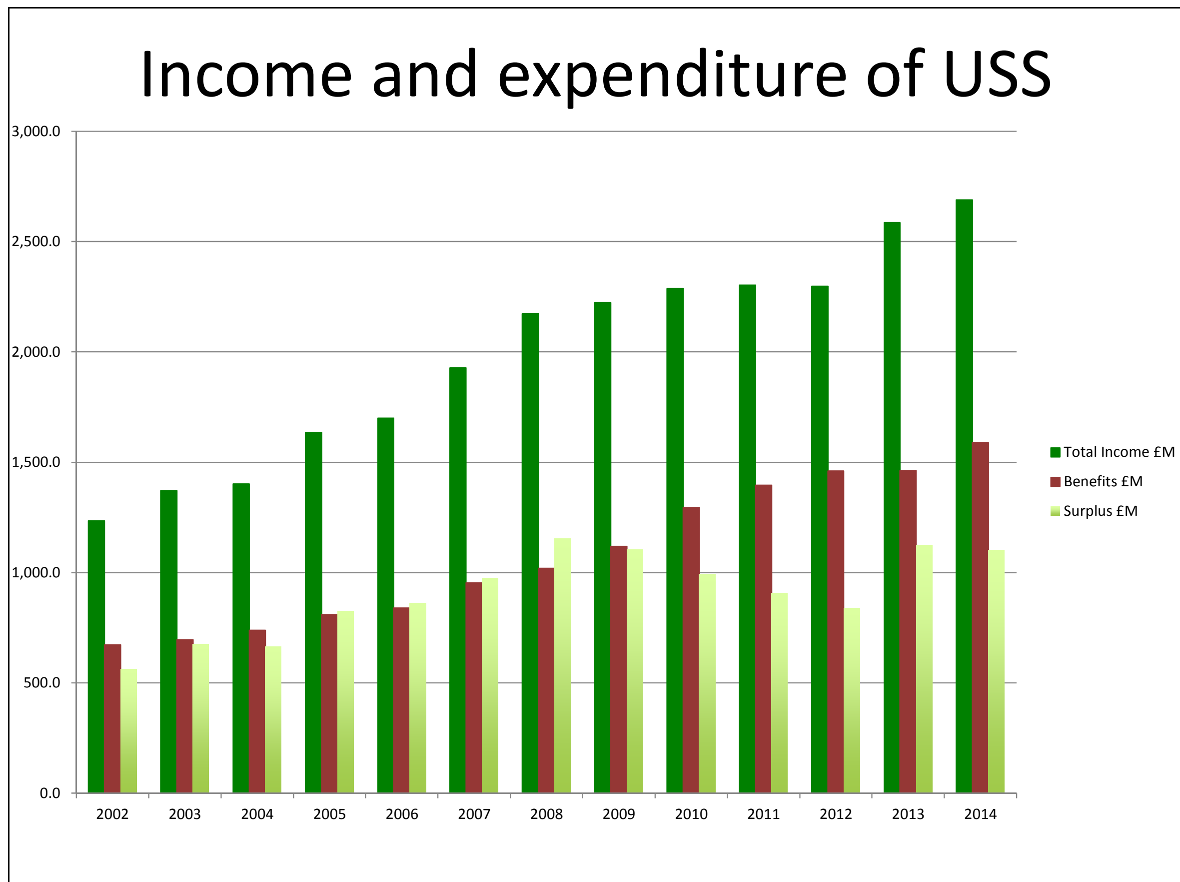
> ...the approach being taken by the trustee is not an unusual one and indeed may be quite reasonable for a scheme which is closed to accrual, has a weak employer and is aiming to get to a position where it can buy out benefits. (A position which does reflect the position of a large section of UK pension funds – and one reason why comparisons between USS and the approaches used by other schemes are unhelpful). The point is that USS is not in this situation. Large open schemes with strong employers do not need to take this approach to valuations .... (2.18)[5]

UCU/FA notes in 2.11 that, for such schemes, the following line from sec. 22 of the Pensions Regulator's Code takes on a different light: "The trustees' key objective is to pay promised benefits **as they fall due**" (emphasis added).

Assuming that the post-92 higher education sector will be ongoing for the next two decades, the question that now arises is: will annual cash flows be sufficient to pay promised pensions benefits as they fall due during this period?

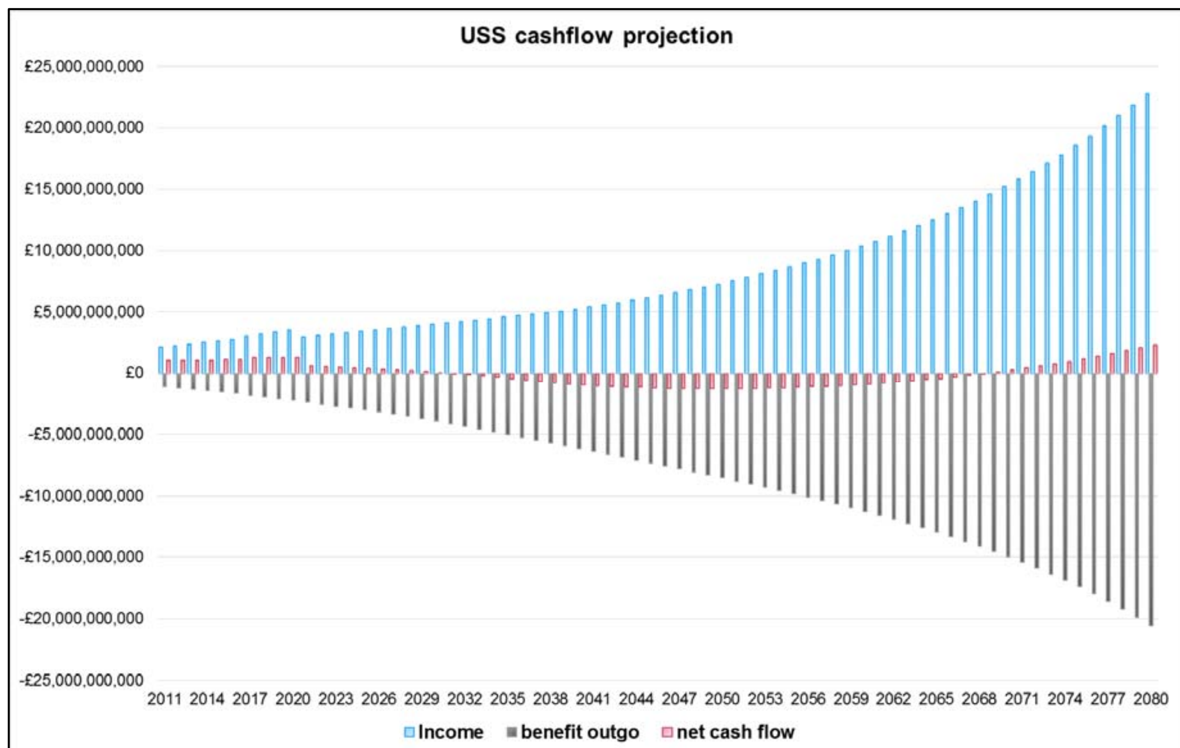
We already know that annual cash flow have been far more than sufficient to cover pensions payments during the past twelve years:

[5] 2.18 goes on to say: "– the most common examples of such schemes are the public service schemes. Needless to say these schemes do not take the approach being suggested by USS." This raises the following question: Is the pre-92 higher education sector more analogous to a single private for-profit firm which is the typical subject of the Pensions Regulator than it is to the post-92 higher education sector, which is part of the public sector Teachers Pension Scheme? I think the question almost answers itself: the pre-92 sector is more analogous to the post-92 sector than it is to the typical firm that is the subject of the Pensions Regulator.



(Graph by Dennis Leech, Professor of Economics, University of Warwick. Data from USS.)

UCU/FA projects that cash flows for the current pension scheme would, *even if unreformed*, remain positive for the period 2011-2031:



(From p. 26 of UCU/FA.)

This fact is highly relevant to the main point of contention over the valuation of the pension fund that remains between UCU on the one hand, and UUK and the USS Trustee on the other hand. This dispute has to do with the *discount rate*, which is an assumed rate of return on the investments in the pension fund. This rate is used to determine whether this fund is sufficient to pay future pensions as they fall due. Such an assumed rate of return is not the best estimate (i.e., a neutral estimate that is neither pessimistic nor optimistic) of returns on the actual investments in the pension fund. Rather, it has been 'prudently' adjusted in a more pessimistic direction.

Both USS and UUK favour a pessimistic discount rate known as "gilts plus", which is based on the rate of return on gilts, which are low risk, low return government bonds.

To see what is wrong with this approach, I invite you to consider the following analogy to a 'pension scheme' involving a single individual:

If one has one's own private 'defined contribution' pension pot, one is advised to 'de-risk' one's investments into assets such as gilts only when one nears retirement age. It is important to do so as one nears retirement, since that's the point when one's one-person pension scheme 'closes down' to further contributions and its assets are 'bought out' by an insurance company that provides you with an annuity in exchange, where the latter is a guaranteed pension for the rest of one's life.[6]

Similarly, if a closed employer's pension scheme is nearing the point where it will be wound up, and its assets bought out by an insurance company that provides a bundle of annuities for the retired employees in exchange, the trustee of this pension will want to be conservative and invest in assets such as gilts.

In both cases, one doesn't want to risk a great fall in the value of one's assets just before the point where one will sell them in exchange for pension income.

When, however, one is several years short of retirement, one is advised to invest one's pension pot into higher risk, higher return assets. Since one doesn't need to sell these assets any time soon, one can ride out the rises and falls in the value of one's higher risk, higher return stocks and shares.

Similarly, when an employer's pension scheme is ongoing rather than close to being wound up, it can remain invested in higher risk, higher return assets for the long run:

> A defined benefit scheme which is open to new entrants and has matured to a steady state position may have broadly neutral net cash flow. The contributions to benefit accrual plus the income from the assets can meet the benefit outgo. Benefits can be paid from the income without any need to sell assets. A prudently funded scheme in steady state could expect to

[6] In the UK, one needn't any longer purchase an annuity with one's pension pot. But that's beside the point I'm making.

have permanent positive cash flow, if contributions are not reduced on account of surplus. (6.3)

Under these circumstances, it makes no sense to de-risk into gilts:

> While the net cash flow is positive, there is no need to sell any assets and therefore no disinvestment risk to the USS. [Therefore,] a measure of risk which suggests a market fall is a problem would be giving a wrong message. While there is no requirement to sell assets, volatility from market value fluctuations is not a concern for the USS: the main concern is the volatility in asset income. Measures of risk and funding level which are market value sensitive, as opposed to asset income sensitive, are likely to be inappropriate in this context and should be given little attention. (6.7-6.8)

Moreover, "a gilts-based discount rate is of low relevance for a scheme expected to last for a long while, where the majority of assets are not invested in gilts." (3.10) Rather, one should instead set what is known as a "best estimate minus" discount rate. This is a discount rate that is based on the best estimate of the expected returns from a pension fund's actual investment portfolio, where this portfolio is as rationally invested into high risk, high return assets as circumstances allow. This is then reduced by a margin of prudence in order to derive the discount rate. UCU/FA recommends an approach along these lines on p. 26 – though under the moniker "internal rate of return" rather than "best estimate minus" (which is a term that UCU/FA employs on p. 8).

The above constitutes a well-reasoned argument for a "best estimate minus" rather than a "gilts plus" discount rate, applied to a pension fund that is rationally invested in return-seeking assets for the greater benefit of all, rather than de-risked into gilts. UUK's arguments for "gilts plus" are rather lacking in substance, by contrast. For example:

- "...We feel this is a more realistic position to take, given that the Gilts+ approach has been used previously, and by law the trustee does not need to change the approach."
- "Some may also be comforted by the prevalence of this approach across the UK pensions industry...."
- "We observed that many of the criticisms of the Gilts+ methodology have come from parties that are not directly responsible for addressing the consequences should the aspired for investment returns not come through in practice (meaning they have often come from eminent mathematicians and physicists, rather than from Vice Chancellors or employers' finance teams)."[7]

[7] "Response to the Universities Superannuation Scheme Consultation on Technical Provisions and Recovery Plan", UUK, 2 December 2014.