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Many UCU members are not convinced that the Defined Benefit (DB) Universities Superannuation Scheme (USS) is in actuarial deficit. (It is strongly cash positive and therefore not in deficit in the way some naively assume, as I argued in **USSbriefs7**.) Many of the assumptions behind the USS account of the deficit are questionable and there is evidence that other assumptions would lead to a different conclusion, even a surplus. The union's policy is therefore that the scheme is not in deficit and there is no reason for it to close unless clear evidence can be presented otherwise. I propose that in looking at the evidence the JEP should consider in detail the following questions.

1. USS is a special case

The USS covers a large sector of national importance, the pre-92 universities, and should not be seen in the same way as a pension scheme for a commercial company. Therefore the USS valuation should be approached in this spirit. It is not a typical company scheme and it is invalid to compare it directly with other DB schemes, as the scheme actuary does in the **video** linked to from the USS website, and the chief executive, Bill Galvin, does in his 2018 **video** to members, where he reports on the trend of DB scheme closures.

Universities are different kinds of institutions from private companies for whom the pension regulations — and equally importantly professional practice among accountants and actuaries not mandated by government regulation — were designed. We should be asking the question whether the regulations ought to apply to the higher education sector. The sector is large and important enough for that.

The current pensions regulations date from the time of the **Pensions Act 2004**. Then things were very different, the universities being funded mainly by government through the higher education funding councils. The legislation was not intended to apply to the USS, which was then a public sector scheme supported partly by the funding councils. The Articles of Association at that time provided for government representation on the Board in the form of a Director appointed by the funding councils, in practice the Higher Education Funding Council for England (HEFCE). The Articles were revised in 2012, changing the composition of the Board, to abolish the funding councils' director post. Sir David Eastwood moved over from having occupied that seat to being a Universities UK (UUK)-appointed director in 2011.

2. Need for economic pluralism in approaching the valuation

The valuation is an application of economic analysis. Since the financial crash of 2008 economics is seen to have failed in many areas. Bad public decisions have been made using the widely criticised 'mainstream' or 'neoclassical' economic theories, leading to calls from many critics for pluralism in economics. This means basing economic policy on a range of analyses using different approaches instead of the single 'orthodox' method. (See for example Jerry Courvisanos and colleagues' edited collection ***Reclaiming Pluralism in Economics***.) This argument is mostly used in the context of macroeconomics where 'mainstream' thinking led to disastrous policy mistakes, failing both to prevent the crash and to see it coming. But I would argue it also applies equally to pensions valuations, where it can lead to decisions to close schemes that would be seen as perfectly sustainable from other perspectives.

Many of the ideas that lie behind the way pensions are often valued, including the USS currently, come from financial economics, deriving from the same 'neoclassical' thinking, and are subject to the same criticism.

The USS executive appear to be using this method. For example they often claim to be being 'objective' (see, for example, **Bill Galvin's communications** of 16 March 2018) when they mean they are relying on the market to make the predictions of inflation, etc., needed for the discount rate calculations.

Financial economics also teaches that the market risk associated with investment in equities does not decrease with time. This comes from using the model of asset returns as a 'random walk'. This contrasts with the evidence from multiple studies

which find there is an equity premium — that investment in a balanced portfolio of equities held for a long period always outperforms bonds which underlies long term investment. This is a major issue at the very centre of the valuation methodology.

The JEP should ask the USS executive to provide valuations based on multiple economic methods. For example forecasts based on projections of income and outgo made using knowledge of the sector and macroeconomic forecasts. They should also question the assumptions about risk and return. If USS is using the random walk model in the valuation, which is not clear from its publications, but seems highly likely given the language with which it discusses risk, then the JEP should demand an analysis based on the alternative economic model.

The JEP should insist that the USS executive be required to give a rounded view (i.e. taking into account analyses from different angles) of how the scheme is doing, presented in simple language. They report only a single — relentlessly negative — view that clashes with the fact that the scheme is literally not in deficit — in the ordinary meaning of the word.

The USS should be asked to report a valuation based on the premise that the scheme remains open to new members and accrual indefinitely. If this shows a deficit that is unsustainable then that will tell a very persuasive story that will command the respect of members. However their present approach involves using valuation methods assuming closure, then finding the additional prudence that follows, confirming the assumption.

3. Need to reconcile fundamentally different models of investment risk

At its core, the dispute involves two fundamentally contrasting views of risk in long-term investing.

On the one hand is the view that investing in equities has a high probability of achieving a high return in the long run, through the equity premium. This is the 'patient capital' view, for which there is (arguably) considerable empirical support, often attributed to **Ben Graham** and followed by Warren Buffett, and traditionally followed by pension schemes.

On the other hand is the view, deriving from the newer random walk model of modern finance theory, that risk increases in the long run. There is no long run

equity premium and all investment is essentially short term speculation. This approach underlies the current accounting rules for pension assets and liabilities on company balance sheets. This is the view that is expressed in a particularly extreme form by John Ralfe in his frequent interventions in the media (see, for example, Ralfe's '**Pensions no longer need large equity holdings**' from 2012, and **his account** in 2011 of his role in the move Boots made to switch pension assets into bonds).

Statements by the USS Executive tend to suggest that the latter view is very much part of their risk analysis and underlies their approach to reliance on covenant and the policy of derisking. The members of UCU and our actuarial advisers, First Actuarial, tend to adopt the former view on the basis of the scheme remaining open and therefore able to invest long term. An open scheme can withstand short term volatility in asset prices (see, for example, Jeremy Siegel's ***Stocks for the Long Run***; Zvi Bodie's 1995 paper '**On the risks of stocks in the long run**'; and The National Association of Personal Financial Advisors' '**The Great Debate**' held in April 2004).

4. The strength of the covenant should be assessed on the basis that the higher education sector is of strategic national importance

The JEP should thoroughly and seriously examine the strength of the employer covenant, that is the ability and capacity of the 300 plus employers, including the 60-odd pre-92 universities, all highly reputable and significant institutions, collectively to support the scheme. The scheme should be seen as one covering a whole large and important sector of the economy, with long time horizons, and is more collectively resilient than the financial solvency of merely the current members of the USS.

Universities are not like commercial companies. They should be seen as part of the public sector and not the commercial world. There will always be a need for higher education whatever happens to the existing pre-92 universities individually in the marketplace. The assessment of the covenant should therefore not be exclusively in financial terms regarding the financial capacity of existing institutional members. The covenant should not be expressed as a financial variable subject to short term fluctuations. The idea that there is a simple market relation between the strength of covenant and the valuation should be strongly resisted.

If a university becomes insolvent much of its activities will still need to be provided, whether through merger with another institution or just by another institution expanding. There will still be need for much of the research and teaching it supplied. Therefore there will still be need for pensions to support the staff who continue this work. This is different from the life cycle of a commercial firm producing products for the marketplace. The activities of teaching and research that are the business of the members are not related solely to the existence of particular institutions, and there will still be need for them after an insolvency, requiring the continued support of a pension scheme. So it is wrong to look at covenant exclusively in terms of the solvency of individual institutions without considering the pre-92 sector as a whole.

5. Assessing the health of the scheme and complying with regulations are not the same

There are two separate issues: (i) to form a view as to whether the scheme is in good shape; (ii) strictly complying with the **regulatory formalities**. The former can start from the premise that the scheme remains open indefinitely to new members while the latter contains a presumption of possible or probable closure and the need to protect the Pension Protection Fund (PPF) in that instance because it requires the mark-to-market principle to be applied.

A pension scheme can be perfectly sustainable although not fully funded, something that has been the case with many pension schemes including sometimes the USS. If trustees have applied a sufficient level of prudence and are satisfied with the strength of the employer covenant then the Regulator should be satisfied. The Pension Regulations are sufficiently broad in giving considerable latitude to trustees on the discount rate and other matters to allow this.

However if the approach to the valuation is exclusively or mainly via the regulatory rules construed narrowly, for example using only accounting rules to value liabilities, ignoring this latitude, then it may induce directors to make changes in the management of the scheme which will harm its long term health to the detriment of members. The most salient example of this is the plan to 'derisk' the investment portfolio by replacing equities by government bonds.

6. Need to follow actuarial guidelines in the spirit as well as the letter

The Pensions Regulator's **guidelines** (116) say trustees 'must choose an accrued benefits method for calculating the scheme's technical provisions [i.e.] the value placed on benefits accrued to a particular date. Trustees must take advice from the actuary on the differences between the accrued benefits funding methods available and the impact on the scheme of changing the funding method'.

USS does not appear to be doing that and is failing to properly consider alternative methods that give a different picture. It is doggedly working to a fixed blueprint and failing to consider alternatives which may benefit members.

7. Need to explain where the deficit arises as a simple historical process

Despite what USS keep saying, the scheme is not currently in deficit in the normal meaning of the word. The overriding requirement is to require the USS executive to explain *precisely* how the present—actually very large—annual cash surplus of well over a billion pounds per year turns into a deficit; in what year that is predicted to happen; and whether it will return to surplus. Although this question has been asked many times by UCU, so far no response has been forthcoming.

Instead USS presents a narrative in terms of a single methodology comparing balance-sheet assets and capitalised liabilities. The focus is on discount rates, and the fact that the scheme is—literally—in a trading surplus is ignored. We need to know if there is really a deficit in a practical sense or it is merely a consequence of a particular flawed theoretical approach.

8. Provide an analysis in terms of cash flow projections for income and outgo

Preliminary studies using partial information done by First Actuarial for UCU in 2017 have suggested strongly that the scheme is sustainable over the long term and for a range of assumptions—provided it remains open. More work needs to be done, building on this, using the complete data that USS can provide.

This projected income and outgo approach ensures that the assets and liabilities expressed as capitalised sums on a consistent basis since the same discount rate will be used for both. In this sense the issue of choice of discount rate becomes of

minor importance. This does not get round the legal requirement to value the assets at market prices.

9. The assessment of reliance on the covenant should be on a consistent basis and beware circular reasoning (or what is fundamentally wrong with Test 1)

The discount rate used in the valuation reflects the assumption made by the trustee about the strength of the employer covenant. Assuming the covenant to be weak — with a high probability of the employer's being unable to continue to support the scheme at some point in the future — prudence suggests that the scheme should invest in 'safe' bonds with a low return. Therefore a low discount rate should be used for the calculation. This will produce a high liabilities figure which the employer may well find too high to be affordable.

Assuming a *strong* covenant, on the other hand, means also assuming the scheme will be able to invest in equities to get a higher return, safe in the knowledge that the scheme will be able to withstand short term volatility in asset prices. The covenant is strong enough that temporary falls in the market value of the investment portfolio do not pose a risk. Asset price volatility becomes risk when there is a possibility that assets will need to be sold just at the time when their value has fallen too low. This possibility does not exist if the covenant is strong. The higher investment return will therefore mean a higher discount rate, using a best estimate basis, and the liabilities will hence be lower.

There is a direct relationship between what is assumed about the strength of covenant and the resulting liabilities. In order to assess reliance it is therefore necessary to make the calculation on a *consistent* basis. That is, it is necessary to evaluate the liabilities on the assumption of a strong covenant first. If, then, this places excessive reliance on the employers, then the conclusion must be that the covenant is not strong enough.

The USS approach to reliance on covenant is wrong because it assumes its conclusion. The valuation of the liabilities in Test 1 is based on assuming that the covenant is weak. It is fallacious then to use this figure to test the covenant. That is putting the cart before the horse: the assumption of a weak covenant that underpins the self-sufficiency liabilities leads to the conclusion that the covenant is weak.

Equally, basing the discount rate on an assumption of a strong covenant, might lead to the opposite conclusion for Test 1. Assuming a strong covenant and valuing the liabilities on that basis might very well point to the employers being well able to afford to support the scheme indefinitely. The present covenant assessment method assumes the result it sets out to find and is not fit for purpose.

10. Role of the Pensions Regulator

The pensions regulation system is designed for (mostly small) schemes involving a single company in the marketplace. The university sector is quite different, and big and important enough not to be dominated by the Regulator. It is unlikely that the USS was envisaged as being within its scope when the regulations were introduced.

The Regulator's role, as a government body, is to oversee proper governance of pension schemes. Also it must be remembered that the pension regulations give trustees and sponsors wide discretion on many aspects of the valuation, provided they use due prudence. The rules are not as strict as we are often told and the Regulator uses its enforcement powers only reluctantly.

It is not the Regulator's role to intervene in the management of the scheme, something that it did in **September 2017**, arguably exceeding its powers. It cannot and should not second guess the trustee and sponsor. For example to review the covenant is not a matter that is within the Regulator's competence.

11. Take a long-term view

Pensions are long-term commitments and funds ought to be invested on that basis. The valuation should also take a long-term view and ignore short-term fluctuations in asset prices. Short-term market volatility is of minor, if any, relevance. Keeping the scheme open to new members is key. An open scheme with positive net cash flow can invest in assets that have a high expected return in the long run, such as equities. The efficient and rational running of the scheme suggests this.

12. Question the excessive use of index-linked gilts (which are currently producing a negative return)

The idea of investing in government bonds—following actuarial habit from a time when such assets provided a steady and safe return—should be questioned in light of today's very low interest rates that result from government policy. It is highly irrational to invest in a way that guarantees losing money—money that will have to be found from higher contributions. The notion that such an investment strategy is a 'safe harbour' (as Guy Coughlan **puts** it) needs to be subjected to detailed scrutiny. Is the scheme actuary just following the customary practice, not noticing that its rationale no longer exists?

13. Why not use the internal rate of return?

Every pension scheme has an implicit internal rate of return required for its investments for it to be sustainable. It would cast a lot of light on the scheme and answer fundamental questions around sustainability if these could be provided and compared with actual and expected rates of return.

Indicative calculations suggest that the internal return is often quite low for a typical pension scheme and below rates of return achievable on investment portfolios. For example 3.3% is required for a career average scheme with a contribution rate of 21% salary (40 years service, 20 years retirement, lump sum of 3 x pension, indexed pension assuming 2% inflation). This is much below the return on the Prudential With Profits fund which achieved 9.1% last year, five year average annualised 8.0%, ten-year average annualised 5.8% net.

Con Keating reported (at a **pensions and USS dispute symposium** in May 2018) that when he asked one of the senior members of the USS executive if they had done the calculation he was told it was 4.6%.

14. Are investment returns in fact too low?

The USS Executive **claims** that expected investment returns have fallen too low for most asset classes. It is certainly true of gilts, government bonds, which are at an all-time low. But is it also true of higher income assets such as equities? And does it matter anyway if the returns are still high enough? There is need to question the USS more closely on these two points.

The idea that movement in gilt rates is indicative of investment returns more generally is surely false in today's circumstances where rates on government bonds are not determined in the market but manipulated for policy purposes. The government's monetary policy at the moment centres on fixing interest rates at levels low enough to increase the profitability of investment, suggesting we might expect to see an inverse relationship, rather than a direct one.

The USS Executive should be quizzed closely on their claim because, even if expected returns have fallen across the board, that may make little difference to affordability in practice — if discount rates are based on investment returns other than bonds they may not have fallen enough for it to matter much — especially if the scheme is in cash flow surplus.

15. Investigate in detail the 'best estimate' valuation

The USS 2017 **draft valuation document** (p.22) reports a 'best estimate' surplus of £8.3 billion. This figure needs to be analysed in some detail and should not be dismissed in an offhand manner.

Bill Galvin has subsequently **commented** on this figure: 'But, by definition, this only has a 50/50 chance of our funding assumptions being right (or better). To run the scheme responsibly and be compliant with legislation we have to apply a degree of prudence and, as a result, we have a funding deficit'. This 50:50 argument comes from the fact that the liabilities estimate is an average (median) over the distribution of investment-portfolio-return-based discount rates, but that in itself does not seem to tell us about the likelihood of a surplus not being achieved.

16. Focus on the income from the investments not their price

This is a major issue that seems to be almost universally ignored in pension valuations. The fact is that the stock market and bond markets are much more volatile than the income that drives them — whether dividends or interest — well known from the work of, for example, **Robert Shiller** and others. This excess volatility greatly amplifies risk if assets are valued at market prices. A true economic analysis would allow for this but it is being ignored by the USS executive. In an open scheme like USS, it is income from investments that is important to pay the pensions and those investments' asset prices are of minor

importance. Valuing the scheme using asset market prices instead of investment earnings greatly amplifies risk. The JEP should commission an alternative valuation along these lines, with assets valued at discounted present value of expected future income.

17. Question the facile assumption that equities are universally riskier than bonds

This assumption leads to statements being made with an undue degree of certainty and calculations done with spurious precision. Many equities provide good long-term investments without a lot of risk. Bond markets are also subject to short-term volatility like equity markets and there is excess volatility in both.

*This is a USSbrief, published on 5 July 2018, that belongs to the OpenUPP (Open USS Pension Panel) series. It has been submitted to the UCU-UUK JEP (Joint Expert Panel) by the author on 1 July 2018. This paper represents the views of the author only. The author believes all information to be reliable and accurate; if any errors are found please contact us so that we can correct them. We welcome discussion of the points raised and suggest that discussants use Twitter with the hashtags **#USSbriefs28** and **#OpenUPP2018**; the authors will try to respond as appropriate.*