

Is the USS in deficit?

It is hard to be certain, but probably not, at least not on the basis of the published information. The key document is the USS October consultation, which lays out some of the details.

http://www.leeds.ac.uk/comms/for_staff/USS_consultation_paper_October_2014.pdf

The widely quoted deficit estimate of about £13B is obtained by making a number of 'prudent' assumptions. In this case 'prudent' means 'pessimistic'. The deficit figure is also based on changing the USS investment strategy in future to put more reliance on Gilts (government debt), which are currently paying historically low yields.

USS are also required to calculate the deficit on a 'neutral assumptions' basis. i.e. neither optimistic nor pessimistic. In a small table (C.16) at the back of the consultation (p.35) they report this estimate as a £3B deficit. However the neutral basis calculation is based on the 'prudent' salary growth and inflation assumptions, not neutral assumptions (p33). Moving to evidence based neutral assumptions would put the fund in healthy surplus on a neutral assumptions basis, as can be worked out using table C.5 on page 32.

You can also do this calculation from the 'ground up'. A group from Imperial with direct experience of large pension fund management have done just that. Their report formed the basis of the Imperial submission to the consultation and is here

https://workspace.imperial.ac.uk/college/Public/pdfs/PDFS/USS_report_final.pdf

The figure on page 2 is quite instructive. It shows, for example, that if the USS fund performed as it has for the last 10 years, 5 years or 1 year it would be in healthy surplus. The 10 year performance figure is closest to a reasonable neutral assumptions basis.

Further criticism of the assumptions used to arrive at a deficit are in an open letter to the trustees from a group of professors of statistics, risk and actuarial science

<http://www.maths.bath.ac.uk/~sw283/USSTrusteesDeficit21Nov2014.pdf>

This letter also points out that the assumptions have been chosen in an economically incoherent manner: e.g. wage growth assumes a robustly expanding economy, while investment returns assume recession. USS's reply to this letter chose not to address the issue of economic incoherence, nor the point that the fund appears to be in neutral assumptions surplus. If the USS valuation were a scientific paper, it is likely that the peer reviewers would be raising serious concerns that the results had been cooked.

The problem with snapshots

A fundamental problem with the valuation methodology is that it attempts to predict the future from snapshot economic indicators at one point in time. This is why the deficit estimate swings so wildly on a timescale of months, even though real changes in assets and liabilities have a timescale of decades for a pension fund. Note in particular that the huge swings in the deficit estimates have not been driven by changes in market value of the schemes assets, but by massive swings in the liability estimates based on short term changes in market conditions.

For example, assumed future inflation rate is taken from an estimate of what the market thinks the rate will be as estimated from the difference between the yield of index linked (inflation proofed) government bonds and non-index linked bonds. This estimate also relies on a guess of the 'risk premium' investors require, and the yields themselves are affected by the current distortions in the Gilts markets. One obvious problem with estimating market expectation of inflation with this method is that many market players are using the same sort of method to estimate what they think future inflation will be, so 'what the market thinks' is at least partly driven by the results of the method itself, rather than any real insight into the future. A better approach might take historical

data and bank of England targets into account.

Doesn't the variability in deficit estimates itself indicate a substantial risk?

Not really (although the variability shown in figure 2 of the Imperial College report, referenced above, might indicate some risk of substantial overfunding). The variability indicates that the estimation method is very sensitive to the assumptions put into it. This means that you have to be very careful that the assumptions put in are reasonable and coherent *when taken together*. What is reasonable prudence when considering one assumption on its own can be utterly unreasonable pessimism when combined with several other pessimistic assumptions. Failure to reason properly about joint risk is very common problem and sometimes a very serious one (e.g. Sir Roy Meadows and the infamous Sally Clark conviction). As the Imperial College document points out, there are much better methods available for prudently exploring the risks associated with the funding position, based on mutually coherent sets of assumptions.

But why should we believe you rather than the highly trained financial experts who say it is in deficit?

Firstly: Don't. Look at the published calculations yourself, and don't be put off by the jargon. The question that the calculations are trying to answer is quite simple. Will the scheme's assets (based on what you and the employer have paid in) grow fast enough to meet the liabilities attached to those assets (i.e. what the scheme will have to pay you as a pension), given how those liabilities will grow.

Secondly: received wisdom is that final salary and/or defined benefit schemes are unsustainable. This is based in part on a number of such schemes having really become unsustainable: but not schemes that are really comparable to the rather conservative USS scheme (Universities have never taken pension contribution holidays during booms, for example). It is an obvious truth that going against received wisdom carries very substantial risk if you are proved wrong, and the immediate cost that your peers think you are an idiot. Sticking to received wisdom carries no risk if that wisdom was wrong, since everyone was wrong: see the sub-prime mortgage debacle.

Isn't it sensible for the USS to de-risk?

There is clearly a balance to be struck here. There may well be a case to be made that the financial crisis and subsequent recession are symptoms of a much longer term economic malaise, so that the economic future is much less certain than it was. That isn't in fact the case being made for the changes. But suppose de-risking was desirable - the question is then whether investing in lending money to the government at historically low rates of return (i.e. buying gilts) is the way to achieve this (turning the risk of failure into the certainty of failure is one way of 'dealing' with risk)?

A particular problem with Gilts is that the return on Gilts has been directly depressed by the Quantitative Easing program (where the Bank of England bought large volumes of government debt on the bond markets, which it has yet to sell, thereby reducing supply and driving down yields). A second problem is that the Pensions Regulator has been encouraging pension funds to buy Gilts in the interest of de-risking. Research papers from the Bank of England suggest that large scale Gilt buying by pension funds may be depressing Gilt yields. An indicator of the extent to which Gilt yields are out of kilter at present is the fact that the UK is paying about the same amount to borrow as Norway (Norway is rather more solvent than the UK. Its sovereign wealth fund holds about 1% of world assets). See <http://www.edmundconway.com/wp-content/uploads/2013/10/ukgovtdebt.jpg> for a chart of who owns Government debt. The alternative to government debt is to invest in diverse

assets, and to take a long term view of the investments.

What is the role of the regulator in all this?

It is difficult to know. The trustees have claimed that to some extent they are merely following the direction of the regulator, but the regulator's published guidance and statements seem to be much more pragmatic than the USS trustee position. What is clear is that the regulator has a responsibility to minimise the risk that the government backed pension protection fund has to pay out because a scheme fails. It is also clear that the regulator will be held to account for any failure to do that, whereas no-one will hold them to account if you get a lower pension in the cause of risk-lowering. It is also the case that the regulator has encouraged funds to de-risk, and this means buying government debt (gilts). A consequence of this (which we must assume is coincidental) is that the government is borrowing from pension funds at attractively low rates, not beneficial to scheme members.

But at least my accrued benefits to date are `protected' aren't they?

Not in any meaningful sense. To work out the benefits due to you under the closed final salary scheme your nominal final salary will be taken as your salary at March 2016 inflated using the CPI (Consumer Prices Index) measure of inflation. So you clearly lose the benefits you would have gained from salary scale progression, promotion or discretionary increases. Even without these, CPI is about 2% lower than the rate of salary growth assumed by USS to `show' that the fund was in deficit. That was RPI + 1% (Retail Prices Index + 1%). So even if you stayed on the same scale point for 20 years, your `nominal final salary' under the new scheme would be less than 70% of your actual final salary, if USS salary growth assumptions were correct. Actually the historical data suggests that the USS assumptions are not correct and salary growth of RPI is more realistic. Even so, after 20 years your `nominal final salary' would be less than 83% of what it would have been (and that is without even considering promotion or salary scale progression, remember).