USS crisis: can the pension system be reformed?

For many years, much of the British workforce enjoyed lifetime employment with a secure pension, based on final salary and underpinned by a reliable employer. Then came Robert Maxwell's looting of the Mirror Group and Maxwell Communication Corporation pension funds to support his crumbling empire and the regulatory response that followed: tighter rules replaced what had previously been relatively informal obligations. Changes in capital markets then upended the comfortable assumption that a business such as ICI or the Royal Bank of Scotland would be around forever. Pension fund trustees were required to do everything possible to ensure that pension promises are riskless. But since it is prohibitively expensive, and often impossible, to eliminate risk, defined benefit schemes – in which pensions are based on members' earnings – have not become safer. Instead, they have all but disappeared outside the public sector. The best has been the enemy of the good.

The Universities Superannuation Scheme, the UK's largest defined benefit pension fund with assets of £63.6 billion, is the latest scheme to be bound by this financial straitjacket. Anger over proposals to switch to a wholly defined contribution scheme for future service, which does not guarantee any particular level of pension, saw thousands of staff walk out from pre-1992

universities. The dispute was temporarily resolved by the creation of an independent panel of experts, jointly appointed by Universities UK and the University and College Union, charged with reviewing the assumptions made in the scheme's valuation.

On the face of it, the USS fund seems in rude health. According to its latest annual report, about 200,000 active members contribute to it and about 70,000 pensioners receive benefits. Last year, the USS received £2.2 billion and paid out £2 billion. These figures will grow over time, reflecting recent and perhaps future expansion of the university sector. The more generous level of benefits promised in the past means that, in the short term, outflows will rise slightly faster than inflows. However, this trend will subsequently be reversed. In any event, the difference between contributions and pensions paid will remain small relative to the gross figures – and to the value of the scheme assets.

At 31 March, the USS held investments worth just under £64 billion. During that year, the fund earned a total return on these assets of £3.7 billion, about 6 per cent. Over the past five years, investment returns have averaged just over 10 per cent a year. It is unrealistic to suppose that this recent experience will be sustained. Nonetheless, many prudent educational endowments plan on the basis of a sustainable investment return in the range 3 to 4 per cent in real terms, seeking to finance current expenditure while maintaining the real value of assets.

And, at the same time as the scheme assets have been performing well, its future funding has been greatly strengthened. Contribution rates have risen in recent years to 18 per cent of pensionable salary from employers and 8 per cent from employees, making a total of 26 per cent. At the same time, benefits have been reduced considerably since 2016: pension entitlement has been based on revalued average career salary rather than final salary. This will mean, in the long run, that pensions paid out will no longer fully reflect career progression from humble researcher to tenured professor, nor the general rise in real earnings across the economy as a whole. Moreover, a cap of £55,000, index-linked, is now imposed on the salary qualifying for defined benefits.

The bread that a retired person eats was baked today by someone currently working. Whatever the mechanics of pension provision, all such provision is the product of an implicit or explicit intergenerational contract. And intergenerational fairness demands that we invest for the future in ways that will help our children and grandchildren meet our expectations of a comfortable retirement – educating them, building houses and infrastructure for them to use, and establishing new businesses to employ them. This intergenerational contract can be maintained at the national level – as in France. Or at the household level, as in most traditional societies. Or through some affinity group, as in the USS, which was established in 1974 for the whole of the (then) UK university system. In principle, each participating

university underwrites the scheme as a whole – the "last man standing" concept.

It is therefore important that the contribution rate is set at a level that is equitable between successive generations of university teachers and between different universities. A rate that is too high will secure the position of past and future academics at the expense of present ones, and a rate that is too low will throw an inappropriate burden on to future staff. And since some universities are expanding rapidly while others are not, the generational make-up of different institutions varies considerably.

Of the current contribution rate of 26 per cent of pensionable salary, about 4.5 per cent covers non-pension benefits and administrative costs. Each year of service entitles the USS member to a pension of 1/75 of that year's salary and to a lump sum of three times the pension. On the reasonably conservative assumption that pension is payable for 25 years, annual payments from the scheme in a steady state – with membership static and salaries constant in real terms – would therefore be 28/75 of university salaries, or 37 per cent of average career earnings.

But contributions are paid well in advance of pensions, creating the fund that supports the scheme. A "fair" contribution rate would aim to ensure that the fund would neither expand nor contract in real – inflation adjusted – terms, and adjust contributions in light of experience. A 2 per cent annual return on investments would bridge the gap between the USS' revenue inflows and outflows in steady state. While there is no scientific basis for determining likely real rates of return over the 50-year career expectancy typical of an average USS member today, 2 per cent is well below the rate assumed for planning by the most cautious endowments, although well above the rate on government bonds. Even if the Western world is running out of profitable investments – as some believe, although we are not among them – there are certainly many attractive opportunities in the developing world.

In the context of a fund with almost £64 billion in assets, which has recently been earning investment returns averaging £5 billion per year, it is plain that the USS is not facing a funding crisis now or in the reasonably foreseeable future.

So what is the problem? Why are trustees and academic administrators so concerned? And what is the nature and source of the £7.5 billion "deficit", which supposedly looms over the scheme and the university sector itself? The crisis and controversy is the product of a combination of three factors: the practices of actuarial modelling, regulation and the obligations of trustees.

Until the 20th century, few people lived long in retirement, if indeed they reached retirement age. The government provided pensions to its own

employees and was followed by large firms such as railways, banks and other benevolent private sector employers that offered lifetime employment, a benefit that was extended and formalised. In the 1960s, with state encouragement, employer-based defined benefit schemes became widespread. These developments contributed to the near elimination of pensioner poverty over the past two decades.

Uncertainties – in the return on assets and in factors such as mortality rates – were shared among scheme members and with employers and their shareholders. The scheme became a collective investment in which each individual prospective or actual pensioner had a stake, but one that was not a well-defined individual legal entitlement. Pension funds could and did invest for the future in productive assets rather than securities that guaranteed a particular flow of income corresponding to the future pension liability. The sharing of risk among different age cohorts which made that possible was the essence of collective pension schemes.

But after the Maxwell fiasco and growing uncertainty over the long-term health of once rock-solid firms, things changed. Actuaries and accountants took on board – rather too enthusiastically, in our view – ideas from financial economics and insisted that pension obligations be quantified and exposed on balance sheets. Linking specific assets to specific liabilities – the strategy of "liability matching" – seeks to eliminate the risk to other members, shareholders and taxpayers of unconditional pension promises in respect of past service. With matching of liabilities there is no implicit risk-sharing among different cohorts and even if the employer ceases to exist, as did Maxwell, the fund will be able to meet every individual obligation irrespective of returns or mortality experience. But after a decade or more of extremely low – and at times negative – real interest rates, attempting to offer such unconditional individual promises is now inordinately expensive, while regulation has made risk-sharing virtually impossible.

Enter the Pensions Act 2004, which requires trustees to commission a "technical valuation" of their scheme at three-year intervals. The figure described as the "deficit" is the difference between the "technical valuation" of liabilities and the market value of scheme assets, a deficit that has widened substantially at consecutive valuations of the USS: in 2011 it was £2.1 billion; in 2014 £5.3 billion; and in 2017 £7.5 billion.

However, during this period, the critical parameters of the scheme have considerably improved: contributions increased, benefits substantially reduced, investment returns were far greater than anticipated; and – regrettably for members but advantageously for their pension scheme – improvements in mortality have been smaller than expected. The increase in the "deficit" is wholly attributable to changes in the assumptions made in the process of technical valuation, at a time when the finances of the USS have substantially strengthened. The contrast between the healthy cash flow, investment performance and asset position of the USS, on the one hand, and

the deteriorating actuarial assessment of the "deficit", on the other, cannot be overstated.

The main risk to the USS and its trustees over the next few years is the possibility that in three years' time the technical valuation will incorporate even more pessimistic assumptions. We have no better projections of investment returns two decades from now to offer than the strange ones proposed by the scheme's actuaries. If the answer to a question is very sensitive to a number that is almost impossible to predict, it is time to ask a different question. As so often, cash flows are a more reliable guide to what is going on than hypothetical valuations. But the requirement of technical valuation is imposed by law and enforced by regulation.

In essence, regulators are requiring the USS to behave as if the fund could be closed down at any moment while still meeting its obligations with as much certainty as possible. To do that is inordinately expensive. And the irony is that the realisation of the cost of behaving in this way has inevitably led the trustees to propose closing the defined benefit scheme altogether. Regulation to protect pensioners in the event of a defined benefit scheme closure has resulted in the closure of virtually all such schemes.

As such, the 2004 Pensions Act is a prime, but by no means unique, example of well-intentioned but inept financial regulation. Over-prescriptive, it has led to the demise of the defined benefit schemes that it was designed to protect. If proposed changes to the USS are implemented, there will be no defined benefit schemes of any significant size outside the public sector open to new members.

We sympathise with the position in which USS trustees are placed by such law and regulation. They are being required to make promises about pensions that are impossible to guarantee and prohibitively expensive to attempt to match. Scheme actuaries are clear that responsibility for the assumptions made in a technical valuation lies not with them but with the client. The actuary is little more than the human face of a computer. But the practical reality is that it is impossibly risky for a trustee to challenge – except at the margin – the assumptions put forward by the actuary. There is, as many in the pensions world will privately acknowledge, a black hole of accountability, a black hole into which the fate of future pensioners has disappeared.

In an endeavour to provide cast-iron security for those who have been employed in universities in the past, the process of technical valuation fails to balance the competing claims of different generations in an uncertain environment. Baby boomers ourselves, we see here yet another example of the entrenchment of our own position and that of our contemporaries at the expense of our grandchildren.

Any plan to provide pensions 50 years from now involves uncertainties and therefore should involve an explicit discussion of how risks are shared among employers and employees and between generations. We have both been, but are no longer, members of the USS, and have no skin in this game. Our interest in this controversy arises because it illustrates so clearly the issues that we tackle in a forthcoming book on "radical uncertainty". Fundamentally, we do not plan sensibly for the future by making up numbers to fill the gaps in our knowledge. Economic models are indispensable, but as guides to thought, not substitutes for it. A model should never be treated as an oracle that emits obscure but unchallengeable verities.

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