

Briefing

# Accounting for pension costs

Survey of universities' disclosures  
as at 31 July 2018

RISK | [PENSIONS](#) | INVESTMENT | INSURANCE

I am pleased to present the results of our eighth survey of the assumptions adopted by UK universities for determining the value of their pension liabilities for accounting purposes.

This is a challenging time for the sector in general, and increasing pensions costs are not helping. Significant cost increases are on their way for the Teachers' Pension Scheme (and Scottish Teachers' Superannuation Scheme) and the Universities' Superannuation Scheme (USS), while the England and Wales Local Government Pension Schemes have their actuarial valuations coming in 2019 as well.

The changes to the teachers' schemes will not affect the universities' accounting balance sheet, but the increased contributions to the USS will, as for this scheme, a deficit is shown on the balance sheet equal to the present value of future deficit contributions. These contributions have increased (as part of the 2017 valuation) from 2.1% of salaries to 5.0% of salaries (and for a longer period), so this will have a significant impact on amounts shown in the balance sheet at the 2019 year end in respect of the USS. Clearly, at some point the 2018 valuation may then replace the 2017 valuation, and the position will change again.

The main focus of this survey, though, are the "Self-Administered Trusts" (SATs) – standalone defined benefit (DB) schemes operated by a number of universities for non-academic staff. The survey looks at the significance of these schemes in the context of the overall finances of the university, as well as at the assumptions used in their FRS102 disclosures as at 31 July 2018.

The results of this survey show that the size of pension deficits reduced significantly by £600m over the year mainly due to strong equity returns and a rise in bond yields that resulted in a higher

average discount rate being used to value the liabilities. The requirement to include provisions for future deficit contributions to the USS also had a negative impact of £900m on the balance sheets of the universities in the survey.

We did not issue a survey last year, but we have included the figures for 2017 to compare with the 2018 data as part of our analysis.

We hope that this analysis will be helpful to universities formulating their own assumptions under FRS102 for future disclosures. In the meantime, we wait to see what will happen to markets (post Brexit?) to find out what that will mean for the position in 2019.



**Paul Hamilton**

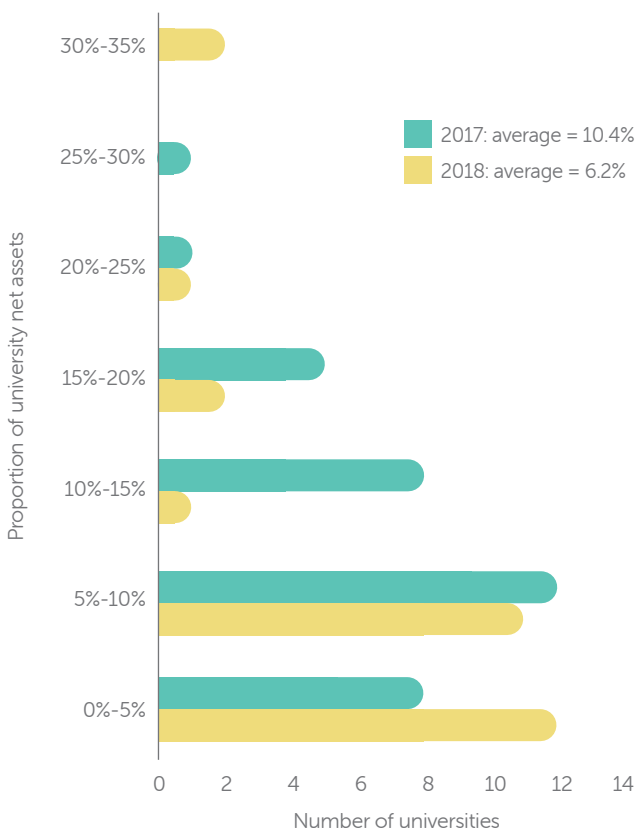
Partner and Head of Higher Education  
BARNETT WADDINGHAM

## How much of a burden are these schemes?

For the universities in our survey, the pension deficit represents an average of 6.0% of the net assets of the university (excluding the SAT pension deficit). This is lower than the average seen last year (10.4%) and shows that deficits have been falling at a faster pace than net assets, although it's worth noting that the second half of 2018 saw equity markets and yields fall (pushing up liabilities), so the position may well have worsened again for many of these schemes.

The chart below shows how this proportion can vary significantly between individual universities.

### SAT PENSION DEFICIT AS A PROPORTION OF UNIVERSITY NET ASSETS



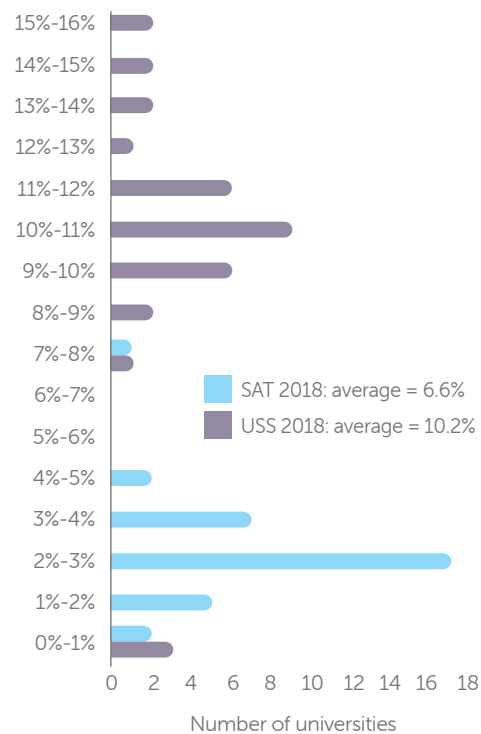
For the universities in our survey that contribute to both SATs and the USS, we found that the total contributions made by the universities to SATs as a proportion of total staff costs in 2018 has fallen slightly from an average of 2.9% in 2017, to an average of 2.6% as at 2018.

Conversely, the contributions made to USS, as a proportion of total staff costs, have increased slightly in 2018 at 10.2%, whereas in 2017 the average was 9.5%. Contributions to the USS remain substantially higher than the contributions made to SATs.

To an extent this represents the maturing of the SATs, many of which are closed to new members or accrual and so represent a decreasing proportion of University staff. Total staff costs have typically increased in monetary terms between 2017 and 2018 but where DB schemes are closed new staff will generally be joining lower-cost defined contribution schemes.

The chart below illustrates how the contributions to SATs compare with contributions made to the USS for these universities.

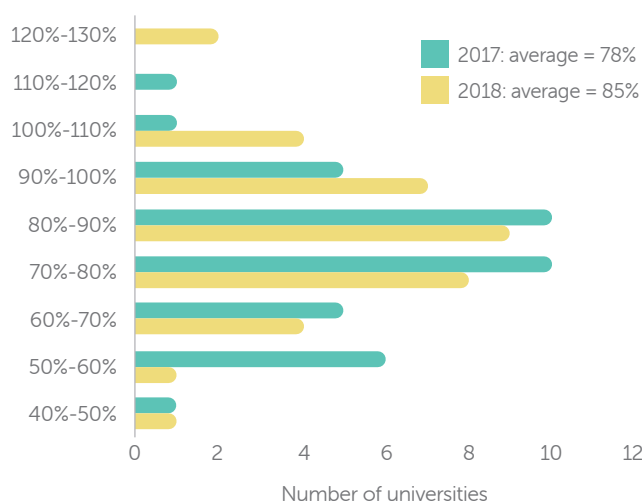
### SAT AND USS EMPLOYER CONTRIBUTIONS AS A PROPORTION OF TOTAL STAFF COSTS



## Surplus / deficit

The average FRS102 funding level at 31 July 2018 for the universities in our survey was approximately 85%, which is more than the average funding level of 78% at 31 July 2017. The principal reason for the increase in funding levels over this period was the strong returns on equities, coupled with an increase in bond yields over the year that led to higher average discount rates being used to value liabilities. Deficit contributions paid by the universities also helped to improve funding levels.

### FRS102 FUNDING LEVEL AS AT 31 JULY 2018

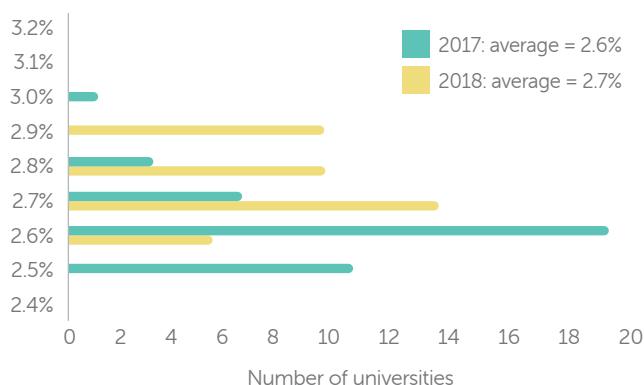


## FRS102 assumptions

### Discount rate

The discount rates used by the universities in our survey for their SATs are illustrated below.

### DISCOUNT RATE (% P.A.)



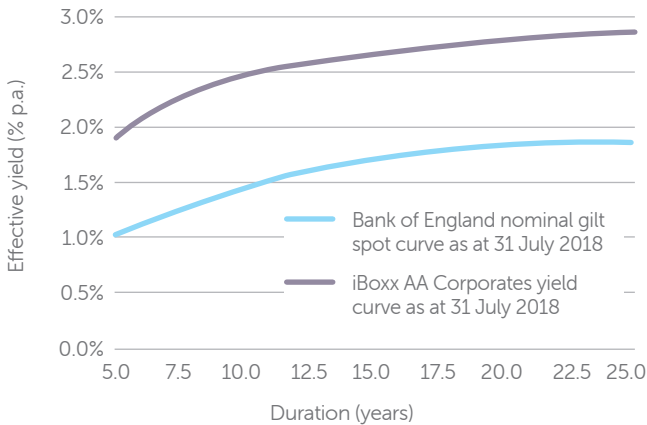
This reflects the slight increase in corporate bond yields, on which the discount rates are based, over the year.

The following table compares the corporate bond yield and the average discount rate adopted at 31 July over the last five years.

Year ending	iBoxx over 15 year AA-rated corporate bond index (% p.a.)	Average discount rate (% p.a.)
31 July 2014	4.1	4.2
31 July 2015	3.5	3.6
31 July 2016	2.3	2.4
31 July 2017	2.5	2.6
31 July 2018	2.7	2.7

The discount rates adopted have been marginally higher than the yield on the index shown over the past five years. In recent years the derivation of discount rates has tended to place specific reference on the term of the liabilities, e.g. through adopting the yield on a corporate bond yield curve at the relevant term, rather than making an approximate adjustment to an index value. There has also been a move to derive the discount rate using a full yield curve approach, i.e. finding the single discount rate equivalent to discounting each future cashflow using the yield curve at the relevant term. While there are outliers in the data set, in general discount rates have been close to the index yield.

## CORPORATE BOND AND GILT YIELD CURVES AS AT 31 JULY 2018



Discount rates in this year's survey were noticeably less varied than in recent years, which may be due in part to the flatter yield curve seen in 2018 compared to a year ago. The range in 2018 was from 2.55% p.a. to 2.91% p.a., compared with the range in 2017 from 2.45% p.a. to 3.00% p.a.

## Retail Prices Index inflation

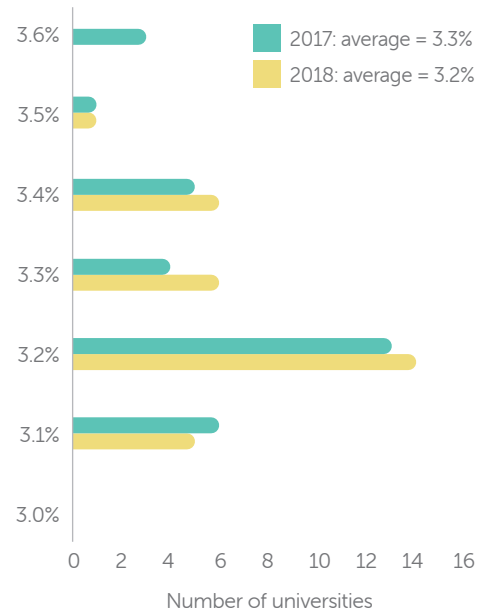
Market yields are generally used to set the future inflation assumption. The market's expectation of the Retail Prices Index (RPI) inflation rate calculated by the Bank of England at 20 years (based on the difference between fixed interest gilt yields and index linked gilt yields) was 3.5% p.a. as at 31 July 2018. Most universities in the survey assumed that inflation would be slightly lower, with the average at 3.2% p.a. It is likely that some allowance is being made for an "inflation risk premium", which is based on a view that investors will pay more for index linked gilts because they provide inflation protection. This means that the break-even rate calculated by the Bank of England is higher than the market's best estimate assumption for future RPI inflation.

Year ending	Market implied future inflation rate*	Average discount rate (% p.a.)
31 July 2013	3.5	3.3
31 July 2014	3.5	3.3
31 July 2015	3.1	2.8
31 July 2016	3.5	3.3
31 July 2017	3.6	3.3
31 July 2018	3.5	3.2

\*Bank of England implied 'inflation rate' at 20 years.

The assumptions adopted are about 0.1% less than they were last year, which broadly reflects the fall in market-implied inflation over the year.

## RPI INFLATION ASSUMPTION (% P.A.) ROUNDED TO THE NEAREST 0.1%



31 out of 35 universities disclosed the RPI inflation rate assumptions (32 out of 40 in 2017).

We have started to see recently that the 'single equivalent' approach to setting the discount rate is also being applied to the RPI inflation assumption. At the moment the inflation curve is downward sloping at both the short end and the long end, and this argument can be used to apply a further deduction to the inflation expectation implied by the curve at the relevant term.

## Consumer Prices Index inflation

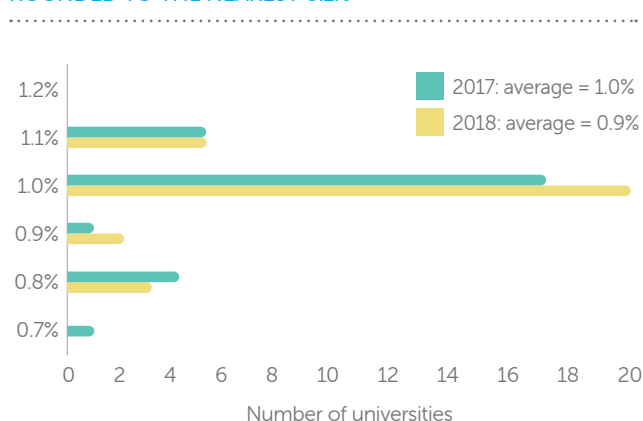
33 out of the 35 universities in our survey explicitly disclosed a Consumer Price Index (CPI) inflation rate assumption, implying that most of the universities in our survey use CPI as a measure of future inflation for at least some of the increases applied to benefits.

Over the 20 years to 2010, CPI was on average around 0.7% p.a. lower than RPI. Of this, 0.5% p.a. could be attributed to the "formula effect" resulting from technical differences in the way the two indices are calculated, and the remaining 0.2% p.a. could be attributed to differences between the compositions of the two indices. In 2010, a change was made to the way the indices were calculated and at the time this was expected to increase the difference between CPI and RPI going forward. The "formula effect" since 2010 has been observed to be between 0.8% p.a. and 1.1% p.a.

In March 2015, the Office for Budget Responsibility (OBR) published a paper which included an analysis on the gap between RPI and CPI which suggested that the other factors mean the gap could be around 1.0% p.a. Additionally, the Bank of England's latest estimate, from its 2014 quarter 1 inflation report, is that the gap will be around 1.3% p.a. over the long term. However, these estimates assume that the constituent effect will continue unchanged, and there is no guarantee that this will be the case over the long term. Indeed, the omission of housing costs from the calculation of CPI continues to provoke debate. The current Government CPI inflation target is 2.0% p.a.

The following graph shows the gap implied by the assumptions chosen by the 30 universities who disclosed assumptions for both CPI and RPI. The average deduction from RPI was 0.9% p.a. in 2018 which is slightly lower than the 2017 difference (1.0%).

### RPI AND CPI DIFFERENCE (% P.A.) ROUNDED TO THE NEAREST 0.1%



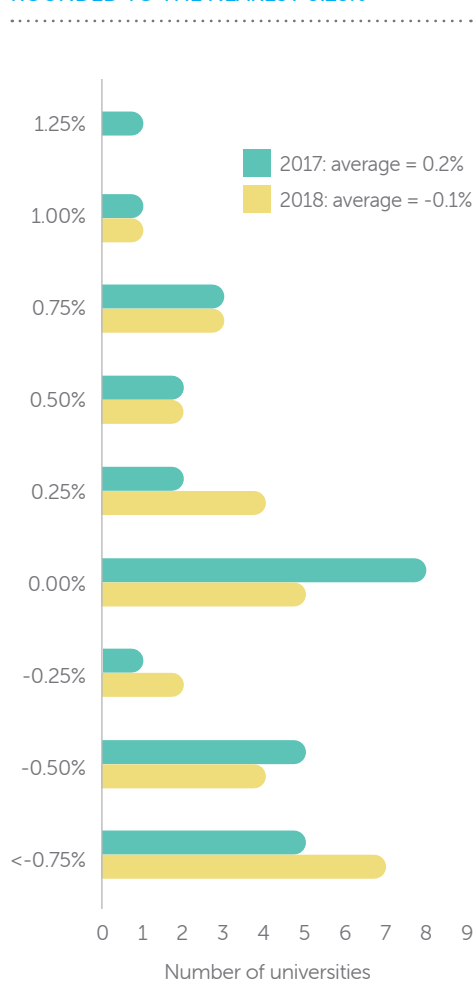
30 out of 35 universities disclosed both CPI and RPI inflation rate assumptions (32 in 2017)

## Salary increases

Some universities may use a scale for promotional salary increases in addition to a general salary growth assumption and therefore a comparison of the disclosed salary increase rate assumptions may not be like-for-like in all cases. We have nevertheless shown below the disclosed salary increase assumptions used relative to the RPI inflation assumption i.e. real salary growth.

The average real salary growth assumption fell by 0.1% p.a. in 2018 compared to the previous year. The chart below only considers universities which disclosed an assumption for RPI.

### REAL SALARY GROWTH (% P.A.) ROUNDED TO THE NEAREST 0.25%



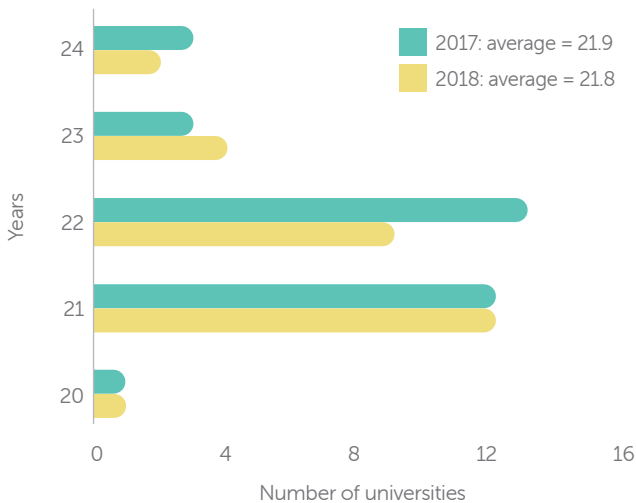
28 out of 35 universities disclosed both the salary growth and RPI inflation rate assumptions (28 in 2017).

## Life expectancy

31 out of 35 universities in this year's survey disclosed information on their life expectancy assumption, either by stating the assumed life expectancy or by referring to the mortality tables used allowing comparisons to be drawn.

We have shown below the life expectancy assumptions for a man currently aged 65 at the year end and also indicated the life expectancies implied by some of the mortality tables that were used.

### LIFE EXPECTANCY - MALE AGED 65



31 out of 35 universities disclosed the future mortality from age 65

The wide range of life expectancy assumptions adopted by pension schemes generally can often be explained by differences in the underlying scheme membership, for example different average income levels or occupations. As the profile of SATs members would be expected to be fairly similar from university to university, the wide range highlighted below is perhaps surprising, but may reflect that some universities carried out a more detailed scheme specific mortality investigation.

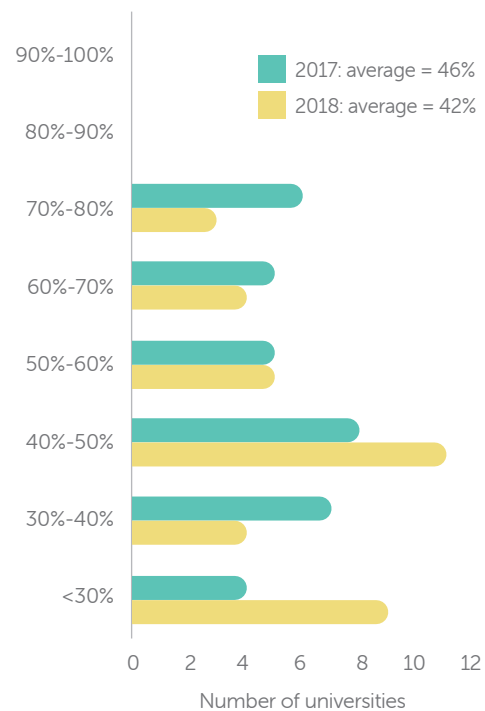
On average, the mortality assumptions chosen lead to roughly the same life expectancies as at 31 July 2018 as last year, although this hides the fact that around half of the Universities adopted new assumptions that resulted in a lower life expectancy. It's common practice to review mortality assumption at each triennial valuation, but this would typically only affect around one in three schemes in any given year, so we are also seeing a number of universities taking the opportunity to update their life expectancy outside of the usual three-yearly cycle.

This may reflect the fact that the most recent large scale analyses of mortality experience have shown that the rate of improvement in life expectancies has fallen. In other words, while life expectancies are continuing to increase, they are doing so at a slower rate. Taking account of this new analysis could lead to lower projected life expectancies, reducing the pensions costs/deficits.

## Asset allocation

The chart below shows the percentage of SATs' assets invested in equities as at 31 July 2017 and 31 July 2018.

### EQUITY WEIGHTING OF TOTAL ASSETS



32 out of 35 universities disclosed the equity allocation and asset amount figures

The average equity weighting of 42% is slightly lower than the 2017 average of 46%.

## Current affairs

### Increased audit scrutiny

Every year the FRC (Financial Reporting Council) reviews the work of the main UK audit firms. A common theme from the 2018 review was that the pension disclosure figures are not being given sufficient audit scrutiny. Following on from this we expect audit firms to pay more attention to the derivation of all assumptions in audits. In particular, the use of indices to set financial assumptions and using the mortality assumption used at the last scheme funding valuation is being heavily challenged.

### GMP equalisation

Towards the end of 2018, the High Court published its judgement in the case of Lloyds Banking Group Pension Trustees Limited vs Lloyds Bank plc (and others). The case was concerned primarily with the requirement to equalise pension benefits for the effects of unequal Guaranteed Minimum Pensions (GMPs) – referred to colloquially as “GMP equalisation”, even though the GMPs themselves are not generally to be made equal.

The key outcome of the case was to confirm that formerly contracted-out schemes must equalise GMPs, and whilst there are several methods for doing this the Court has identified which it considers legally robust. Four main methods of equalisation were considered, each with up to three variants.

While the accounting disclosures as at 31 July 2018 did not reflect this decision, several published accounts have referred to it and we expect to see the material impacts coming through in the 31 July 2019 accounts. This typically adds around 1% to the liabilities disclosed (but it could be higher, depending on the circumstances of your scheme).

Please contact your Barnett Waddingham consultant if you would like to discuss any of the above topics in more detail. Alternatively get in touch via the following:

✉ [info@barnett-waddingham.co.uk](mailto:info@barnett-waddingham.co.uk)

☎ 0333 11 11 222

[www.barnett-waddingham.co.uk](http://www.barnett-waddingham.co.uk)

Barnett Waddingham LLP is a body corporate with members to whom we refer as “partners”. A list of members can be inspected at the registered office. Barnett Waddingham LLP (OC307678), BW SIPP LLP (OC322417), and Barnett Waddingham Actuaries and Consultants Limited (06498431) are registered in England and Wales with their registered office at 2 London Wall Place, London, EC2Y 5AU. Barnett Waddingham LLP is authorised and regulated by the Financial Conduct Authority and is licensed by the Institute and Faculty of Actuaries for a range of investment business activities. BW SIPP LLP is authorised and regulated by the Financial Conduct Authority. Barnett Waddingham Actuaries and Consultants Limited is licensed by the Institute and Faculty of Actuaries in respect of a range of investment business activities.