

Accounting for pension costs

Survey of universities' disclosures as at 31 July 2016







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I am pleased to present the results of our seventh annual survey of the assumptions used by UK universities when valuing pension liabilities for accounting purposes.

31 July 2016 was a particularly bad time to be valuing pensions liabilities – particularly on the measure adopted by the accounting standard (FRS102), because the yields available on long-term AA-rated corporate bonds were very low at that point, having fallen sharply following the results of the EU referendum. The end of July saw a particular dip in yields, which have since recovered a bit (but not to pre-referendum levels). The lower the yield the higher the value placed on both liabilities already built up, and the cost of future benefits (where relevant).

This dip in yields at the end of July therefore means that having a 31 July year end was particularly bad in 2016 – figures shortly afterwards and shortly before would generally have been better. However, yields are currently still noticeably lower than pre-referendum levels, and expectations of future price inflation have been increasing recently, so overall the trend is still in the wrong direction since 31 July.

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Across the sector, institutions will generally be including figures in their accounts for a number of different schemes:

- Teachers' Pension Scheme (TPS) as an unfunded public service scheme, our understanding is that institutions are generally accounting for this based purely on the contributions paid each year, with no impact on the balance sheet (similar comments would apply to other such scheme – e.g. the NHS Pension Scheme).
- The Local Government Pension Scheme (LGPS) and (if it has one) the institution's own defined benefit self-administered trust (SAT). These are funded schemes, in which the institution's share of the deficit can be identified and, as such, the deficits in these schemes have always been shown on the balance sheet, and the comments above about 31 July 2016 will apply.
- The Universities' Superannuation Scheme (USS). This is a bit more interesting, because historically, any USS deficit has not been shown on institution's balance sheet – because the share of the liabilities for each institution could not be identified. In the past, this has been accounted for based on the annual contributions (as for TPS, etc). Under the new FRS102 accounting standard, institutions should now show the present value of future deficit contributions on their balance sheet. Our survey shows this has made the balance sheets of the universities in our survey £1.2bn worse off overall. It is also worth being aware that the mechanics of this calculation are different from that which applies to the LGPS and SATs – the deficit figure which this is based on is the one set at the previous USS triennial valuation – and so the balance sheet figure will be relatively stable for 3 years, and then jump (up or down) once a new triennial valuation is finalised. The next valuation of the USS is now underway, and could lead to a big increase in the deficit value – though this probably won't be signed off until after 31 July 2017 – meaning it won't affect accounts until 2018.

This survey's main purpose is to help those institutions with their own DB SAT in setting the assumptions to use, therefore the figures in this survey are focussed on a sample of 35 institutions whose accounts show they operates SATs.

As the accounts are obtained from the universities' first financial statements prepared in accordance with the new accounting standard FRS102 and the new Statement of Recommended Practice (SORP), data in the 31 July 2015 accounts has been restated since last year's survey. We have allowed for the updated data as at 31 July 2015 in this year's survey and therefore figures shown for 2015 may differ from those in last year's survey. We comment further on the implications of the change at the end of this report.

How much of a burden are these schemes?

For the universities in our survey, the pension deficit represents an average of 12.7% of the net assets of the university (excluding the SAT pension deficit). This is higher than the average seen last year (8.7%) and shows that deficits have been rising at a faster pace than net assets. Chart 1 shows how this proportion can vary significantly between individual universities.

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 2016, has remained the same since 2015 at an average of 2.9%.

The contributions made to USS, as a proportion of total staff costs, also decreased in 2016 at 9.3%, whereas in 2015 the average was 10.3%. Contributions to the USS remain substantially higher than the contributions made to SATs.

Chart 2 illustrates how the contributions to SATs compare with contributions made to the USS for these universities.

CHART 1

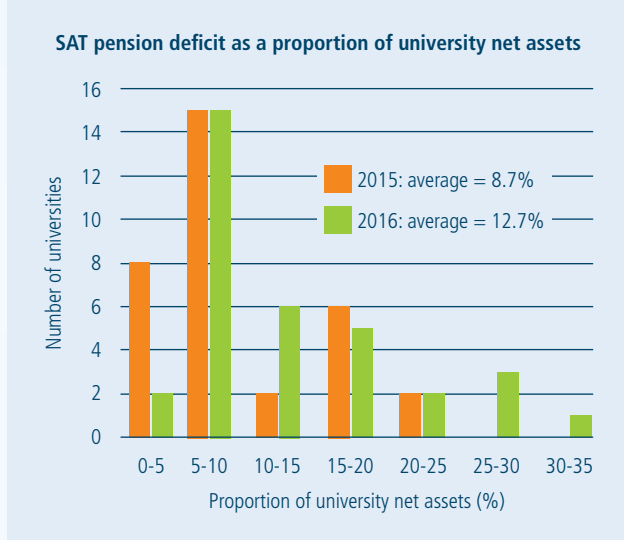
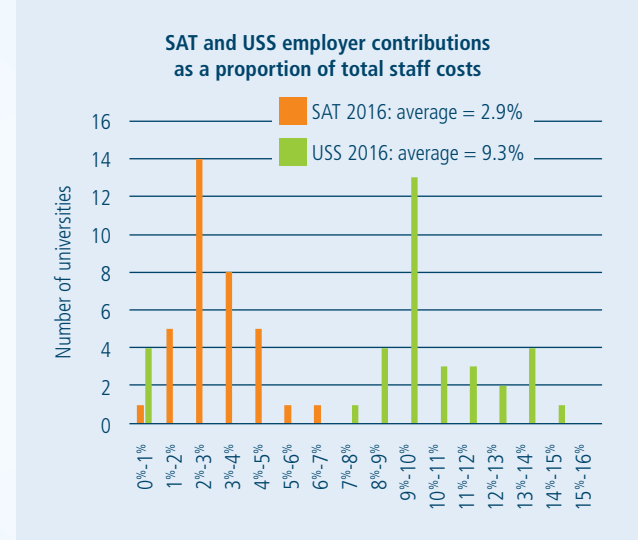


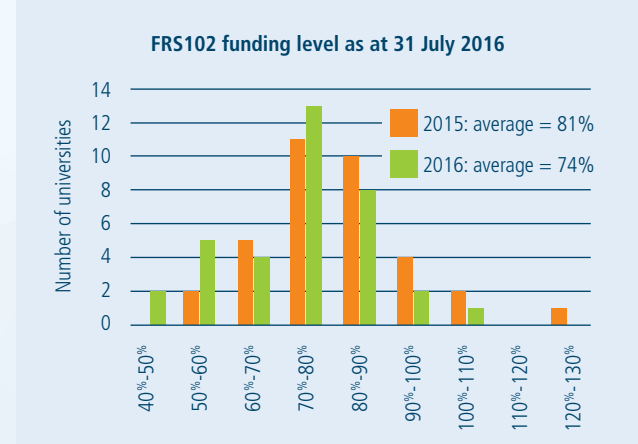
CHART 2



SURPLUS / DEFICIT

The average FRS102 funding level at 31 July 2016 for the universities in our survey was approximately 74%, which is less than the average funding level of 81% at 31 July 2015. The principal reason for the decrease in funding levels over this period was the reduction in bond yields over the year, leading to lower discount rates being used to value the liabilities. The effect of this was partially offset to an extent by strong asset performance and deficit contributions paid by the universities, but overall there has generally been a significant increase in deficits over the period amounting to approximately £800m across the universities included in the survey.

CHART 3



FRS102 assumptions

DISCOUNT RATE

The discount rates used by the universities in our survey for their SATs are illustrated in chart 4.

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

Table 1 compares the corporate bond yield and the average discount rate adopted at 31 July over the last five years.

The discount rates adopted have been higher than the yield on the index shown over the past five years. In the earlier part of this period this will reflect the fact that the duration of this index is shorter than the term of the pension scheme liabilities, and so an upward adjustment would have been made to reflect the fact that corporate bond yields generally increase with term. More recently, the derivation of discount

rates has changed such that specific reference to the term of the liabilities is normally made, 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. The shape of the corporate bond curve has also changed in recent years; it is now much flatter at longer terms.

Discount rates in this year's survey were lower and more varied than in the previous year. The range in 2016 was from 2.1% p.a. to 2.8% p.a., compared with the range in 2015 from 3.5% p.a. to 3.9% p.a.

CHART 4

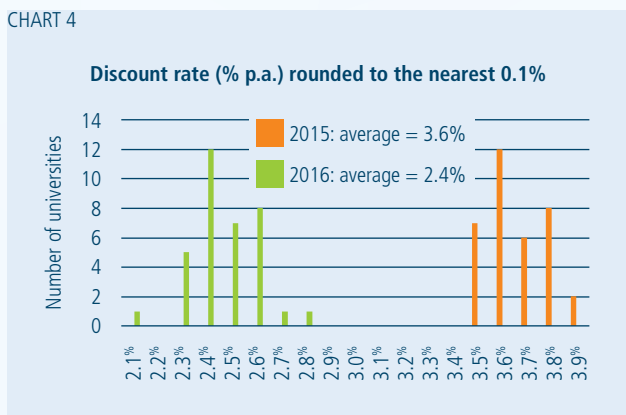
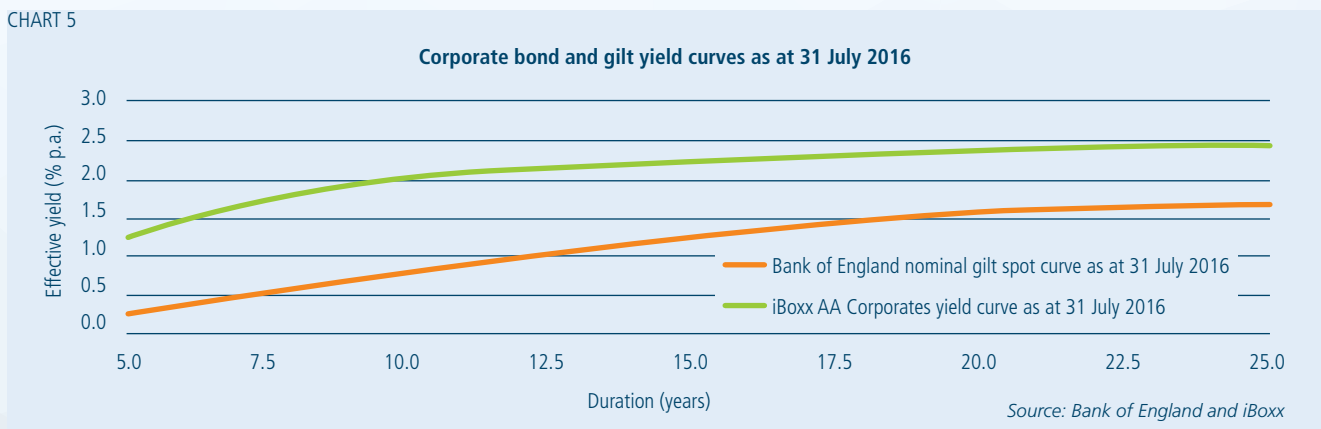


TABLE 1

Year ending	iBoxx over 15 year AA-rated corporate bond index (% p.a.)	Average discount rate (% p.a.)
31 July 2012	3.9	4.3
31 July 2013	4.3	4.6
31 July 2014	4.1	4.2
31 July 2015	3.5	3.6
31 July 2016	2.3	2.4

CHART 5



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 3.1% p.a. as at 31 July 2016. Most universities in the survey assumed that inflation would be slightly lower, with the average at 2.8% 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.

The assumptions adopted are about 50 bps less than they were last year, which broadly reflects the fall in market-implied inflation over the year.

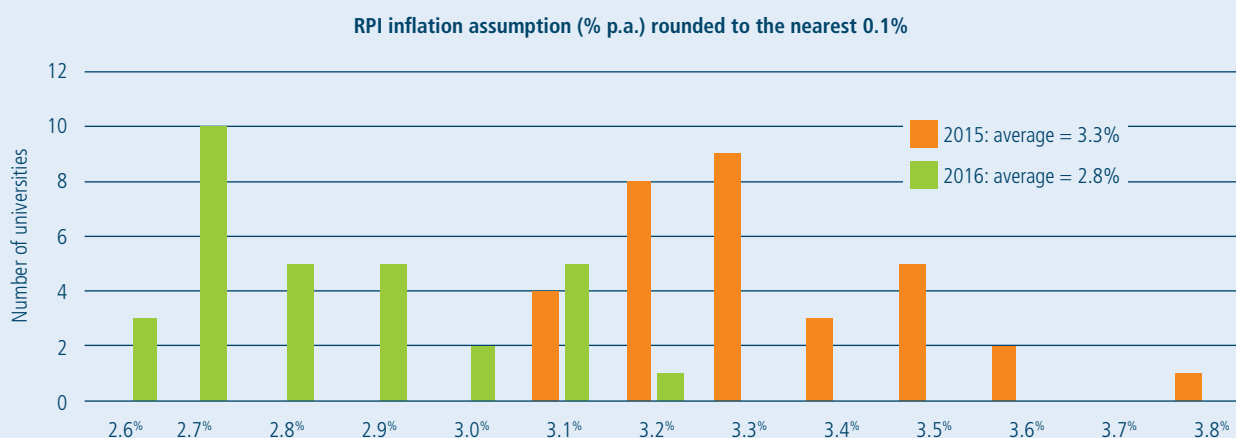
We have started to see recently that the 'single equivalent' approach to setting the discount rate is also being applied to the RPI inflation assumption. At the moment the inflation curve is downward sloping at both the short end and the long end, and this argument can be used to apply a further deduction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

TABLE 2

Year ending	Market implied future inflation rate* % p.a.	Average inflation assumption (% p.a.)
31 July 2011	3.8	3.5
31 July 2012	2.9	2.7
31 July 2013	3.5	3.4
31 July 2014	3.5	3.3
31 July 2015	3.5	3.3
31 July 2016	3.1	2.8

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

CHART 6



CONSUMER PRICES INDEX INFLATION

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

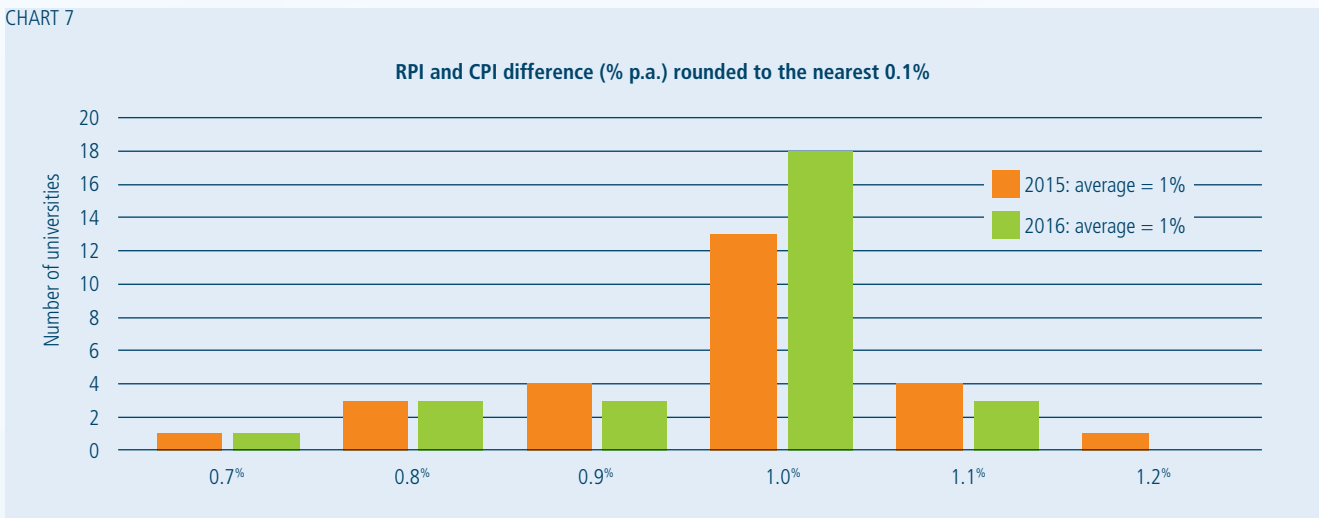
Over the 20 years to 2010, CPI was on average around 0.7% p.a. lower than RPI. Of this, 0.5% p.a. could be attributed to the 'formula effect' resulting from technical differences in the way the two indices are calculated, and the remaining 0.2% p.a. could be attributed to differences between the compositions 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 1.0% 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.

Chart 7 shows the gap implied by the assumptions chosen by the 29 universities who disclosed assumptions for both CPI and RPI. The average deduction from RPI was 1.0% p.a. in 2016 which is consistent with last year and slightly higher than the 2014 difference (0.9%). The trend indicates that the universities are slowly shifting towards a higher deduction more in line with the OBR and BoE estimates.

CHART 7



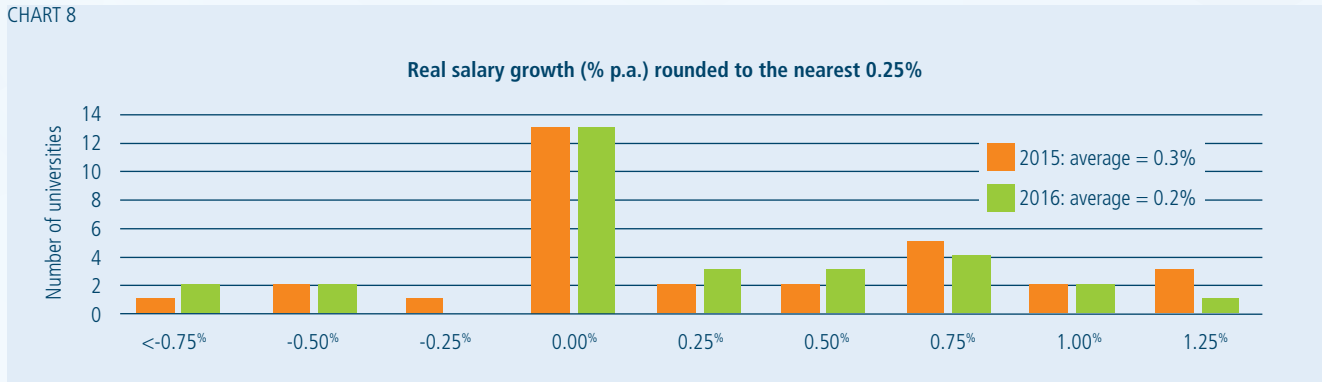
SALARY INCREASES

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 (chart 8) 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 2016 compared to the previous year. Chart 8 only considers universities which disclosed an assumption for RPI.

CHART 8



LIFE EXPECTANCY

30 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.

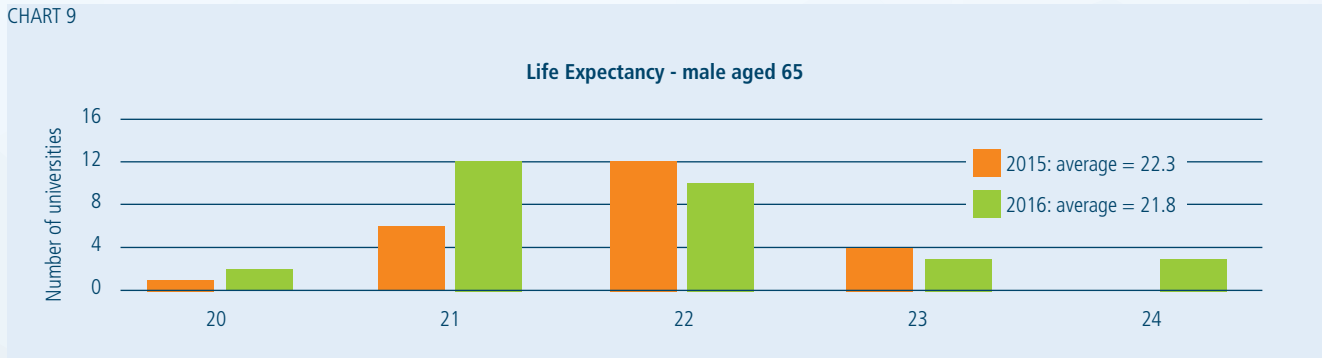
We have shown in chart 9 the life expectancy assumptions for a man currently aged 65 at the year end and also indicated the life expectancies implied by some of the mortality tables that were used.

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 slightly lower life expectancies as at 31 July 2016 than last year.

CHART 9



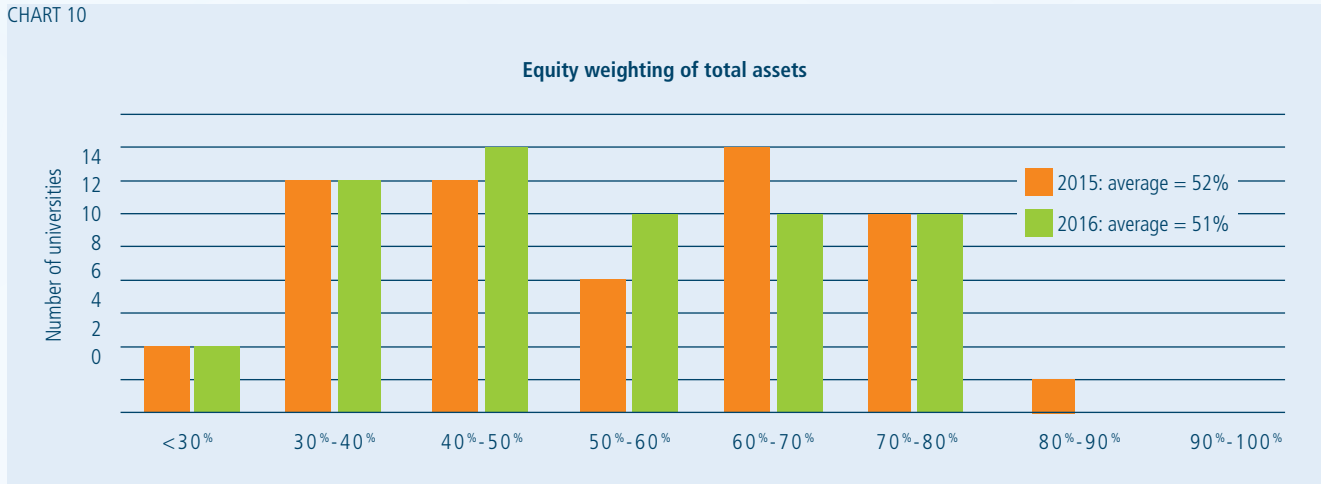
ASSET ALLOCATION

The chart below shows the percentage of SATs' assets invested in equities as at 31 July 2016 and 31 July 2015. The average equity weighting of 51% is slightly lower than the 2015 average of 52%. However, the average equity allocation of the SATs in our survey remains substantially above the average equity allocation within private sector occupational defined benefit schemes in 2016 of 30%, as reported by The Pensions Regulator.

This suggests that universities are prepared to take a longer term view on investment returns and the SATs trustees believe a stronger covenant is being provided than that from many private sector scheme sponsors.

We hope that this analysis is helpful to universities in formulating assumptions for future disclosures under FRS102 for their respective SATs.

CHART 10







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