ACTUARIAL VALUATION AS AT 31 MARCH 2014 STATEMENT OF FUNDING PRINCIPLES

Universities Superannuation Scheme ("the Scheme")

This statement of funding principles (SFP) sets out the policies of the Trustee Board of the Universities Superannuation Scheme ("the Trustee") for securing that the statutory funding objective is met.

It has been prepared by the Trustee to satisfy the requirements of section 223 of the Pensions Act 2004, after obtaining the advice of Ali Tayyebi, the actuary to the Scheme. It has been taken into account in the actuarial valuation as at the effective date of 31 March 2014. The SFP will be reviewed and, if necessary, revised, before being taken into account at subsequent valuations under Part 3 of the Pensions Act 2004.

The Trustee has consulted with Universities UK over the content of this statement of funding principles.

The statutory funding objective

The statutory funding objective is that the Scheme has sufficient and appropriate assets to meet the costs incurred by the Trustee in paying its benefits as they fall due (the technical provisions).

Calculation of the technical provisions

The principal method and assumptions to be used in the calculation of the technical provisions are set out in the Appendix.

The general principles adopted by the Trustee are that the assumptions used, taken as a whole, will be chosen sufficiently prudently for pensions and benefits already in payment to continue to be paid, and to reflect the commitments which will arise from members' accrued pension rights. The basis will include appropriate margins to allow for the possibility of events turning out worse than expected and will only be adopted after considering how it compares with the assumptions used to assess the Scheme's solvency position.

However, the Trustee does not intend for the method and assumptions to remove completely the risk that the technical provisions could be insufficient to provide benefits in the future.

As part of its process for choosing the assumptions and determining the size of the margins to include, the Trustee will take into account its objective assessment of the Employers' covenant and the level of risk present in the investment strategy of the Scheme.

"Self-sufficiency" and "Economic" bases

The principles of risk management adopted by the Trustee mean that the Trustee will have regard to the "Self-sufficiency" basis and the "Economic" basis when setting the technical provisions basis. In particular, the Trustee takes into account the projected difference between the Self-sufficiency basis and the technical provisions basis over time in order to ensure that it is within a range which is considered acceptable, taking into account the Trustee's assessment of the scope of potential employer contributions beyond those agreed in the schedule of contributions. This means that the choice of the discount rate may be impacted by the level of future benefit accrual as the latter will affect the projected quantum of liabilities over time.

The differences between the assumptions used for these two bases and the technical provisions assumptions are highlighted in the Appendix.

Policy on discretionary increases and funding strategy

No allowance has been included in the assumptions for paying discretionary benefits or making increases to benefits that are not guaranteed under the Scheme rules.

Rectifying a failure to meet the statutory funding objective

If the assets of the Scheme are less than the technical provisions at the effective date of any actuarial valuation, a recovery plan will be put in place, which requires additional contributions from the Employers (and potentially the members) to meet the shortfall. The Trustee has agreed that any such funding shortfalls should be met over an appropriate period taking into account the circumstances and needs of the Scheme and Employers at the relevant time.

Additional contributions will be expressed as a percentage of pensionable payroll.

In determining the actual recovery period at any particular valuation, the Trustee will take into account the following factors:

- The size of the funding shortfall and the Scheme's current asset and liability structure.
- The Trustee's future investment strategy, as set out it the Statement of Investment Principles.
- The Trustee's objective assessment of the financial covenant of the Employers.

Based on these principles and the assumptions being borne out in practice, the shortfall calculated at the 31 March 2014 valuation will be met by 31 March 2031 which is 17 years from the effective date of the valuation.

The assumptions to be used in these calculations are set out in the Appendix.

Calculating the normal cost of the Scheme

Contributions required to meet the cost of benefits accruing by members after the valuation date will be calculated using the method and assumptions set out in the Appendix.

Arrangements for other parties to make payments to the Scheme

There is no provision except in specific, limited circumstances in the Scheme Rules to allow someone other than the Employers or a Scheme member to make contributions to the Scheme.

Policy on reduction of cash equivalent transfer values (CETVs)

At each valuation, the Trustee will ask the actuary to report on the extent to which assets are sufficient to provide CETVs for all members. If the assets are insufficient to provide 100% of benefits on that basis, so that payment of full CETVs would adversely affect the security of the remaining members' benefits, and the Employers are unable or unwilling to provide additional funds, the Trustee will consider reducing CETVs as permitted under legislation.

If, at any other time, the Trustee is of the opinion that payment of CETVs at a previously agreed level could adversely affect the security of the remaining members' benefits, the Trustee will commission a report from the Actuary and will use the above criteria to decide whether, and to what extent, CETVs should be reduced.

Payments to the Employer

There is no provision in the Scheme Rules for Employers to request a refund of the excess assets over the cost of buying out benefits of all beneficiaries with an insurance company, when the Scheme is not being wound up.

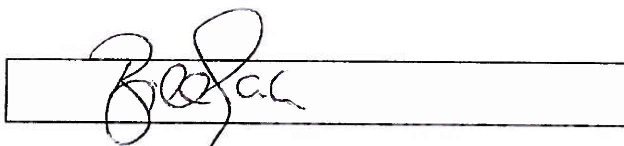
Frequency of valuations and circumstances for extra valuations

Subsequent valuations will in normal circumstances be carried out every three years, the next being 31 March 2017. In intervening years an actuarial report will be produced.

The Trustee will monitor the funding level between valuations. If the Trustee decides that it is appropriate, it may commission a full actuarial valuation, when after considering the Actuary's advice, it is of the opinion that it is necessary to do so and is an effective use of its resources.

This statement of funding principles, dated 24 July 2015 has been agreed by the Trustee of the USS after obtaining advice from the Scheme Actuary.

Signed on behalf of the Trustee of the USS



Name Bill Galvin

Position Group CEO

Date of signing 24 July 2015

Appendix

Method and assumptions used in calculating the technical provisions

Summary of decisions made as to method and key assumptions used for calculating technical provisions as at 31 March 2014

The method used was the Projected Unit method.

Principal actuarial assumptions for valuation as at 31 March 2014	
Investment return	5.2% in year 1, decreasing linearly to 4.7% p.a. over 20 years
Market derived price inflation	3.6% p.a.
Inflation risk premium	0.2% in year 1, decreasing linearly to 0.1% p.a. over 20 years
Price inflation – Retail Prices Index	Market derived price inflation less Inflation risk premium
RPI / CPI gap	0.8% p.a.
Price inflation – Consumer Prices Index	RPI assumption less RPI / CPI gap
Salary increases	
- General pay growth	CPI in year 1, CPI+1.0% in year 2 and RPI+1.0% p.a. subsequently
- Salary scale for past service *	Scale adopted reflecting recent experience
- Salary scale for future service *	Scale adopted reflecting longer term expectations
Pension increases in payment	CPI assumption (for both pre and post 2011 benefits)
Mortality base table	98% of SAPS S1NA "light" YOB unadjusted for males and 99% of SAPS SINA "light" with a -1 year adjustment for females
Future improvements to mortality	CMI_2014 with a long term rate of 1.5% p.a.

* Only up to April 2016

The derivation of these key assumptions and an explanation of the other assumptions to be used in the calculation of the technical provisions are set out below.

Method

The actuarial method to be used in the calculation of the technical provisions is the Projected Unit method, under which, for the Final Salary section members, the salary increases assumed for each member are projected until that member is assumed to leave active service by death, retirement or withdrawal from service or to 31 March 2016, if earlier.

Financial assumptions

Investment return (discount rate)

This is expressed as an estimate of the yield available on a notional portfolio of UK Government conventional gilt stocks whose cash flows approximately match the Scheme's estimated benefit cashflows plus an additional outperformance to reflect the allowance the Trustee has agreed for additional investment returns based on the investment strategy as set out in the applicable Statement of Investment Principles. The outperformance is 1.7% in year 1 and is assumed to reduce linearly to 1.2% over 20 years and assumed to stay at 1.2% p.a. beyond 20 years. This approach therefore implicitly includes a provision for gradual investment de-risking to take place over the 20 year period.

As explained earlier, the choice of the discount rate may be impacted by the level of the future benefit accrual. For the 2014 valuation the discount rate takes into account the new benefit structure effective from 1 April 2016.

If, following a review of the Statement of Investment Principles, the investment strategy of the Scheme changes after completion of the valuation then the assumed rate of investment return may also change at subsequent funding updates to reflect the different expected investment returns from the new asset mix.

For the "Self-sufficiency" basis the discount rate is assumed to be the gilt yield + 0.5% p.a. and for the Economic basis, the discount rate is assumed to equal the gilt yield.

Inflation (RPI)

The assumption for the rate of increase in the Retail Prices Index (RPI) will be taken to be the investment market's expectation for inflation as indicated by the difference between an estimate of the yields available on notional portfolios of conventional and index-linked UK Government bonds whose cashflows approximately match the Scheme's estimated benefit cashflows. An adjustment may be made to the assumption to reflect market views that the prices of index-linked gilts include a 'risk premium' to reflect, for example, future inflation uncertainty. This adjustment may be limited by the existing or prospective level of inflation hedging targeted by the Scheme. For the 31 March 2014 valuation, the inflation risk premium is set to be 0.2% in year 1 and then assumed to reduce linearly to 0.1% in year 20 and assumed to stay at 0.1% p.a. beyond year 20.

For the Self-sufficiency basis the inflation risk premium is assumed to be 0.1% p.a. and for the Economic basis, the inflation risk premium is assumed be nil.

Inflation (CPI)

The assumption for the rate of increase in the Consumer Prices Index (CPI) will be derived from the RPI inflation assumption with an appropriate adjustment to recognise the difference between expectations of future RPI increases and future CPI increases. The adjustment will be reviewed at each valuation; at the 31 March 2014 valuation the adjustment was a deduction of 0.8% p.a..

Salary increases

For the 2014 valuation, it has been assumed that increases in salaries will be as per the assumed CPI inflation in year 1, 1% above the assumed CPI inflation in year 2 and 1.0% p.a. above the assumed RPI inflation assumption thereafter.

In addition to the above general inflationary salary escalation allowance for further salary increases, over and above the sector's inflationary general pay growth, has been made by reference to an age-related scale. Sample rates are shown in the table below:

	% increase per annum	**% increase per annum**
Age	Males	Females
35	3.8	3.1
45	2.0	1.8
55	1.1	1.4

The Self-sufficiency and Economic bases assume no allowance for salary increases above CPI.

Pension increases

Increases to pensions are assumed to be in line with the CPI inflation assumption described above.

In particular, at the 31 March 2014 valuation no adjustment has been made for the fact that pension increases on benefits accrued after 30 September 2011 do not fully reflect inflation once CPI exceeds 5% p.a..

Demographic assumptions

Mortality

The mortality assumptions will be based on up-to-date information published by the Continuous Mortality Investigation (CMI) and National Statistics, making allowance for future improvements in longevity and the experience of the Scheme. The mortality tables are S1NA "Light" Year of Birth tables (taking 98% with no age adjustment to the table for males and 99% with a -1 year age adjustment to the table for females) with improvements based on the CMI 2014 model with a long term improvement rate of 1.5% p.a.

Early retirement

The allowance for early retirements will reflect emerging experience of retirements as monitored at each actuarial valuation and any adjustment for future expectations which is considered appropriate. For the 31 March 2014 valuation it has been assumed that for service accrued prior to 1 October 2011, active members will retire from age 62 with no reduction to their benefits. For service accrued after 30 September 2011, it has been assumed that active members will retire at age 65.

Deferred pensioners are assumed to retire at age 60 and allowance is built in for the appropriate reduction for early payment which would apply to each relevant tranche of benefit applicable to members retiring at that age. Allowance has been included for deferred members shown in the valuation data with a Contractual Pension Age prior to age 65 in accordance with the "Contractual Pension Age/Preservation" judgement.

Ill health retirement

A small proportion of the active members will be assumed to retire owing to ill health. As an example of the rates assumed at the valuation with effective date 31 March 2014, the following is an extract from the decrement table used:

	% leaving per annum	**% leaving per annum**
Age	Males	Females
35	0.01	0.01
45	0.04	0.05
55	0.14	0.25

Withdrawals

This assumption relates to those members who leave the Scheme with an entitlement to a deferred pension or transfer value. It has been assumed that active members will leave the Scheme at the following sample rates:

	% leaving per annum	**% leaving per annum**
Age	Males	Females
25	14.42	19.28
35	9.19	11.40
45	3.79	3.83

Commutation

No allowance has been made for the option that members have to commute part of their pension at retirement in return for an additional lump sum (or indeed exchange part of their additional lump sum for pension) on the basis that the overall effect of these options is not expected to be material to the Scheme.

Proportion of beneficiary pensions payable and age difference

It has been assumed that a proportion of members will have an eligible beneficiary at the time of retirement or earlier death as shown in the table below being 109% of the ONS 2008 tables for males, and that surviving beneficiary is three years younger, on average, than the deceased scheme member.

Age	**% spouse/partner**
25	10.9
35	53.4
45	69.8
55	77.4
65	83.9
75	79.6
85	61.0

Expenses

Expenses including PPF Levies are met by the fund. A provision for this is included by adding 0.4% of salary to the total contribution rate. This addition is reassessed at each valuation. The future level of the PPF levy in particular is very uncertain. Investment expenses have been allowed for implicitly in determining the discount rates.

Assumptions used in calculating contributions payable under the recovery plan

The contributions payable under the recovery plan will be calculated using the same assumptions as those used to calculate the technical provisions, with the exception of the following during the period of the recovery plan:

Investment return on existing assets and future contributions

The Trustee has agreed to allow for additional investment returns in the recovery plan. As at 31 March 2014 the additional investment was equal to 50% of the excess return between the best estimate assumed return and the return assumed in the technical provisions. For the 31 March 2014 valuation, the best estimate return is assumed to be 2.75% in year 1 and is assumed to reduce linearly to 1.85% p.a. in year 20.

If, following a review of the Statement of Investment Principles, the investment strategy of the Scheme changes after completion of the valuation then the assumed rate of investment return may also change at subsequent funding updates to reflect the different expected investment returns from the new asset mix.

Method and assumptions used in calculating the cost of future accrual

The cost of future accrual was calculated using the same assumptions as those used to calculate the technical provisions, with the exception of a reduced allowance for salary increases in excess of the sector's inflationary general pay growth. Sample increases (which are only applicable to April 2016) are given in the table below:

	% increase per annum	% increase per annum
Age	Males	Females
35	2.7	2.1
45	1.3	0.7
55	0.7	0.6

Assumptions used in calculating the cost of future accrual on the new benefit structure effective 1 April 2016

The cost of future accrual for the defined benefit element of the new benefit structure was calculated using the same assumptions as those used to calculate the technical provisions but, once the hybrid scheme has been implemented, with an additional assumption that the salary threshold would increase in line with the CPI assumption.

For the defined contribution element, once introduced, an assumption has been made of an 80% take up rate for the 1% of salary matched contribution.