USS

UNIVERSITIES SUPERANNUATION SCHEME

Actuarial Valuation Report
as at 31 March 2008

Universities Superannuation Scheme

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ACTUARIAL VALUATION AS AT 31 MARCH 2008

A triennial actuarial valuation of Universities Superannuation Scheme has been carried out as at 31 March 2008 by the actuary, Mr E S Topper of Mercer Limited. This is the first valuation for USS under the new scheme-specific funding regime introduced by the Pensions Act 2004 (and detailed within associated scheme funding regulations), which requires schemes to adopt a statutory funding objective, which is to have sufficient and appropriate assets to cover their technical provisions.

Mr Topper's report on the 2008 actuarial valuation was accepted by the USS board at its meeting on 22 January 2009 following a consultation with Universities UK (on behalf of the employers) on the assumptions to be used in the valuation.

The report on the 2008 actuarial valuation is being made available to all USS institutions and is printed in full in this booklet. The results of the valuation may be summarised as follows:

1 The employers' contribution rate will increase to 16% of salary from 1 October 2009, while the employees' contribution rate remains at 6.35% of salary (as currently specified in the USS rules) – but please refer to the penultimate paragraph of this letter.

2 Under the scheme funding regulations, the assets of the scheme at the valuation date were 103% of the scheme's technical provisions based on projected pensionable salaries, with a past service surplus of £707 million.

3 Based on the trustee company's historic funding basis, which makes no allowance for expected future equity outperformance over gilts, the assets of the scheme at the valuation date were 71% of the accrued liabilities based on projected pensionable salaries, with a past service deficit of £11,777 million.

3 The scheme is 107% funded in terms of the Pension Protection Fund regulations introduced by the Pensions Act 2004.

4 The valuation includes a reserve of £1,350 million to take account of recent promotional salary increase experience. Further analysis of promotional salary increases will be carried out to determine whether the high rate of increase experienced between 2002 and 2008 is likely to continue into the future and whether the provision is necessary or sufficient.

5 The contribution rate will be subject to review at the next actuarial valuation which is due to take place at 31 March 2011. Depending on the analysis of promotional salary increases and other factors, it may be necessary to consider the contribution rate in advance of the next actuarial valuation.

6 Although not referred to in the valuation report and not a requirement for USS, the actuary has estimated that the funding level at 31 March 2008 using the FRS17 formula was approximately 104%.

As can be seen by the disparity between the results of the valuation under the Scheme Funding Regulations and the valuation based on the trustee company's historic funding basis, the scope for variation in the funding level is substantial. The only difference between the two valuation calculations is in the discount rate used to value the liabilities. The former assumes the USS assets will return 2%pa in excess of gilts, an assumption which most investment professionals would consider to be reasonably cautious, whereas the latter is based on the conservative assumption that there will be no outperformance over gilts.

The report states that the employer contribution rate will increase to 16% from 1 October 2009. The board recognises, however, that the employers and the members, the latter represented by the University and College Union (UCU), are currently discussing ways in which the scheme can remain attractive and affordable. These discussions may lead to scheme changes which could affect the contribution rate. In the event that changes are agreed in the next few months, the board will be able to consider the effect of the changes on scheme funding and, if appropriate, decide on any changes to the increase specified above in advance of the 1 October 2009 implementation date.

While the board considers that the funding objective, the valuation method and the assumptions underlying the valuation calculations together represent a satisfactory basis for the long-term funding of the benefits provided by USS, it recognises that factors such as uncertainty over future investment returns, improving mortality and salary pressures arising from the competitive recruitment market in higher education, continue to put pressure on the scheme. The board will continue to monitor these factors closely and provide assistance where appropriate to the employer and member representatives in their discussions on the future of the scheme.

T H Merchant
Chief Executive

January 2009

Summary

Summary

An actuarial valuation of the Universities Superannuation Scheme has been carried out as at 31 March 2008.

The key conclusions from the valuation are:

- the Scheme showed a surplus of £707.3 million at the valuation date based on the assumptions made for calculating its technical provisions. This measure compares the Scheme's assets with the value of the past service benefits at 31 March 2008. It represents a funding level of 103% relative to the Scheme's funding target;
- based on the assumptions set out in the statement of funding principles for assessing the cost of accrual, the joint employee and employer cost of the benefits accruing for future service was 22.35% of Pensionable Salaries;
- based on the trustees' historic gilt funding basis, the Scheme showed a deficit of £11,776.6 million at the valuation date. This represents a funding level of 71%;
- if the gilt-based deficit was to be rectified by contributions alone, then a contribution of 23.2% of pensionable salaries per annum would be required over 10 years, in addition to the 22.35% per annum for future service.
- if the Scheme had been discontinued at the valuation date there would have been insufficient scheme assets to buy out all the benefits with an insurance company. The estimated wind-up funding level at the valuation date was 79%. In practice it should be noted that it would be very difficult if not impossible actually to secure all the USS benefits with an insurance company;
- on the PPF, Section 179 basis, the funding level was 107%.

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This report is addressed to the Trustee and has been prepared in accordance with the version of the Board for Actuarial Standards' *Guidance Note 9: Funding Defined Benefits – Presentation of Actuarial Advice* current at the date this report is signed.

The calculations in the report use methods and assumptions appropriate for reviewing the financial position of the Scheme and determining the appropriate contribution rate for the future. Mercer does not accept liability to any third party in respect of this report; nor does Mercer accept liability to the Trustee if the advice is used for any purpose other than that stated (for example for company accounting or corporate mergers/acquisitions).

The report may be disclosed to members and others who have a statutory right to see it. It may also be disclosed to any participating employers and, if the Trustee and Mercer consent, this report may be disclosed to other third parties.

1

Introduction

1.1 This report sets out the results of the actuarial valuation of the Universities Superannuation Scheme ('the Scheme') as at 31 March 2008.

Purpose of valuation

1.2 The primary aims of the valuation are to review the financial position of the Scheme and to determine appropriate contributions to the Scheme for the future.

1.3 In particular, the valuation aims:

- to assess the Scheme's funding position relative to the funding objectives;
- to assess whether the Scheme would have sufficient resources were it to discontinue;
- and, taking the above into account, to determine the appropriate future level of contributions.

1.4 Under the provisions of the Trust Deed and Rules, the Employers contributions are determined by the Trustee after considering actuarial advice. In accordance with the Pensions Act 2004, the Trustee has consulted with UUK on behalf of the employers on the contribution rate.

1.5 The valuation has been carried out on the instruction of the Trustee, and in accordance with Rule 20.20 of the Definitive Trust Deed and Rules and Section 224 of the Pensions Act 2004.

Previous actuarial valuation

1.6 The previous actuarial valuation of the Scheme was carried out as at 31 March 2005 by E S Topper.

1.7 At the previous valuation a cost of accrual of 20.65% per annum and an ongoing funding level of 77% was determined. It was agreed that Employers would contribute at the rate of 14% per annum in addition to a member contribution rate of 6.35% pending the results of the 2008 actuarial valuation.

2

Funding objective

2.1 The Pensions Act 2004 and the Scheme Funding Regulations issued in 2005 require schemes to adopt the statutory funding objective – to have sufficient and appropriate assets to cover their 'technical provisions'. This is the first valuation for the USS under this regime.

2.2 The 'technical provisions' are an estimate of the assets needed to make provision for benefits already accrued under a scheme.

2.3 The Trustee has decided on the funding objectives. These are set out in the statement of funding principles, enclosed as Appendix D.

2.4 In summary, the agreed funding objective is to build up an asset base sufficient to cover the Scheme's present benefit commitments as they fall due, together with those that will accrue in due course from future service, with appropriate allowance for, inter alia, the effect of future salary increases on the Scheme's liabilities.

2.5 Under legislation, the assumptions underlying the technical provisions are set by the Trustee after consultation with the Employers. The assumptions include margins for prudence that the Trustee considers appropriate given the Employer's willingness and ability to support the Scheme (the "Employer's covenant"). I have provided advice to the Trustee on margins for prudence.

2.6 The Minimum Funding Requirement underpin on the funding objective has been removed (as the MFR has been abolished).

3

Funding results – technical provisions

3.1 The market value of the Scheme's assets at the valuation date is compared with the Scheme's technical provisions below.

	31 March 2008 £m
Market Value of Assets	28,842.6
Liabilities	
Member in service	14,774.6
Deferred pensioners	2,229.3
Pensioners	11,131.4
All members	28,135.3
Surplus / (Deficit)	707.3
Funding Level	103%

3.2 The surplus against the technical provisions at the valuation date was £707.3 million. This represents a funding level of 103% relative to the technical provisions.

3.3 Of the surplus identified £564.7 million is in respect of the Main section, and £142.6 million is in respect of the supplementary section.

3.4 The technical provisions are not the same as the cost of securing the benefits on a wind-up. The wind-up position is described in Section 7.

4

Funding results – Trustee's historic funding basis

4.1 The market value of the Scheme's assets at the valuation date is compared with the Scheme's liabilities on the Trustee's historic funding basis below. The funding position at the previous valuation is shown for comparison.

4.2 The method and assumptions used to calculate the liabilities on the Trustee's historic funding basis are set out in the Statement of Funding Principles in Appendix D.

	31 March 2008 £m	31 March 2005 £m
Market Value of Assets	28,842.6	21,739.7
Liabilities		
Member in service	23,171.7	16,237.3
Deferred pensioners	3,548.9	2,159.3
Pensioners	13,898.6	9,911.5
All members	**40,619.2**	**28,308.1**
Surplus / (Deficit)	(11,776.6)	(6,568.4)
Funding Level	71%	77%

4.3 The deficit on this basis at the valuation date was £11,776.6 million. Of this deficit, £11,865 million is in respect of the main section offset by a surplus of £88.4 million in respect of the supplementary section.

4.4 The above liabilities are not the same as the cost of securing the benefits on a wind-up. The wind up position is described in Section 7.

Analysis of change in funding position

4.5 The key factors influencing the change in the value of the liabilities since the previous valuation are shown below:

Analysis of movement in deficit	£bn
Deficit at 31 March 2005	-6.6
Interest on deficit	-0.9
Higher than expected investment returns	+3.4
Higher than expected salary increases	-1.1
Employer contributions versus the of cost of benefit accrual	-1.7
Change in market conditions	-4.9
Change in underlying assumptions	-2.8
Inflation risk premium	+2.0
Miscellaneous/membership movements	+0.8
Deficit at 31 March 2008	-11.8

4.6 The above analysis highlights the key differences between what was assumed at the previous valuation and experience since then, namely;

- the higher than expected investment returns achieved by the Scheme; and
- the significant change in market conditions (primarily inflation) since the previous valuation.

4.7 The membership movement items include the impact of withdrawals, rejoiners, ill health retirements and deaths. It also includes the costs from the subsidy the scheme provides to Club Transfers received. These items are not possible to analyse in detail without substantial additional data and work being carried out.

5

Funding results – contribution requirements

5.1 The contribution rate payable by the Employers is set out in the following section and is based on the assumptions set out in the Statement of Funding Principles in Appendix D and assumes member contributions remain at 6.35% per annum.

5.2 The contribution rate is made up of the cost of the future service accrual (plus expenses) over the year (the "normal cost") together with any contributions levied to rectify any revealed deficit ("additional contributions").

Normal cost

5.3 The table below sets out the elements that make up the normal contribution rate. This cost is calculated as the value of benefits expected to accrue to the membership in respect of one year's service based on projected salaries. To this are added allowances for life assurance costs and expenses/levies. The figures are expressed as percentages of Pensionable Salaries and apply for the period to the next formal actuarial valuation.

	31 March 2008	31 March 2005
Normal contribution rate for:		
• pension benefits (including life assurance costs)	22.05% p.a.	20.40% p.a.
• administrative expenses/levies	0.30% p.a.	0.25% p.a.
Total normal contribution rate	22.35% p.a.	20.65% p.a.
Current Member contribution rate	(6.35)% p.a.	(6.35)% p.a.
Employer normal contribution	16.0% p.a.	14.3% p.a

Analysis of change in the Employers normal contribution

5.4 The key factors influencing the change in the Employers normal contribution since the previous valuation in 2005 are shown below.

Analysis of movement in normal cost	%
Employers normal contribution at 31 March 2005	14.3%
Change in financial assumptions	3.2%
Inclusion of Inflation risk premium	-1.7%
Increased longevity	2.4%
Effect of early retirement funding charge and revised decrements	-2.2%
Employers normal contribution at 31 March 2008	16.0%

Contributions to address shortfall

5.5 The Technical Provisions show no deficit and so no recovery plan is required to be submitted to the Pensions Regulator. The Trustee, however, is also minded to consider its historic gilt-based valuation target which did reveal a deficit as at 31 March 2008. If that deficit was to be made good by employer contributions alone, it would require additional contributions as shown below:

Recovery period	Additional contributions
10 years	23.2%
15 years	15.4%
20 years	11.5%
25 years	9.2%
30 years	7.6%

5.6 In addition a further increase of 2% would be required on account of the difference between the current member contribution rate of 6.35% and institution contribution rate of 14% compared with the 22.35% Normal cost contribution rate as detailed in paragraph 5.3.

5.7 The above additional contributions set out in the table are based on the assumptions set out in the Statement of Funding Principles in Appendix D, in particular the past service assumptions for the additional deficit contributions which make no assumption of equity out–performance over gilts, long term.

6

Method and assumptions

Funding method

6.1 The funding method adopted is known as the projected unit (PU) method. This is described in the statement of funding principles, enclosed as Appendix D. The same method was used at the previous valuation.

6.2 If the membership profile remains stable in terms of age and sex, and the assumptions are borne out, then the normal contribution rate (as a percentage of salaries) will remain stable. The method therefore implicitly allows for new entrants replacing leavers.

Assumptions

6.3 The financial and demographic assumptions used to assess the technical provisions; the Trustee's historic basis and the normal cost of benefit accrual are set out in the statement of funding principles (Appendix D).

6.4 The table below sets out a summary of the market yields at the valuation date, together with the yields at the date of the previous valuation:

	31 March 2008	31 March 2005
Long-dated gilt yield	4.4% p.a.	4.5% p.a.
Long-dated index-linked gilt yield	0.8% p.a.	1.6% p.a.
Market expectation for inflation (long-term)	3.6% p.a.	2.9% p.a.

6.5 The assumptions to which the valuation results are particularly sensitive are shown overleaf. A number of changes have been made to the Trustee's historic basis, compared with the previous valuation, and these are highlighted overleaf.

	2008 Future Service	2008 Past service	2005 Future service	2005 Past service
Investment return pre-retirement	6.1% p.a.	4.4% p.a.	6.2% p.a.	4.5% p.a.
Investment return post-retirement	6.1% p.a.	4.4% p.a.	6.2% p.a.	4.5% p.a.
Pension increases	3.3% p.a.	3.3% p.a.	2.9% p.a.	2.9% p.a.
Salary increases	4.3% p.a.	4.3% p.a.	3.9% p.a.	3.9% p.a.
Promotional Salary Increases	Scale	Scale + £1.35bn*	Scale	Scale + £800m*
Retirement age (active members)	62	62	60	60
Pre-retirement mortality	PA92 Medium cohort rated down one year for males		PA92 Base rated down 3 years	
Post-retirement mortality	PA92 Medium cohort rated down one year for males		PA92 c = 2020	

*The promotional salary increases are being monitored on a regular basis. At the previous valuation an £800 million reserve was built into the past service basis. We have retained the same allowance at this valuation for promotional salary increases but have increased the reserve to £1.35 billion.

6.6 As an illustration of the mortality rates included in the above table, the further life expectancies for a male/female at age 65 are shown below:

Pre-retirement mortality – current age 45	PA92 medium cohort (rated down one year for males)	PA92 Base - 3
	24/26 years	19/22 years
Post-retirement mortality – current age 65	**PA92 medium cohort (rated down one year for males)**	**PA92 c = 2020**
	23/25 years	20/23 years

6.7 The basis of valuing the assets (market value) is consistent with that of valuing the liabilities. Alternative assets comprise a relatively modest part of the current portfolio and have been taken at market value too, at this valuation.

7

Wind-up funding results

7.1 The wind-up funding level of the Scheme at the valuation date has been estimated as 79%. This has improved from 74% since the previous valuation. The main reasons for the improvement are the greater than assumed investment returns since the previous valuation, and the reduction in insurance company buy-out costs.

	31 March 2008 (£m)	31 March 2005 (£m)
Market Value of Assets	28,842.6	21,739.70
Liabilities		
Member in service	18,932.1	15,330.7
Deferred pensioners	3,500.8	2,522.2
Pensioners	13,471.7	11,065.3
Provision for wind up expenses	718.1	628.7
All members	**36,622.7**	**29,546.9**
Surplus / (Deficit)	(7,780.1)	(7,807.2)
Funding Level	79%	74%

7.2 As the Scheme is less than 100% funded on the wind-up basis at 31 March 2008, not all members could have received their full benefits from the Scheme's assets had the Scheme wound-up on that date.

7.3 If the Scheme had been wound-up on the valuation date, the priority order currently applicable would have had the following approximate impact on the different categories of benefit.

Benefit category	Coverage of benefits
Benefits up to level covered by PPF	100%
Any other benefits above those covered by PPF	20%

7.4 There is now a liability on employers on wind-up of a scheme based on the cost of meeting benefits in full. The estimated shortfall at the valuation date amounted to £7,780.1 million.

7.5 The above measures look at the Scheme's funding on the assumption that it had been discontinued on the valuation date and the benefits bought out with an insurance company. This is broadly equivalent to the position that would apply were the Trustees to run the Scheme on a secure closed fund basis.

7.6 In doing this, it is assumed that no further benefits accrue, no further contributions are paid and active members are entitled to benefits on the basis they had left service on the valuation date. There is no allowance for any discretionary benefits being paid in the future.

7.7 The funding level is only an estimate since it is not based on an actual quotation. The true position could only be established by completing a buy-out.

7.8 Given the Trustee's current investment policy, the wind-up position on a given date may be significantly different from the position estimated at the valuation date.

7.9 The assessments above have been carried out using experience of recent buy-out quotations and an understanding of the factors affecting this market. Detailed analysis of the reserves that would need to be held has not been carried out. Approximate allowance has been made for the reserves a provider would maintain to cover the risks involved and the statutory reserving requirements. Thus these results are only a guide to the wind-up position and should not be taken as a quotation. Market changes, both in interest rates and in supply and demand for buy-out business, means that if buy-out ultimately proceeds, actual quotations may differ. The assumptions used are as follows:

Financial	
Investment return	
Pre-retirement	4.8% p.a.
Post-retirement	5.0% p.a.
Pension increases	3.6% p.a.

Demographic	
Retirement	All at age 63.5
Mortality – base table	PA92 tables using year of birth and adjusted by -1 year for males only to reflect the membership profile of the Scheme
Mortality – future improvements	
Males	Medium cohort projections with 1.5% minimum improvement per annum starting from 2007
Females	Medium cohort projections with 1% minimum improvement per annum starting from 2007

7.10 An allowance of £718.1 million has been made to cover both Trustees' and insurance company expenses that maybe incurred to cover the cost of winding up the Scheme.

7.11 It should be noted that the agreed contributions of 16.0% (see paragraph 10.1) are not expected to be sufficient to maintain the current solvency coverage for all scheme members unless equity returns are significantly in excess of gilts going forward.

8

Pension Protection Fund (PPF)

8.1 If the Scheme winds up when all the Employers are insolvent it may be eligible for the PPF. The Scheme's assets and liabilities would only transfer to the PPF if these assets were insufficient to buy-out the benefits provided by the PPF.

8.2 The benefits that the PPF could provide would be broadly 100% of pension for members over pension age and 90% of a capped amount of pension for members under pension age. Under the current PPF provisions:

- pensions in payment will be increased annually, at the lower of 2.5% and the change in the retail price index (RPI), in respect of post April 1997 service only. Pre April 1997 accrued pensions are not increased;
- all deferred pensions will be revalued over the period to retirement in line with the increase in the RPI over the same period, or 5% per annum if less;
- spouse's pensions will be 50% of the member's PPF benefit;
- the pensions of members aged less than their scheme's normal pension age when the scheme enters the PPF will be capped. The cap depends on the member's age and will increase in line with earnings. For example, in 2007/8 the cap is £29,929 at age 65 so that the maximum amount of compensation for members retiring at age 65 will be 90% of this, i.e. £26,936.

8.3 Based on the PPF benefits, and the financial and demographic assumptions prescribed for the PPF, the Scheme is estimated to be 107% funded at the valuation date.

8.4 Since the Scheme had more than sufficient assets at the valuation date to cover the PPF benefits, on wind-up at that date, the Scheme would not have entered the PPF but would have secured benefits by the purchase of annuities.

9

Variability and risks

9.1 Valuation results set out in this report in sections 3, 4 and 5 depend on the financial and demographic assumptions set out in the statement of funding principles.

9.2 It is likely, especially in the short-term, that these assumptions will not be borne out in practice. It is therefore important to consider the potential impact of the actual experience differing from what has been assumed.

Sensitivity to key assumptions

9.3 Investment return, inflation, salary increase and life expectancy assumptions impact significantly on the funding position and the following table illustrates the sensitivity to variations in these key assumptions over the long term. The base point is the liability value of £40,619.2 million shown in section 4.2. Each row of the table considers one change in isolation, with all other assumptions being unaltered. An equivalent change in the assumption in the opposite direction would change the liability value by a similar amount but in the opposite direction.

Change in assumption	Increase in liability on Trustee's historic funding basis 31 March 2008 £bn
Asset out-performance assumption **increased** to 1% p.a.	-7.1
RPI increased by 0.3% p.a.	+2.0
Real salary growth increased by 0.5% p.a.	+0.8
Allowance made in pre and post retirement mortality for long cohort projections (no improvement floor)	+2.3

9.4 Similarly these assumptions impact significantly on the cost of the benefits accruing over the year. The following table illustrates the sensitivity to variations in these key assumptions over the long term. The starting point is the Employers normal cost of 16% shown in section 5.3. Each row of the table considers one change in isolation, with all other assumptions being unaltered. As before, a change in the assumption in the opposite direction would give rise to similar but reverse direction change in the Employers normal cost.

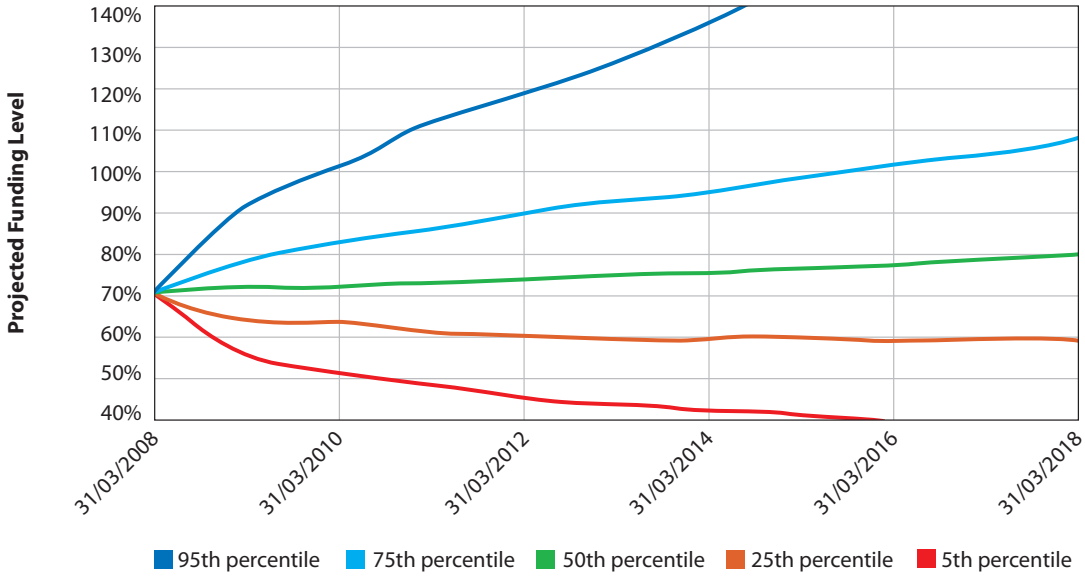
Change in assumption	Increase in Employers normal cost of benefits accruing at 31 March 2008 % of Pensionable Salaries
Asset out-performance assumption **reduced** to 1% p.a.	+4.4%
RPI increased by 0.3% p.a.	+1.7%
Real salary growth increased by 0.5% p.a.	+1.2%
Allowance made in pre and post retirement mortality for long cohort projections (no improvement floor)	+0.9%

Investment risks

9.5 The funding of defined benefits is by its nature uncertain. Funding of the Scheme is based on both financial and demographic assumptions. These assumptions are specified in the actuarial valuation report. When actual experience is not in line with the assumptions adopted a surplus or shortfall will emerge at the next actuarial assessment and will require a subsequent contribution adjustment to bring the funding back into line with the target.

9.6 The greatest risk to the Scheme's funding is the investment risk inherent in the predominantly equity-based strategy, in that actual asset out-performance between successive valuations could diverge significantly from the investment return assumptions made as set out in Appendix D.

9.7 The chart overleaf shows a "funnel of doubt" funding level graph, which illustrates the range and uncertainty in the future progression of the funding level, relative to the funding target adopted at the valuation. Using a simplified model, the chart shows the probability of exceeding a certain funding level over a 10 year period from the valuation date. For example, the top line shows the 95th percentile level (i.e. there is a 5% chance of the funding level at each point in time being better than the funding level shown, and a 95% chance of the funding level being lower). The graph adopts the Trustee's historic funding basis results at 31 March 2008 as a starting point, and allows for contributions equivalent to the normal cost of 22.35% p.a. to be paid into the Scheme as set out in Section 5.3. The chart assumes median investment returns in line with "best estimate" market expectations and variability of those returns broadly in line with historic experience.



9.8 The above chart assumes that the Scheme's current investment strategy, which involves investing a significant proportion of its assets in equities, will continue.

9.9 Alternative investment strategies could be followed that would minimise the risk of deterioration in the funding position assessed relative to the funding target, for example by raising the proportion of bond investment. Such a strategy would reduce the risk that changing economic conditions would cause deterioration in the Scheme's funding position. It would also tend to produce a more stable contribution rate but at a much higher overall level.

Risks associated with the Trustee's policy for meeting the statutory funding objective

9.10 The Trustee's policy for meeting the Scheme's statutory funding objective carries a number of risks. The following paragraphs comment on the following potentially material risks:

- the Employers may not be able to continue to pay contributions or make good deficits in the future;
- the future investment return on assets may be insufficient to meet the funding objective;
- falls in asset values may occur that are not matched by similar falls in the values of liabilities;

- unanticipated future changes in mortality may occur, increasing the cost of the benefits;
- additional pay growth from that assumed in the valuation.

9.11 If the Employers become unable to pay contributions, or they are unable to make good deficits in the future, the Scheme's assets will be lower than expected and the solvency position will be worse than expected. It is likely that any scope for benefit enhancements or discretionary benefits would be greatly reduced or eliminated entirely. If the reason for the Employers not paying the agreed contributions is one of financial difficulties, the Trustee's focus would switch to the results on the buy-out basis set out in Section 7.

9.12 If the future investment return on assets falls short of the rates assumed in the calculation of the liabilities then the solvency position of the Scheme would be worse than expected. It is likely that an increase in future contributions may be required (or alternatively the Employers may seek to reduce the value of the future benefits being built up). The analysis shown earlier in this section illustrates the potential volatility of contribution rates and funding levels of changes in investment market conditions.

9.13 If gilt yields change such that the liability values increase by more than the assets, or decrease by less than the assets, the funding position and the wind-up coverage would be worse than expected. An increase in contributions may be expected as a result. The same comments would apply if general population mortality studies and analysis of the Scheme show that people are living longer. In both scenarios the worsened funding position would reduce the affordability of discretionary benefits and benefit enhancements. The sensitivity analysis shown earlier in this section illustrates the quantitative impact of such changes.

10

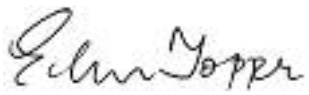
Conclusions

10.1 The agreed Employers contribution rate is 16.0% of members' Pensionable salaries.

These contributions will commence from 1 October 2009.

10.2 No additional contributions are required from the Employers to meet Scheme expenses or lump sum death benefits since allowance for these is included in the rates above. Member contributions (including any additional voluntary contributions) are payable in addition to the above rates.

10.3 Contributions will generally be paid monthly in arrears with each payment due by the 19th of each month. The PPF levy will be paid as required.

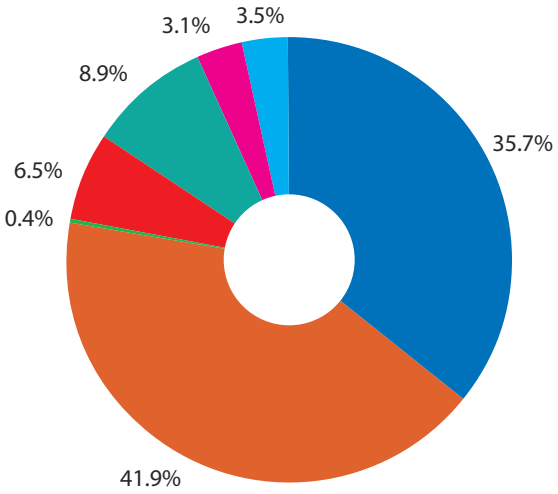
Signature	
Scheme Actuary	E S Topper
Date of signing	4th February 2009
Qualification	Fellow of the Institute of Actuaries

Appendix A

Assets and financial transactions

A.1 The market value of the Scheme's assets (excluding additional voluntary contributions (AVCs) which are separately invested) was £28,842.6 million on the valuation date.

A.2 The distribution of the assets by asset class is shown below:



	Percentage %
UK equities	**35.7**
Pooled investment vehicles	**6.5**
Cash/other	**3.5**
Overseas equities	**41.9**
Overseas bonds	**8.9**
UK fixed interest	**0.4**
Property	**3.1**

A.3 During the inter-valuation period, the investment return has been 31.2%.

A.4 The details of the assets at the valuation date and the financial transactions during the inter-valuation period have been obtained from the accounts for the Scheme.

A.5 Following the previous valuation it was agreed that the Employers would pay a contribution rate of 14% of Pensionable Salaries to the Scheme.

Members' contributions and AVCs were payable in addition. The accounts confirm that contributions have been paid at this rate.

A.6 The detailed asset information is shown below:

Market value at valuation date	**£millions**
Equities:	
UK	10,302.2
Overseas	12,103.4
Bonds:	
UK Fixed interest – public sector	47.9
UK fixed interest – Other	80.4
Overseas bonds	2,547.4
Property	877.8
Pooled investment vehicles	1,879.4
Cash deposits/Other	936.2
Net current assets/(liabilities)	67.9
Total	28,842.6

Appendix B

Membership data

B.1 The membership data is summarised below, with figures at the previous valuation shown for comparison.

Active members	Valuation date	Previous valuation
Number	130,450	109,684
Total Pensionable Salaries (£ p.a.)	£4,950.3 million	£3,650.4 million
Average Pensionable Salary (£ p.a.)	£37,947	£33,281
Average age	43.7	43
Average past service (years)	10.5	11.1

- The salary figures above include actual salaries for part time members.
- Members with more than one post are included in the above figures as the number of appointments, rather than one member.
- We have adjusted or made assumptions concerning missing salary data or apparently rogue salaries.
- Members who joined during the year have had their salary annualised.

Deferred pensioners	Valuation date	Previous valuation
Number	76,104	62,600
Total deferred pensions (revalued to valuation date)	£155.5 million	£122.8 million
Average deferred pension (£ p.a.)	£2,044	£1,961
Average age	43.7	42.8

Pensioners	Valuation date	Previous valuation
Number	40,945	34,542
Total pensions payable (£ p.a.)	£709.5 million	£573.9 million
Average pension (£ p.a.)	£17,329	£16,614
Average age	69.8	69.4

Dependents	Valuation date	Previous valuation
Number	8,057	6,930
Total pensions payable (£ p.a.)	£73.5 million	£60.3 million
Average pension (£ p.a.)	£9,117	£8,703
Average age	72.5	71.9

In addition there were 894 children receiving pensions totalling £3.0 million per annum.

B.2 The average Pensionable Salary increase for the Scheme members who were in service for the whole of the inter-valuation period was approximately 6.6% per annum.

B.3 Pensions in payment in excess of Guaranteed Minimum Pensions (GMP) were increased under the Scheme as follows:

11 April 2005	3.1%
10 April 2006	2.7%
9 April 2007	3.6%
7 April 2008	3.9%

B.4 Data in relation to members of the scheme was provided by USS and its accuracy has been relied upon. Whilst reasonableness checks on the data have been carried out, they do not guarantee the completeness or the accuracy of the data. Consequently Mercer does not accept any liability in respect of its advice where it has relied on data which is incomplete or inaccurate.

Appendix C

Benefits

C.1 The benefits valued are as set out in the Trust Deed and Rules dated 1 October 2003 plus supplemental deeds.

C.2 The Scheme commenced on 1 April 1975 and is exempt approved under Chapter I, Part XIV of the Income and Corporation Taxes Act 1988. The Scheme contracted out of the State Earnings Related Pension Scheme (SERPS) and is now contracted out of the State Second Pension. The Trustee has previously been provided with a Reference Scheme Test Certificate (confirming that scheme benefits satisfy the statutory comparison with minimum benefits provided by a reference scheme in accordance with sections 12A and 12B of the Pension Schemes Act 1993). I know of no reason why the Reference Scheme Test Certificate should no longer be valid.

C.3 The benefits that will emerge from Prudential money purchase AVCs paid by members have been excluded from the valuation, as have the corresponding assets, since the value of these liabilities is exactly matched by these assets.

C.4 UK and European law requires pension schemes to provide equal benefits to men and women in respect of service after 17 May 1990 (the date of the "Barber" judgement). There is still no general agreement on whether this applies to inequalities caused by Guaranteed Minimum Pensions (GMPs) and, if it does, what adjustments have to be made to scheme benefits to correct these inequalities. The valuation makes no allowance for equalisation of these inequalities. It is consequently possible that additional funding will be required for equalisation once the law has been clarified.

Appendix D

Statement of funding principles

This statement of funding principles sets out the policies of the Trustee of the USS ("the Trustee") for securing that the funding objectives 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 E S Topper, the actuary to the scheme. It has been taken into account in the actuarial valuation as at the effective date of 31 March 2008.

The Trustee has consulted with the Employers, 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 pay its benefits as they fall due (the technical provisions).

Trustee's historic funding basis

In addition to the statutory funding objective the Trustee will monitor the Scheme's funding level with regard to its historic funding basis (which makes no allowance for expected future equity out-performance over gilts).

Calculation of the technical provisions

The general principles adopted by the Trustee are that the assumptions used, taken as a whole, will be sufficiently prudent 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.

In particular, a prudent margin will be included in the discount rate and demographic assumptions will be based on prudent principles. 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.

In determining what is 'prudent' the Trustee will take into account their objective assessment of the Employers covenant.

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 may require additional contributions from the Employers to meet the shortfall. The Trustee has agreed that any such funding shortfalls should be eliminated as quickly as the Employers can reasonably afford.

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 asset and liability structure;
- the Trustees' objective assessment of the financial covenant of the Employers;

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 in the Scheme Riles 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 employers

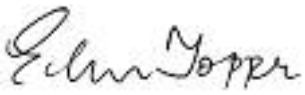
There is no provision in the Scheme Rules for employers to request a refund of the excess assets over the cost of buying out benefits of all beneficiaries from an insurance company, when the Scheme is not being wound up.

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 2011. In intervening years an actuarial report will be produced.

The Trustee will monitor the funding level on a quarterly basis between valuations. If the Trustee decides that it is appropriate, they may commission a full actuarial valuation, when after considering the actuary's advice, they are of the opinion that events have made it unsafe to continue to rely on the previous valuation results and the current contribution level is inappropriate.

This statement of funding principles, dated 4th February 2009 has been agreed by the Trustee of the USS after obtaining actuarial advice from the Scheme Actuary:

Signed	
Name	E S Topper FIA
Position	Actuary to the USS
Date	4th February 2009

Appendix to Statement of Funding Principles

Summary of method and key assumptions used for calculating technical provisions as at 31 March 2008

The method used was the Projected Unit method.

Principal actuarial assumptions for valuation as at 31 March 2008	
Investment return pre-retirement	6.4% p.a.
Investment return post-retirement	6.4% p.a.
RPI price inflation	3.3% p.a.
Salary increases	4.3% p.a.
Pension increases in payment	3.3% p.a.
Non-retired members' mortality	PA92 MC YoB tables – rated down 1 year for males
Retired members' mortality	PA92 MC YoB tables – rated down 1 year for males

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

Method

The actuarial method to be used in the calculation of the technical provisions is the Projected Unit method, under which 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.

Financial assumptions

Investment return (discount rate)

A yield based on market returns on UK Government gilts stocks and other instruments which reflects a market consistent discount rate for the profile and duration of the Scheme's accrued liabilities, plus an Asset Out-performance Assumption ("AOA") of 2% p.a. to reflect the prudent allowance the Trustee has agreed for additional investment returns.

Inflation (Retail Index prices)

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 "inflation risk premium" adjustment has also been included by deducting 0.3% from the implied inflation. This is to allow for the current high inflation implied by government bonds, compared to the Bank of England's target of 2.75% per annum, which may be due to the current lack of supply of index-linked gilts.

Salary increases

I have assumed that increases in salaries will be 1.0% per annum above the assumed inflation assumption of 3.3% per annum i.e. a total increase of 4.3% per annum.

I have also allowed for a salary scale to reflect age and promotional increase in addition to general salary escalation of 4.3% per annum. 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

Pension increases

Increases to pensions are assumed to be in line with the inflation (RPI) assumption as described above. The pension increase assumption is modified appropriately to reflect any benefits which are not fully indexed in line with RPI (e.g. GMP in respect of service prior to April 1997).

Demographic assumptions

Mortality

The mortality assumptions will be based on up-to-date information published by the Continuous Mortality Investigation Bureau, making allowance for future improvements in longevity and the experience of the scheme. The mortality tables used are PA92 Year of Birth tables with medium cohort improvements, for both retired and non-retired members. The tables are rated down one year for male members.

Assumed Retirement Age

USS Limited have informed me that the average age of active members retiring in the three years to 31 March 2008, has risen to 62 years as a result of the introduction of the early retirement funding change. I have therefore assumed that active members will retire from age 62 with no reduction to their benefits.

Deferred pensions are assumed to retire at age 60 but allowing for the appropriate reductions to benefits which would apply for 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 2008, 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	0.06	0.08
55	0.21	0.37

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

We have assumed that no members commute their pension for additional lump sum.

Proportion married and age difference

It has been assumed that a proportion of members will have an eligible spouse/civil partner/dependant at the time of retirement or earlier death as shown in the table overleaf, and that wives/partners are three years younger, on average, than their husbands/partners.

	% Spouse/Partner	% Spouse/Partner
Age	Males	Females
25	34	56
35	81	84
45	92	93

Expenses

Expenses are met out the fund. This is allowed for by adding 0.3% of pensionable pay to the employer contribution rate. This addition is reassessed at each valuation. Investment expenses have been allowed for implicitly in determining the discount rates.

The actuary will estimate the levy the Trustee must pay to the Pension Protection Fund over the period of the schedule of contributions, based on a section 179 valuation carried out with the same effective date as the actuarial valuation.

Method and Assumptions used in calculating the Trustees' historic funding basis

In calculating the liabilities on the Trustees historic funding basis we have used the same assumptions used to calculate the technical provisions, with the exception that we have made no allowance for any AOA, i.e. using a discount rate of 4.4% per annum.

Method and assumptions used in calculating the cost of future accrual

The cost of future accrual will be calculated using the same assumptions as those used to calculate the technical provisions, with the exception of the following:

- an allowance for an AOA of 1.7% per annum, giving a discount rate/investment return assumption of 6.1% per annum
- a reduced allowance for promotional salary increases, sample increases are given in the table below and are in addition of the general pay growth of 4.3% per annum:

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

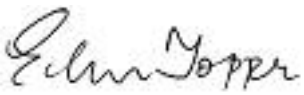
Certification

Certificate of technical provisions

Name of Scheme	Universities Superannuation Scheme

Calculation of technical provisions

I certify that, in my opinion, the calculation of the scheme's technical provisions as at 31 March 2008 is made in accordance with regulations under section 222 of the Pensions Act 2004. The calculation uses a method and assumptions determined by the Trustee of the Scheme and set out in the Statement of Funding Principles.

Signature	
Name	E S Topper
Date of signing	4th February 2009
Address	Mercer Limited Clarence House, Clarence Street Manchester M2 4DW
Qualification	Fellow of the Institute of Actuaries