Cambridge Colleges' Federated Pension Scheme

Actuarial Valuation as at 31 March 2008

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1 Introduction

Background

This report on the actuarial valuation of the Cambridge Colleges' Federated Pension Scheme ("the Scheme") as at 31 March 2008 is addressed to the Management Committee acting as Trustee of the Scheme.

It has been prepared as required by legislation (Part 3 of the Pensions Act 2004 and The Occupational Pension Schemes (Scheme Funding) Regulations 2005), and in accordance with Clause 18.2 of the Scheme Trust Deed dated 9 March 2004.

The previous actuarial valuation was undertaken as at 31 March 2005, by Paul Barnes, the previous Scheme Actuary.

The calculations in this report use methods and bases appropriate for the purposes described below. Calculations required for purposes other than these should be carried out in accordance with the specific requirements for such purposes and the figures provided here should not be assumed to be appropriate.

This report may be provided to the Employers and to Scheme members in accordance with the Disclosure legislation and regulations, but may only be disclosed to other parties with our consent. Such parties may rely upon the results only for the purposes described below. The report does not grant any rights to Scheme members or other third parties and may not necessarily cover all the implications for a third party. I and Cartwright Group Limited do not accept any liability to any third parties in respect of the contents of this report.

Purposes of Report

The main purposes of the report are:

- to review the financial condition of the Scheme as at the valuation date:
  - ⇒ for funding purposes;
  - ⇒ for solvency purposes;
  - ⇒ for pension protection fund levy purposes;
- to set out the level of the Employer contributions for the period until the next valuation; and
- to satisfy the statutory requirements concerning the disclosure of information and regulations relating to the Pensions Act 2004.

This report has been prepared in accordance with the professional guidelines for actuarial reports (Guidance Note 9 v8.1) issued by the Board for Actuarial Standards, and current for valuations based upon the Pensions Act 2004 regime as at the date of signature of the report. It has been peer reviewed under Guidance Note 48 by a qualified actuary.

An earlier discussion document – the Memorandum on the Valuation, dated December 2007, set out my initial advice to the Management Committee regarding the commencement of the valuation process. This too was a GN9/GN48 report. It included drawing the Management Committee's attention to the Pension Regulator's Code of Practice 3 and in particular paragraphs 75, 79 & 102, the different funding methods that are available to them and how they may choose a set of assumptions. However, it should be noted that I have not provided any advice to the Management Committee on Employer matters.

In particular in recommending assumptions to the Management Committee I provided no advice on factors affecting the Employers or their industry which may affect such factors as pay increases or rates of withdrawal of Scheme membership (paragraph 79).

In addition, in calculating the contribution rates in accordance with the Statement of Funding Principles, I have not provided any advice on other related Employer matters such as business plans, expenditure commitments or industry reports (paragraph 102).

Highlights

The highlights of the report are as follows:

Statutory Funding Objective

The result of this valuation is that on the Statutory Funding Objective there is a deficiency of £20.8 million (compared to a deficiency of £18.5 million in the previous valuation) when the actuarial value of the assets is compared to the value of the Technical Provisions. This represents a funding level of 83% (80% in the previous valuation).

It should be noted that part of the increase in this deficiency is caused by the change to the funding basis – this can be seen more clearly in the analysis of deficiency later in Section 7. If the valuation had been based upon the 2005 valuation assumptions then the deficiency would have been £16.1 million.

Part of the change in valuation assumptions relates to the change made to financial assumptions, in particular the assumption made for inflation (3.4% p.a. for this valuation, compared to 3% p.a. for the previous valuation). However, the most significant change in assumptions is the change made to the assumptions for mortality. For the current valuation, the mortality assumptions used are as follows:

Base Table	115% of the Standard Table PA92 for males and females.
Allowance for Future Improvements	Medium Cohort Basis, with a minimum rate of improvement of 1% p.a.

The choice of the Base Table follows on from our analysis of actual Scheme experience, and I therefore believe that the Management Committee can be confident that this is an appropriate reflection of current experience.

Calculated Employer Future Service Contribution Rates

I have calculated that the overall average Employers' Contribution Rate required to fund for future service benefits for all members is 20.03% of Contribution Pay. This rate includes allowances for both Scheme administration expenses and life assurance costs but excludes premiums for PHI.

Employers' Contribution Rates in respect of each individual College vary according to the College's membership profile and whether its Section is closed or open to new entrants.

No adjustment has been made for the deficiency in deriving the above figure.

Actual Employer Contribution Rates

To meet the ongoing cost of future accrual the Employers have agreed to pay contributions in line with the calculated future service rates.

In addition, the Employers have agreed to finance the Scheme's deficiency to bring the funding level to 100% of the Technical Provisions by paying additional contributions. Full details of all contributions to be paid by the Colleges are set out in Section 16.

Employee Contributions

Members' contribution rates are set out in the Scheme's Rules and are summarised in Section 12.

Solvency Level

I have also carried out a valuation on an approximate buy out basis. This gives an estimate of the position should the Scheme wind up and the Management Committee need to purchase deferred annuities and immediate annuities from an insurance company. This basis is my estimate of what an insurance company may have used to quote for the buy out as at the valuation date. This cost is significant as insurance companies use current bond yields as a basis for determining the interest rate they use to calculate buyout costs.

This valuation shows that the Scheme is currently 56% funded on this basis (approximately 54% in the previous valuation), with a deficiency of £79.1 million (£61.7 million previously).

Please note that if the Scheme were currently 100% funded on the Statutory Funding Objective basis then it would be 68% funded on the current Solvency Basis.

Please also note that on this basis the Employer Contribution rate (excluding allowance for the amortisation of deficiency) would be 30.15% of Contribution Pay. **I state this here because if all solvency assumptions are borne out in practice then the solvency position of the Scheme may worsen in future if overall contributions are payable at a rate less than this.**

Timescales & Requirements

A summary of the findings of this report and a copy of the Recovery Plans needs to be submitted to TPR within 10 days of the completion of this report. **I can confirm that this was done today.**

Under the new funding regime an interim funding valuation report will be required at 31 March 2009 for all Colleges that have more than 100 members.

The next full triennial valuation should be undertaken no later than as at each 31 March and will need to be completed by 30 June 2012.

Signature: Robert. J. Sweet   Date: 31 July 2009

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2 Background

The Scheme

The Scheme is deemed to be a registered pension scheme under the terms of Schedule 36 of the Finance Act 2004. There are 25 participating Colleges in the Scheme, each with their own segregated Section. 19 of the College Sections are contracted out of the State Second Pension (S2P) using the Reference Scheme Test.

Benefits

The benefits valued are those defined in the Rules of the Scheme, announcements to members and in the membership handbook effective as at the valuation date, but taking into account overriding legislative changes in force at that date. A summary of the Scheme's benefits as at the valuation date is set out in Section 12. This is provided for information only, and in the event of any discrepancy between the summary and the Rules of the Scheme, the latter will prevail.

The Management Committee fully insure death in service benefits.

Members may pay Additional Voluntary Contributions (AVCs) to increase benefits payable from the Scheme, in the form of added years' service. Past service liabilities, Technical provisions and assets in this report include appropriate allowance for AVCs.

No allowance has been made for any discretionary benefits that the Management Committee may, from time to time, apply to Member benefits.

Allowance has been made for Member's choosing to commute pension for cash. It is assumed that 80% of members will take cash on retirement.

No allowance has been made for other options which, if chosen, could reduce or increase the overall Scheme liabilities.

Membership Data

I was supplied with Member data and the audited accounts by the Pensions Administration Office. I carried out a full member data reconciliation against the previous valuation data. In addition, I have checked the data for reasonableness against previous Scheme accounts and for consistency with other data held. The data is in good order. All queries were resolved satisfactorily. A summary of the Member data is set out in Section 13.

I have relied upon the accuracy of the information provided to me by the Management Committee in completing this report.

Employer Data

It is important for the Management Committee to have up to date information on the financial position of the Employers as this could impact upon their assessment of the covenant backing the Scheme.

I have based my calculations on the assumption that the Employers will pay all future contributions without default.

If the Management Committee are concerned at all about the Employers' covenants then I recommend that they seek further advice from an appropriate specialist.

Assets

Assets are those shown in the audited accounts at 31 March 2008. At the valuation date the Scheme's assets were invested in managed funds with Schroder's. The assets were invested in a wide range of asset classes including both domestic and overseas securities. In addition, cash is held within a Scheme bank account and there are other net current assets.

Details of these assets as at the valuation date, and the calculation of their actuarial value, are described in Section 14.

3 Legislative Developments

Pensions Acts and Regulations

Some of the main recent changes in legislation since the previous valuation are set out below:

- Pension Protection Fund (PPF) - an insurance-type scheme to meet up to 100% of pensions in payment and up to 90% of the accrued pensions of active and deferred members should the scheme wind up with an insolvent employer.
- Scheme wind up – a solvent Employer will need to provide sufficient funds to buy out benefits.
- The Pensions Regulator (TPR). TPR has extensive powers including all of those previously held by the Occupational Pensions Regulatory Authority (OPRA), which has been dissolved.
- Scheme Funding requirement - the Minimum Funding Requirement (MFR) was replaced with the new funding standard and schemes are required to hold sufficient and appropriate assets to meet their Technical Provisions (the new name for Past Service Liabilities).
- Statement of Funding Principles – the Management Committee are required to have a written statement setting out how they intend to approach Scheme Funding. A copy of your Scheme's document is attached at the back of this report.
- Interim actuarial reports - as well as triennial actuarial valuations, Scheme Actuaries are required to produce an annual update for trustees if a scheme has more than 100 members, setting out information on the development of scheme liabilities and assets.
- Limited Price Indexation (LPI) for pensions in payment may be capped at 2.5% p.a. in respect of service after 5 April 2005 (rather than 5% p.a., as previously).
- Member Nominated Trustees ("MNTs") - schemes are required to have at least one third MNTs or, in the case of trustee companies, one third member nominated directors. The Secretary of State has been granted powers to increase this proportion to half at some point in the future.
- AVC facilities – it is no longer compulsory for schemes to provide an AVC facility.

Finance Acts

The Finance Act 2004 laid the foundation for a simplified taxation regime for pensions from April 2006. The eight existing tax regimes were replaced by a single lifetime allowance, which was set at £1.5 million for the first year from April 2006, rising to £1.8 million by 2010. The Finance Act 2008 capped this lifetime allowance at £1.8 million until at least 2015.

4 Inter-valuation Period

Funding Method

The Scheme is sectionalised and includes 25 separate sections.

- 13 of the College Sections remain open to new entrants;
- 11 College Sections are closed to new entrants; and
- 1 Section is closed for all future accrual.

Following my recommendations, the approach chosen by the Management Committee for this valuation is to use a different future service funding method for Colleges depending on whether or not the College Section of the Scheme is closed to new entrants.

To determine the Past Service Liability for all Colleges the Management Committee uses the Defined Accrued Benefit Method. This method is, in my opinion, suitable for this purpose.

For future service, for Colleges where the Scheme is open to new members, the Actuarial Method the Management Committee use in determining the Future Service Cost is the Projected Unit Method (PUM). This method is, in my opinion, suitable for a scheme open to new members.

For Colleges where the Scheme is closed to new members, the Actuarial Method used in determining the Future Service Cost is the Attained Age Method (AAM). This method is, in my opinion, suitable for a scheme closed to new members taking a more prudent approach in determining future contribution rates.

This is the same approach as was used in the 2005 valuation, although several more Colleges have closed to new entrants since that valuation was carried out and therefore their funding methods have changed. Details of the Colleges that have changed are set out at the end of this Section.

More details about the AAM and PUM are explained in Section 6 and in my earlier Memorandum on the Valuation.

Main Assumptions

The main actuarial assumptions have been changed as follows:

	2005	2008
Rate of interest:		
• before retirement	7.0% p.a.	7.0% p.a.
• after retirement	5.0% p.a.	5.3% p.a.
Rate of Salary increases:	4.5% p.a.	4.4% p.a.
Rate of inflation	3.0% p.a.	3.4% p.a.

In addition, mortality tables have been updated in 2008 to allow for improving longevity.

Contributions

Since the previous valuation the Employers and the members of the Scheme have paid contributions as detailed below:

Members:	• in line with the Rules of the Scheme
Employers:	• In line with Schedules of Contributions agreed with the Management Committee

To meet the cost of normal ongoing future service the Employers agreed to pay contributions at an overall average rate of 17.8% of Contribution Pay . In addition, they agreed to meet the overall deficiency. Each College had its own Schedule of Contributions. Full details of all contribution rates split by College are set out in the back of the audited accounts for 2006, 2007 & 2008. They were recommended by the previous Scheme Actuary and the auditors have confirmed that the contributions paid into the Scheme have been made in accordance with these Schedules of Contributions.

According to the audited accounts, the joint contributions paid into the Scheme, including those for added years' AVCs, since the previous valuation have been as follows:

- £7,371,686 in the year ending 31 March 2005;
- £8,423,484 in the year ending 31 March 2006; and
- £8,539,500 in the year ending 31 March 2008.

Scheme Changes

Since the previous valuation in 2005 the following changes have occurred:

1) The Section for Churchill College has closed for all accrual with effect from 1 April 2007.

2) The following Sections have closed to new entrants:

College	Effective Date of Closure
Pembroke	1 February 2006
Magdalene	1 January 2007
Gonville & Caius	1 January 2007
Wolfson	1 March 2008
King's	1 April 2005 (but only confirmed after all calculations in the 2005 valuation had been undertaken assuming that the Section was open to new entrants)

3) Member Contributions have been increased in the following Sections:

College	Old Rate %	New Rate %	Date of Change
Hughes Hall	2% 5%	5% 8%	1 August 2005 1 August 2006
Wolfson	3%	4%	1 April 2006
Queens'	6%	6.35%	1 April 2006
Selwyn	6%	6.35%	1 April 2006
Newnham	6%	8%	1 April 2006
Corpus Christi	6%	8%	1 April 2006
Lucy Cavendish	2%	4.17%	1 April 2006
St Edmund's	2% 3.5%	3.5% 5%	1 September 2006 1 August 2007
Girton	6% 7.5%	7.5% 8.5%	1 April 2007 1 April 2008
Downing	6.35%	8%	1 April 2008

5 Statutory Funding Objective and Associated Risks

Objective

The Statutory Funding Objective (SFO) is defined in section 222 of the Pensions Act 2004. Every scheme must have sufficient and appropriate assets to cover its technical provisions.

The funding objective adopted for the Scheme by the Management Committee is that the value of the assets at any date should be at least equal to the value of the Technical Provisions for benefits accrued before that date (based on projected earnings for active members). Any deficiency will be addressed in accordance with the Recovery Plan by increasing Employer contributions over a suitable timeframe.

Although expressed using different terminology, the same objective was adopted for the previous actuarial valuation as at 31 March 2005.

Method

The methods employed to achieve this objective involve regular assessments of the Funding Level (defined in Section 7) and of the contribution rates using the valuation methods and assumptions detailed in Section 6. If the assumptions made are borne out in practice, and the appropriate contributions are made, these methods will ensure the funding objective is met and that the contribution rates paid by the Employers are reasonably stable as a percentage of Salary.

It should be noted that the Funding Basis used is not the same as that which would be used to determine the cost of buying out the benefits of the Scheme from an insurance company, should the Scheme commence winding-up.

Risks	Circumstances in which either the funding objective may not be met, the solvency position may worsen or the contribution rates paid by the Employers may not be stable might include the following: • the appropriate contributions are not made; • the financial or demographic experience of the Scheme differs significantly from the valuation assumptions; or • the benefits provided by the Scheme are changed (as a result of either legislation or a decision by the Employers/ Trustee). In particular, the Trustee should consider the possible impact of the following specific risks. Although not exhaustive it covers the main risks for the Scheme. Some of the risks can be reduced by adjusting the funding strategy, for example investment matching risk. Other risks cannot be removed, for example longevity risk, and the Trustee must be aware of these risks and monitor them closely.
Sponsor Risk	If an Employer becomes insolvent or is otherwise unable to meet the contribution rate set then the risk is that members may not receive all the benefits they expect.
Investment Return Risk	If the assets under-perform the returns assumed in setting the funding target then additional contributions may be required at subsequent valuations.
Investment Matching Risk	The Scheme invests significantly in equity type assets, whereas the solvency target is closely related to the return on bonds. If the Scheme were to wind-up when these equity type assets have fallen in value relative to the matching asset of bonds, members may not receive their full expected benefits. If the Scheme were not to wind-up, additional contributions may be required in such circumstances.
Longevity Risk	If future improvements in mortality exceed the assumptions made then additional contributions may be required.

Solvency Risk	As the funding target is not a solvency target, and the investment strategy does not follow that required for a solvency target, the assets of the Scheme may not be sufficient to provide all members with the full value of their benefits on a Scheme wind-up.
Concentration of Assets Risk	If the Scheme invests a significant proportion of its assets in one class of investments for example UK equities, or in one specific investment it is exposed to an increased risk from falls in that investment. This may reduce the level of funding and require additional contributions to correct.
Self Investment Risk	If the Scheme invests in the Employers in any form it is at risk that the value of this investment will fall if an Employer performs badly. This may occur at a time when an Employer is least able to make additional contributions to correct the situation.
Member Option Risk	If members of the Scheme exercise options allowed by the Scheme on a scale which is sufficient to lead to an increase in costs, the Scheme's funding position may worsen.

6 Valuation Method and Assumptions

Economic Assumptions

The valuation assumptions are given in Section 15. Details of how they were derived are set out in the Management Committee's Statement of Funding Principles.

The assumptions that can have most impact on the results of the valuation are the economic assumptions.

I should point out that the values assigned to various assumptions are as important as the relationship between the assumptions. For example, the difference between the valuation rate of interest before retirement and the rate of salary increases of 2.6% per annum compound is just as important as the absolute amounts of 7.0% and 4.4% per annum compound respectively.

Demographic Assumptions

The key demographic assumptions used in this valuation are:

- rates of mortality before and after retirement;
- proportion of members who are married; and
- the age difference between members and dependants.

The mortality tables that I am using this time have been updated to reflect an increased probability of surviving to and beyond retirement age, but also take into account the heavier mortality experienced by the Scheme compared to the base tables.

Differences in Objectives between Funding, Solvency, and PPF

This formal actuarial report must contain details of the results of at least 3 valuations: Statutory Funding, Solvency and Pension Protection Fund (PPF).

To avoid confusion I state here the different objectives of the various methods:

1) **Statutory Funding** – the aim is to ensure that the Scheme has sufficient resources, both now and in the future, to meet all pension payments as they arise. It is calculated on a prudent on going basis. It is important to understand that the calculated Technical Provisions are not the same as the buy out cost.
2) **Solvency** – this basis is designed to show the approximate cost of buying out the Scheme benefits with an insurance company should the Scheme wind up. It is calculated on a, currently, very strong basis placing a

much higher value on liabilities (or Technical Provisions) than the Statutory Funding Basis.

3) **PPF** – this basis is designed to calculate the cost of the PPF benefits should the Scheme wind up and need to enter the PPF. It is calculated on a, currently, strong basis placing a higher value on liabilities than the Statutory Funding Basis, even though the benefits valued are at a lower level than under the Statutory Funding Basis.

Technical Provisions (previously Past Service Liabilities)

This is defined as the actuarial present value of all benefits prospectively payable in respect of Members' service prior to the valuation date:

- for active Members the benefits are based on Pensionable Service up to the valuation date and Pensionable Salary estimated at Assumed Retirement Date (ARD) or earlier death;

- for deferred pensioners (i.e. Members who have left Pensionable Service prior to the valuation date with entitlement to deferred benefits) the benefits are the deferred pensions payable on retirement or earlier death; and

- for pensioners, the non-insured benefits are the benefits currently payable; and the insured benefits are fully met by the insurance company and are excluded from the valuation.

Future Service Cost (PUM)

For the PUM, this is defined as the actuarial present value of benefits accruing ***in the year*** *after the valuation date* in respect of all active members, based on Final Pensionable Salary estimated at ARD or earlier death.

Future Service Cost (AAM)

For the AAM, this is defined as the actuarial present value of benefits accruing in all years after the valuation date in respect of all active members, based on Final Pensionable Salary estimated at ARD or earlier death.

There is no Future Service Cost for either deferred pensioners or pensioners.

In all cases, the above liabilities include amounts in respect of benefits contingently payable to members' dependants and increases in pensions at the rates guaranteed in the Rules of the Scheme.

The calculation of the Past Service Liability and the Future Service Cost requires assumptions to be made, inter alia, in respect of future investment returns and salary progression. These assumptions are explained in Sections 6 and 13.

Actuarial Value of the Assets

The actuarial value of the invested assets is based upon the market value of the assets as at the valuation date. The actuarial values of cash or net current assets are taken at their face value.

I consider this approach to their valuation as consistent with the method and assumptions used in valuing the Scheme's Technical Provisions.

Section 14 shows that the Actuarial Value of the assets at the valuation date has been taken as £101,931,741.

College Contribution Rate (PUM)

Under the PUM, the College contribution rate is determined as a percentage of future Contribution Pay as:

- the Future Service Cost (PUM)

  divided by

- 1% of the current Contribution Pay

  less

- the members' contribution rate

The aim of this method is to produce a contribution rate that, if paid over the next year, would be sufficient to meet the liability accrued over that year. It should remain stable from year to year provided that the membership profile remains stable. There is an implicit allowance here for new entrants.

College Contribution Rate (AAM)

Under the AAM, the College contribution rate is determined as a percentage of future Contribution Pay as:

- the Future Service Cost (AAM)

  divided by

- 1% of present value of all future Contribution Pay for all current members

  less

- the members' contribution rate

The aim of this method is to produce a constant contribution rate, such that if paid for the period to the member's ARD, it would produce a fund that was sufficient to cover the liability accrued over that period (if all the assumptions are borne out in practice). The contribution rate is effectively a weighted average of the rates needed to pay for each year's liability. There is no allowance for new entrants.

Deficiency Adjustment	If the Actuarial Value of the Assets is less than the Technical Provisions, the difference is termed a deficiency. This will be dealt with by a Deficiency Adjustment which will commonly be an increase in the contribution rate for an agreed period.
Employer Actual Contribution Rate	The Employer Actual Contribution Rate is calculated as the Employer Future Service Contribution Rate adjusted by the Deficiency Adjustment. This rate takes account of any Deficiency Adjustment that the Management Committee agree with the Employer in order to fund the Scheme's deficit.

7 Financial Condition of the Scheme - Funding

Funding Level The Funding Level is the ratio of the Actuarial Value of the Scheme's assets to the Scheme's Technical Provisions. The liabilities on Basis 1 are referred to as the Technical Provisions.

Past service (service to 31 March 2008)		**Basis 1 (Statutory Funding Objective)**
Value of Past Service Liability: (nearest £'000)		
Active Members		61,737,000
Deferred Members		17,517,000
Pensioners		43,468,000
Expense Reserve		0
Total	[a]	**122,722,000**
Actuarial Value of Assets **Total**	[b]	**101,932,000**
Surplus/(Deficiency) (£)	[b]-[a]	**(20,790,000)**
Funding Level	[b]/[a]x100%	**83%**

Notes

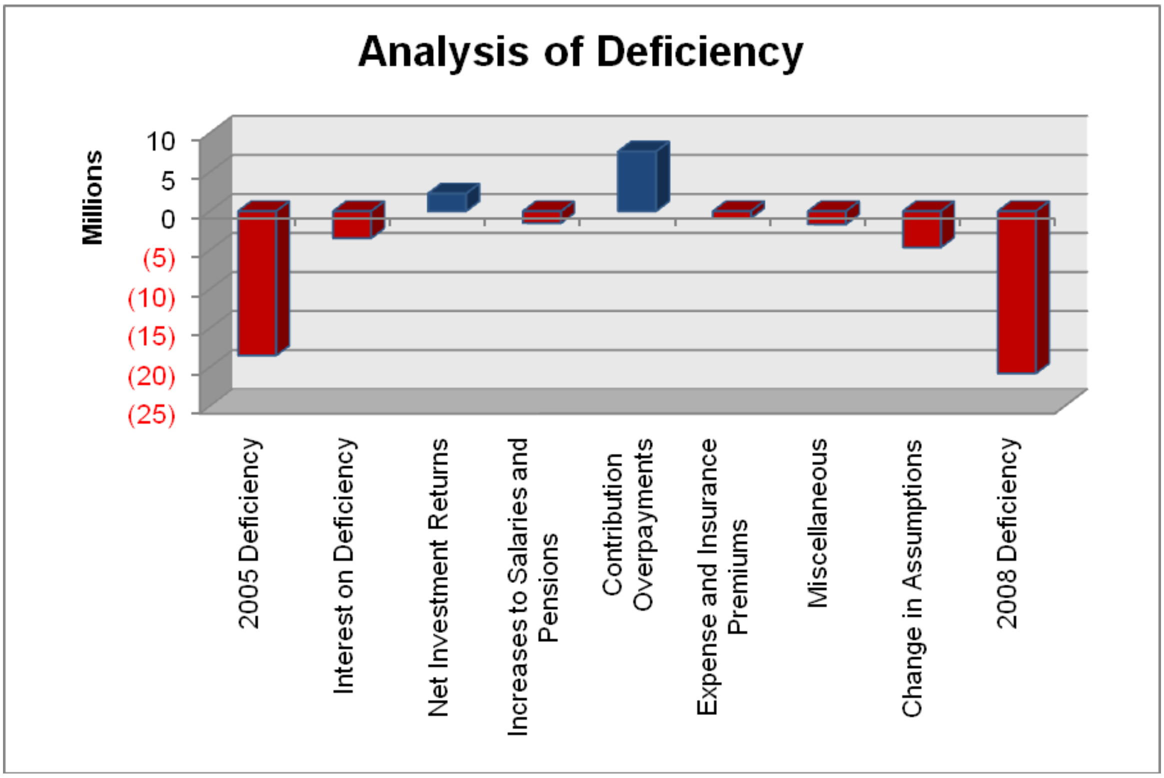
1. The Funding Level is the ratio of the Actuarial Value of the Scheme's assets to the Scheme's Past Service Liability. The Past Service Liability above is referred to as the Technical Provisions.

2. The actuarial value of the assets are either at bid price or on a single price basis. I therefore consider that the assets and liability calculations are compatible.

Analysis of Funding deficiency

I have analysed the change in deficiency from the 2005 valuation to this valuation and my findings are (to the nearest £'000):

Surplus/(Deficiency) as at 31 March 2005	**(£18,490,000)**
Interest on deficiency at 5.9% p.a. – the approximate overall valuation rate of interest.	(£3,470,000)
Effects of higher than expected Investment Returns (net of investment expenses)	£2,258,000
Increases to pensions and salaries being greater than expected, due to rise in inflation	(£1,515,000)
Contributions paid towards reducing deficit	£7,645,000
Expenses and life insurance costs higher than expected	(894,000)
Effects of changing Economic, Demographic and member option assumptions at this valuation	(4,645,000)
Miscellaneous items, comprising other experience gains/losses on items such as retirements, deaths, withdrawals (e.g. transfer values or refunds).	(£1,679,000)
Surplus/(Deficiency) as at 31 March 2008	**(20,790,000)**



Notes

The most significant factors in the change in the funding position are:

- Interest on the 2005 deficiency;
- the change in assumptions; and
- Salary increases greater than expected.

These have been partially offset by:

- Contributions higher than required to meet normal pension accrual; and
- Better than expected investment returns.

Employer Contribution Rate

Ignoring the deficiency disclosed by the Statutory Funding Objective valuation, the Employer Contribution Rate required to fund the future service liabilities of Scheme members is shown below as a percentage of Contribution Pay. It should be noted that the Expected Future Benefit Value is a mixture of the one year cost for those based on the PUC method and the total cost for those based on the AAM method. Contribution Pay has been calculated consistently.

Future service (service on or after 1 April 2008)		**Basis 1 (Statutory Funding Objective)**
Expected Future Benefit Value (£)	[a]	5,445,257
Contribution Pay consistent with the above Benefit (£)	[b]	24,034,944
Total Average Contribution Rate (excluding expenses and insurance costs) as % of Contribution Pay.	[c] =[a]/[b]	22.66%
Expense allowance as a % of Contribution Pay (including PPF Expenses).	[d]	1.50%
Insurance Premium allowance as a % of Contribution Pay.	[e]	2.25%
Average Member Contributions as a % of Contribution Pay.	[f]	6.38%
Employer Average Contribution Rate (including expenses and insurance costs) as % of Contribution Pay.	[g] =[c]+[d]+ [e]-[f]	20.03%

Notes

1. The above contribution rates are the average rates over the Scheme's total membership. The required contribution rate in respect of each College Section varies in accordance with the membership of each College Section and whether the Section is closed or open to new entrants.
2. Additional Voluntary Contributions are excluded from the above and are payable in addition to secure additional service in the Scheme.

Actual Contribution Rates

After taking into account the Scheme deficiency and the factors in Paragraph 102 of the Pension Regulator's Code of Practice 3 the Management Committee and Employers have agreed that the following contributions should be paid to the Scheme:

In the period from 1 April 2008 to 30 June 2009 in respect of future accrual:

- Members will continue to pay contributions in line with the Rules; and
- The Colleges will pay contributions as set out in their existing Schedules of Contributions.

The Employer rate **includes** allowance for all Scheme expenses and life insurance costs.
In the period from 1 July 2009 onwards, in respect of future accrual:

- Members will continue to pay contributions in line with the Rules; and

- The Employers will pay in line with the calculated rates, being an overall average rate of 20.03% of Contribution Pay.

The Employer rate **includes** allowance for all Scheme expenses, life insurance costs.

In the period from 1 July 2009 onwards, in respect of the past service deficiency:
The Colleges have agreed to finance the Scheme's deficiency to bring the funding level to 100% of the technical provisions by paying additional contributions. Full details of the contributions payable and the Recovery Plans is set out in Section 16.

All regular contributions are payable monthly into the Scheme by the 4th of the month following the month in which they are due.

It should be noted that Member contributions above exclude any AVC contributions. These would be payable in addition to the above Member contributions.

The deficiency payments include allowance for the underpayment or overpayment of contributions compared to the cost of pension accrual on the new Funding Basis in the period to 30 June 2009.

The deficiency payments are based on the assumptions set out in the Statement of Funding Principles.

Cash Equivalent Transfer Values (CETVs)

Although the Scheme is underfunded, after discussing the Recovery Plan with the Management Committee, they have decided to continue to pay out CETVs in full. In accordance with the Statement of Funding Principles I will inform them if I believe that this may lead to a risk of an adverse impact on other members' benefits.

Statutory Surplus Test	I have not carried out a Statutory Surplus Test as such a test is no longer required as a result of the Finance Act 2004.
Minimum Funding Requirement	I have not carried out a valuation on this basis as the Minimum Funding Requirement does not apply to Schemes with an effective valuation date of on or after 22 September 2005.

8 Financial Condition of the Scheme - Solvency

Solvency

To calculate the solvency of the Scheme, the liabilities of the Scheme are calculated on a buyout basis. That is an estimate of the basis an insurance company would use to calculate the cost of deferred and immediate annuities.

All Active members are treated as deferred members in this calculation, i.e. their accrued pensions revalue in line with increases in line with Statutory Revaluation (where appropriate) rather than being linked to salary increases.

I have estimated that the buyout basis as at the valuation date would be based upon an interest rate of 4.5%pa prior to and 4.75%pa after retirement; that is an addition of 0.25% to gilt yields after retirement and no adjustment pre retirement. At the time of this valuation this produced liability figures in line with buyout quotations received for other schemes.

I have assumed that the expenses on Wind Up would equate to 3% of the Past Service Liability, which I consider to be an appropriate allowance.

I have used the same demographic assumptions for the Solvency Basis as were used in the Statutory Funding Objective apart from:

a) the mortality assumptions, where I have assumed that an insurance company would use the Long Cohort projection for future improvements in longevity rather than the Medium Cohort projection; and

b) I have assumed all benefits will be drawn at the earliest age at which they may be drawn without reduction.

I have used the value of the assets from the audited accounts which I understand to be at no more than market value.

Full details of the basis used are set out in Section 15.

The Management Committee should note that the buyout estimate is only a guide and that market changes in both interest rates and supply and demand for this type of business mean that no one estimate can be relied upon. The true position can only be determined after an actual buyout quotation is obtained.

Solvency Level

The Solvency Level is the ratio of the Actuarial Value of the Scheme's assets to the Scheme's liabilities, in this case the estimated cost of buying annuities.

Past service **(service to 31 March 2008)**		**Basis 2 (Solvency)**
Value of Past Service Liability: (nearest £'000)		
Active Members		96,541,000
Deferred Members		30,121,000
Pensioners		49,115,000
Expense Reserve		5,273,000
Total	[a]	**181,050,000**
Actuarial Value of Assets **Total**	[b]	**101,932,000**
Surplus/(Deficiency) (£)	[b]-[a]	**(79,118,000)**
Funding Level	[b]/[a]x100%	**56%**

Funding Level Compared to Solvency Level

If the Scheme were 100% funded on the statutory funding objective basis then it would be 68% funded on the Solvency basis.

Comparison of Solvency in 2008 with Solvency in 2005

At the previous valuation the solvency level was 54%. The solvency level at this valuation is 56%, although the size of the deficiency has increased to £79.1 million from £61.7 million three years before. The main reason for the increase has been the change in basis since the previous valuation, placing a higher value on the estimated buyout liability.

Priority Orders

I have quantified the effect that the funding level on the solvency basis has on the winding up priority order, using the current priority orders for the Scheme as a whole. The results are shown below:

Benefit	Solvency Liability	Assets Available (excl insurance policies)	Percentage Covered
Pension Protection Fund Expenses (see Section 10)	£5,281,000	£5,281,000	100%
Pension Protection Fund Liabilities	£133,635,000	£96,651,000	72%
Other benefits and expenses above the PPF benefits	£42,134,000	£0	0%
Total	**£181,050,000**	**£101,932,000**	

As at the valuation date the Scheme assets cover 73% of the PPF benefits. Should the Scheme enter wind-up and go into the PPF then Members would receive their PPF entitlements which are lower than their full Scheme entitlements.

Each College within the Scheme would be treated separately on wind up. Therefore in the appendices to this report I have included a College by College breakdown of the solvency position.

Material Developments over next 3 years

There is no agreed future development of which I am aware that will have a material impact on the Scheme's solvency position over the next three years.

Actual Future Contributions Impact on Solvency

The Employers' contribution rate required to meet the cost of pension accrual on the Solvency basis would be 30.15%pa of Contribution Pay.

Details of the actual rates at which contributions are to be paid are set out in Section 7 and Section 16. The overall rate at which contributions are to be paid is estimated to be more than is required to match the solvency normal contribution rate. I envisage that the overall solvency position will improve over the next three years if all of the other solvency assumptions are borne out in practice, to just over 61%.

9

Sensitivity Analysis

Explanation of Analysis

I am required to carry out various sensitivity analyses, so that the Management Committee can assess the impact of actual assumptions being different from those set out in the Statutory Funding Objective (Basis 1). The figures shown below are approximations. Nevertheless, the results should enable the Committee to broadly assess the impact of changes in the various assumptions.

The assessment has been based on the past service liability only but the percentage increase or decrease could also be applied to the future service cost to give an approximate indication of the impact on future contribution rates.

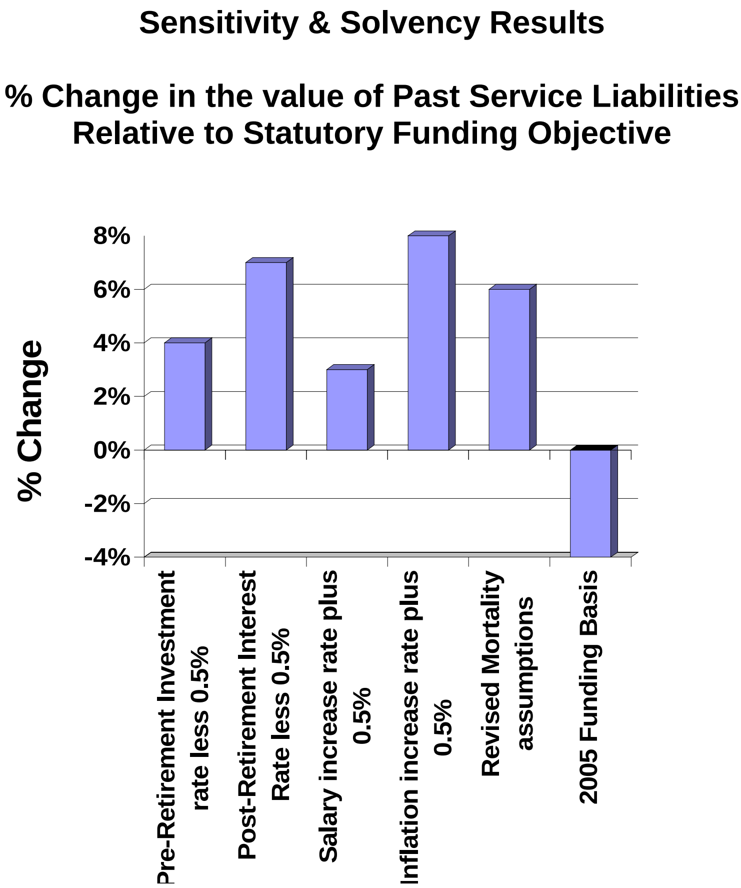
The sensitivity analysis has been performed assuming that one, and only one, of the key assumptions is changed at any one time. The results are as follows:

- If the pre-retirement interest rate is **reduced by 0.5%pa** past service liabilities increase by approximately 4.0%;
- If the post-retirement interest rate is **reduced by 0.5%pa** past service liabilities increase by approximately 7.0%;
- If the salary increase rate is **increased by 0.5%pa** past service liabilities increase by approximately3.0%;
- If the inflation rate **increases by 0.5%pa** past service liabilities increase by approximately 8.0%;
- If the allowance for future mortality improvements is changed to the **long cohort** improvement factors with a minimum rate of improvement of 1% pa past service liabilities increase by approximately 6.0%.

For comparison we have also illustrated the effect if the previous valuation basis was used for funding purposes. **Note that in this basis more than one assumption is changed.**

If the assumptions were to be moved in the opposite direction the impact would be reversed in a similar way to that shown here.

The results are illustrated in the following chart:



10 Pension Protection Fund – Section 179 Valuation

Introduction

This valuation is required by the PPF Board to enable them to determine the correct levy to charge for the PPF. The actual premium payable will be also based on the insolvency risk of the Employers and the amount required to be raised, in total (£675 million for the year 2008/2009), by the PPF.

Benefits Valued

The **PPF liabilities** as defined within Section 131 of the Pensions Act 2004 – namely those to be payable in the event of a claim. These are the Scheme benefits subject to:

- The PPF Cap current at the date of valuation for all members under normal pension age (this will include current pensioners if under normal retirement age), currently £29,928.56 at age 65;
- A reduction of Scheme benefits by 10% for members under normal pension age;
- Disregarding any increases on pre 6 April 1997 accrued pensions;
- Allowing for indexation up to RPI (max 2.5% per annum) on pension thereafter;
- Spouse's pensions and benefits are to be valued at 50% of the member's current pension benefits.

Valuation Basis

- Normal pension age is 65, however, some members have an allowable Scheme retirement age of 60 for some or all of their pension, and where this is the case I have allowed for this in my calculations.
- Interest rate in deferment for each non-pensioner is to be the average yield on the FTSE Government Securities Index-Linked gilt yields over 15 years assuming either 0% or 5% inflation less 0.4% - this allows inherently for revaluation (= 0.43% at 31 March 2008);
- Interest rate on non increasing pensions after retirement is to be the yield on the FTSE Actuaries' Government 10 year Fixed Interest Gilts plus 0.3% (= 4.71% at 31 March 2008);
- Interest rate on increasing pensions after retirement is to be the higher of:
    - average yield on the FTSE Government Securities Index-Linked annualised real yields over 5 years assuming either 0% or 5% inflation less 0.2%; or
    - the yield for pensions not increasing in payment less 2.2% (= 2.21% at 31 March 2008).

- Mortality is based on standard actuarial tables with allowance for improvements in longevity dependant on year of birth;
- Standard adjustments for proportions married and age differences between males and females; and
- Expenses are valued as a per member charge plus 3% of the past service liability up to £50 million for each College.

Past service to 31 March 2008 (to the nearest £'000)		**PPF Valuation**
Value of Past Service Liability: (£)		
Active Members		73,476,000
Deferred Members		22,421,000
Pensioners		37,738,000
Wind Up Expenses		4,009,000
Implementation Expenses		1,272,000
Total	[a]	**138,916,000**
Total Actuarial Value of Assets: (£) **Total**	[b]	**101,932,000**
Surplus/(Deficiency) (£)	[b]-[a]	**(36,984,000)**
Funding Level	[b]/[a]x100%	**73%**

Notes The results of the PPF valuation can be combined with the Dun & Bradstreet failure score for the Employers to calculate the likely PPF risk based levy.

11 Accounting Requirements

Accounting Requirements

It may be necessary to determine pension costs to be charged to profit in respect of UK corporate accounts under the accounting standard FRS 17. I understand that pension costs are not necessary in respect of US corporate accounts under the accounting standard FAS 87.

These accounting issues are the subject of discussions and reports separate from that governing the determination of a funding strategy, and are specifically not included within this report. Such information can be provided, if requested.

12 Summary of Benefits and Member Contributions

1. Effective Date	31 March 2008
2. Eligibility	Each College has its own eligibility conditions.
3. Pensionable Age (PA)	65th birthday for males and females
4. Offset Removal Date (ORD)	The date a College removed the single person's Basic State Pension (BSP) entitlement from the definition of Contribution Pay. The table at the end of this Section sets out those Colleges which have removed the BSP Offset and those which have not.
5. Contribution Pay	**For Pensionable Service prior to ORD** Gross taxable earnings for the week or month minus: (a) if paid weekly, the current weekly rate of the single person's flat rate state retirement pension, or (b) if paid monthly, 4 $^{1}/_{3}$ x the current weekly single person's flat rate state retirement pension in force on the last day of the month. **For Pensionable Service on or after ORD** Gross taxable earnings for the week or month.
6. Insured Salary	Current rate of annual salary or the gross taxable earnings for the previous tax year, whichever is larger.
7. Final Pensionable Salary	The best average of 3 consecutive years Contribution Pay in the last 13 years before the date of exit, increased in line with the RPI to the date of exit.
8. Pensionable Service	Service from date of joining the Scheme in years and completed months <u>plus</u> Service granted on transfer in <u>plus</u> Service secured by AVCs
9. Member's contributions	See table at end of this Section. Members may pay AVCs to secure added years of service.
10. Normal Retirement Pension	1/60th of Final Pensionable Salary times Pensionable Service

11. Early Retirement Pension in Normal Health	Members may retire between age 50 and 60 with the consent of their College, and on or after age 60 as of right. **<u>Members retiring at or after age 60:</u>** 1/60th of Final Pensionable Salary times Pensionable Service **<u>Members retiring between age 50 and 60:</u>** 1/60th of Final Pensionable Salary times Pensionable Service **The pension in this case is reduced by an actuarial factor depending on the period to age 60.** **These provisions are modified in respect of Pensionable Service on or after 1 April 2004 for some Colleges in respect of some of their members (as identified in the following table) so that the actuarial reduction referred to above is based on the period to age 65 and College consent is required for any retirement before age 65.**
12. Additional Retirement Cash	**<u>For Pensionable Service prior to ORD:</u>** In addition to the pension payable a tax free lump sum is payable equal to the first year's pension. **<u>For Pensionable Service on or after ORD</u>**: Nil
13. Early Retirement Pension in Ill-Health or on grounds of Incapacity	Generally, there is no early retirement pension from the Scheme in these circumstances. An insured permanent health benefit will be paid outside the Scheme.
14. Exchange of pension for cash	Part of the retirement pension may be commuted for a tax free cash lump sum, in addition to the Retirement Cash in 12, subject to HMRC limits.
15. Benefits on death after retirement	(a) The balance, if any, of the first 5 years' payments of the member's pension, is paid as a lump sum to dependants **plus** (b) a spouse's pension of one half of the member's pension before any exchange for cash.
16. Benefits on death in service	(a) A lump sum of 2 times Insured Salary at the date of death **plus** (b) a spouse's pension of 25% of Insured Salary **plus** (c) a child's pension of 12.5% of Insured Salary for each child (maximum of 2) while below age 18 or, if later, receiving full time education.

17. Increases to pensions in payment	
• GMP earned before 6 April 1988	Nil
• GMP earned between 6 April 1988 and 5 April 1997	3% pa compound (or the increase in the RPI if lower)
• Pension in excess of GMP (other than spouse's or children's pensions on death in service)	The increase in the RPI in the year ending each September, applied at 1 November
• Spouse's or children's pensions on death in service	5% pa compound (or the increase in the RPI if lower)
18. Benefits on Termination of Service	(a) If the member has completed less than 3 months of Pensionable Service, an appropriate payment is made to National Insurance Contributions Office (NICO) to reinstate the member into the State Second Pension (S2P), and a refund of the member's contributions is paid to the member less the member's share of the payment to NICO, less tax. (b) If the member has completed between 3 months and 2 years of Pensionable Service then they have the option to take a cash transfer sum to an alternative pension arrangement. If this is not taken, then a refund is paid as described in (a). (c) If the member has completed 2 or more years Pensionable Service, the pension at termination is 1/60th of Final Pensionable Salary for each year (and proportionately for months) of Pensionable Service The pension in excess of the GMP will be revalued between termination and PA at 5% pa compound or the increase in RPI if lower. The GMP will be revalued in line with statutory increases. The member also has the option to take a transfer value to an alternative pension arrangement.

19. State Second Pension (S2P)	The following table sets out those Colleges which are contracted-out of S2P and those which are not. Those members who are not contracted-out of S2P receive lower benefits than shown in this summary.

		Service on or after 1 April 2004		Death in service benefits		Employee Contribution Rate
College	BSP Offset Removed	Members at 31 March 2004	Members joining on or after 1 April 2004	Members at 31 March 2004	Members joining on or after 1 April 2004	On or after 1 April 2007
Contracted-out Colleges with BSP Offset Removed						
Emmanuel	1 June 2001	1	2	Unchanged	Unchanged	8%
Girton	1 June 2001	1	3	Unchanged	Unchanged	7.5% wef 1 April 2007 and to 8.5% wef 1 April 2008
Pembroke	1 June 2001	1	3; closed to new entrants from 1 February 2006	Unchanged	5	6.35%
Peterhouse	1 June 2001	1	3	Unchanged	5	6%
Selwyn	1 June 2001	1	3	Unchanged	Unchanged	6.35%
St John's	1 April 2002	1	3	Unchanged	6	6%
Downing	1 June 2001	1 up to 31 March 2005, 2 thereafter	4	Unchanged	N/A	6.35%; 8% wef 1 April 2008
Newnham	1 June 2001	1	4	Unchanged	N/A	8%
Gonville & Caius	1 April 2002	2	2 - closed to new entrants wef 1 April 2007	Unchanged	Unchanged	6.35%
Magdalene	1 June 2001	2	2 - closed to new entrants wef 1 January 2007	Unchanged	Unchanged	6%
Queens'	1 June 2001	2	2	Unchanged	Unchanged	6.35%
Trinity Hall	1 June 2001	2	2	Unchanged	Unchanged	6%
Christ's	1 June 2001	2	3	Unchanged	6	6.35%
Corpus Christi	1 June 2001	2	4	Unchanged	N/A	8%
Churchill	1 June 2001	3 up to 31 March 2007, nil thereafter	3 up to 31 March 2007, nil thereafter	n/a	n/a	Nil
St Catharine's	1 April 2002	3	3	Unchanged	Unchanged	6%
Murray Edwards	1 June 2001	3	4	5	N/A	6.35%

		Service on or after 1 April 2004		Death in service Benefits		Employee Contribution Rate
College	**BSP Offset Removed**	**Members at 31 March 2004**	**Members joining on or after 1 April 2004**	**Members at 31 March 2004**	**Members joining on or after 1 April 2004**	**On or after 1 April 2007**
Contracted-out Colleges with BSP Offset Retained						
King's	No	1	4	Unchanged	TBA	6%
Robinson	No	3	3	Unchanged	Unchanged	6.35%
Contracted-in Colleges with BSP Offset Removed						
Darwin	1 June 2001	1	3	Unchanged	Unchanged	2%
Wolfson	1 June 2001	1	3 up to 1 March 2008, 4 thereafter	Unchanged	Unchanged	4%
Clare Hall	1 June 2001	2	2	Unchanged	Unchanged	5%
St Edmund's	1 June 2001	2	3	Unchanged	Unchanged	3.5% wef 1 September 2006 & 5% wef 1 August 2007
Lucy Cavendish	1 June 2001	3	4	Unchanged	N/A	4.17%
Contracted-in Colleges with BSP Offset Retained						
Hughes Hall	No	1	4	Unchanged	N/A	8%

Key	1) Existing Benefits; 2) Cap maximum service at 40 years and pay unreduced pensions from 65; 3) As 2) above, but increase pensions in payment in line with LPI (RPI max 5% pa); 4) Alternative arrangements for future service; 5) No lump sum and 50% of prospective pension; and 6) No lump sum and 50% of accrued pension

13 Membership Data

The 2005 valuation figures are shown in brackets below the 2008 figures.

ACTIVE MEMBERS	Males	Females	Total
Number of members	640 (727)	581 (668)	1,221 (1,395)
Total Contribution Pay p.a.	£14,080,703 (£13,992,923)	£9,954,243 (£9,920,704)	£24,034,946 (£23,913,627)
Average Contribution Pay p.a.	£22,001 (£19,247)	£17,132 (£14,851)	£19,685 (£17,142)
Average past service (years)	11.6 (10.8)	8.1 (7.8)	9.9 (9.4)
Average age	49.0 (48.3)	48.8 (48.1)	48.9 (48.2)

DEFERRED PENSIONERS			
Number	307 (236)	372 (277)	679 (513)
Total deferred pensions p.a. payable as at valuation date	£732,194 (£374,714)	£559,853 (£350,885)	£1,292,047 (£725,599)
Average deferred pension p.a. payable as at valuation date	£2,385 (£1,588)	£1,505 (£1,267)	£1,903 (£1,414)
Average age	46.0 (44.2)	45.9 (44.6)	46.0 (44.4)

PENSIONERS			
Number	501 (430)	451 (351)	952 (781)
Total pensions p.a. payable from valuation date	£1,656,520 (£1,252,482)	£1,038,322 (£725,502)	£2,694,842 (£1,977,984)
Average pension p.a. payable from valuation date	£3,306 (£2,913)	£2,302 (£2,067)	£2,830 (£2,533)
Average age	73.1 (72.9)	70.9 (70.9)	72.1 (72.0)

Notes:

1. Contribution Pay is as defined in Section 8 and includes the BSP offset where appropriate.

2. Average past service includes augmentations, transfer-in added years and accrued AVC added years.

3. We have reconciled the membership for the 2008 valuation with that from the 2005 valuation with the help of the Pensions Administration team.

4. The Deferred Pensioner data includes 6 members who are due a refund of contributions only and who have no other deferred pension liability.

5. Please note that there are several Pensioners included in the above statistics who have exchanged the whole of their pension for cash. There is however a contingent reversionary spouse's pension payable.

14 Valuation of Assets

The actuarial value of the assets has been calculated as the value of the assets as shown in the accounts:

Asset	Method of allocation	Actuarial Value of Assets (£)
Invested funds under management – Schroder units	Units held by College allocated to that College	100,127,436
Cash held by Schroder's in addition to the above assets	Allocated to College in proportion to number of Schroder units held	1,025,112
Cash held in bank accounts and net current assets attributable to individual College	Allocated to College in accordance with schedule given by administrator	79,024
Cash held in bank accounts and net current assets NOT attributable to individual College	Allocated to College in proportion to number of Schroder units held	700,169
	Total	**101,931,741**

Notes:

1. The above figures have been obtained from the audited accounts and include the value of Additional Voluntary Contributions, as do the liabilities.

2. We have been informed by the Administrator that the invested assets have been valued on a bid price basis where the fund has a bid offer spread or on the last transaction value where they have a single price.

Investment and asset matching

The assets of the Scheme are invested in a portfolio managed by Schroders. In addition, cash is held within a Scheme bank account and there are some net current assets.

The overall asset allocation within the Scheme's investments at the valuation date is broadly 64% in equities and alternative investments, 34% in bonds and 2% in cash.

The Technical Provisions on the Funding basis are split 50% for active members, 14% for deferred members and 36% pensioners. This split masks significant differences between the individual College Sections.

Generally, schemes usually seek to match pensions in payment by investing in bonds or other fixed interest assets. Overall, the assets and liabilities in your Scheme therefore appear to be fairly well matched at this point. It should also be noted that the Scheme will continue to mature as more members reach retirement age, and that this will happen more quickly for those Colleges not admitting new entrants to the Scheme. **I recommend that the Management Committee continue to review their asset mix and take advice from their investment consultant in this regard.**

15

Actuarial Assumptions

Basis 1 is based on Statutory Funding Objective and the Statement of Funding Principles adopted by the Management Committee. **These same assumptions were also used to determine the additional contributions to be paid under the Recovery Plan.** Basis 2 is my assessment of the assumptions an insurance company might use if the Scheme were wound up and annuities purchased.

	Scheme Specific Assumptions for valuation as at 31 March 2008 (% per annum compound)	**Solvency Assumptions for valuation as at 31 March 2008 (% per annum compound)**
Economic		
Rate of interest: Before retirement After retirement	 7.0% 5.3%	 4.5% 4.75%
Rate of earnings increases:	4.4%	N/A
Rate of increase in pensions in payment:		
• Guaranteed Minimum Pension (GMP) earned for service before 6 April 1988	0.0%	0.0%
• GMP earned for service between 6 April 1988 and 5 April 1997	2.8%	2.8%
• Pension in excess of GMP earned to 31 March 2004	3.4%	3.4%
• Pension earned after 31 March 2004	3.4% or 3.2%	3.4% or 3.2%
Rate of increases in pensions in deferment: • GMPs • Excess Pensions	 Statutory 3.4%	 Statutory 3.4%

	Scheme Specific Assumptions for valuation as at 31 March 2008 (% per annum compound)	**Solvency Assumptions for valuation as at 31 March 2008** (% per annum compound)
Valuation of assets:	Surrender value of the assets	Surrender value of the assets
Expenses:		
• Past service	Nil	3% of Past Service Liability
• Future service	1.5% of Contribution Pay	*N/A*
Death in Service Premiums:	As paid by the individual Colleges	Not applicable
Pension Protection Fund levy:	Included in the Expenses allowance above	Not applicable
Demographic		
Rates of mortality - Before and after retirement:	115% PA92 for males and females with an allowance for future longevity improvements based on the Medium Cohort year of birth projection with a 1%pa minimum underpin	115% PA92 for males and females with an allowance for future longevity improvements based on the Long Cohort year of birth projection with a 1%pa minimum underpin
Age at Retirement (ARD):		
Males (All):	Age 65	Age 60 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65)
Females:		
Active Members	Age 63 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65)	Age 60 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65)
Deferred Members	Age 60 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65)	Age 60 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65)

Proportion Married:	Males and females 90%	Males and females 90%
Age Difference:	Wives 3 years younger than their husbands	Wives 3 years younger than their husbands
Commutation of pension for cash:	80% of Members will take their maximum tax free cash allowance on the basis that commutation factors are 80% of the funding basis factors.	No allowance
Withdrawals:	No allowance	No allowance

16 College Contribution Rates

College	From 1 April 2008 to 30 June 2009		From 1 July 2009				
	Employee Contribution Rate (%)	Employer Contribution Rate (%)	Employee Contribution Rate (%)	Employer Contribution Rate (%)	Recovery Plan Period (Years)	Recovery Plan Amounts (£ p.a.)	
Contracted-out Colleges with BSP Offset Removed							
Christ's	6.35%	19.29%	6.35%	18.04%	14*	170,422*	
Churchill	0.00%	£154,248	0.00%	0.00%	7	229,911	##
Corpus Christi	8.00%	27.32%*	15.00%	27.32%	n/a	*	#
Downing	8.00%	23.16%	8.00%	20.56%	9	45,000*	#
Emmanuel	8.00%	22.91%*	8.00%	18.84%	3½	9,000*	
Girton	8.50%	16.42%*	8.50%	17.87%	9	104,638	
Gonville & Caius	6.35%	23.36%	6.35%	22.00%	9	223,433	#
Magdalene	6.00%	19.16%	15.00%	12.77%	9	161,601	#
Murray Edwards	6.35%	25.19%	6.35%	21.08%	7	121,302	#
Newnham	8.00%	19.80%*	8.00%	22.52%	9	54,441	#
Pembroke	6.35%	24.96%	6.35%	23.50%	9	153,168	#
Peterhouse	6.00%	15.44%*	6.00%	19.11%	1	166,756	
Queens'	6.35%	23.33%	6.35%	19.24%	9	170,427	
Selwyn	6.35%	29.11%	6.35%	19.18%	7	69,216	
St Catharine's	6.00%	22.97%*	6.00%	19.43%	9	120,336	
St John's	6.00%	26.71%	6.00%	19.44%	9	420,068	
Trinity Hall	6.00%	21.61%	6.00%	18.06%	9	153,551	
Contracted-out Colleges with BSP Offset Retained							
King's	6.00%	35.93%	6.00%	35.93%	9	247,388	#
Robinson	6.35%	23.28%	7.50%*	19.16%*	7	323,781	
Contracted-in Colleges with BSP Offset Removed							
Clare Hall	5.00%	13.03%	5.00%	11.02%*	n/a	n/a	
Darwin	2.00%	25.01%	2.00%	17.87%	7	16,969	
Lucy Cavendish	4.17%	19.20%	6.35%	20.87%	7	11,544	#
St Edmund's	5.00%	23.53%	5.00%	15.22%	7	11,588	
Wolfson	4.00%	22.59%	4.00%	20.05%	9	35,853	#
Contracted-in Colleges with BSP Offset Retained							
Hughes Hall	8.00%	32.83%	8.00%	18.45%	7	9,598	#
# Closed to New Entrants ## Closed to Future Accruals * See notes overleaf							

College	Notes
Christ’s	£170,422 subject to further discussion between the College and the Management Committee
Corpus Christi	Deficit eliminated by lump sum contribution of £1,500,000 paid in May 2009
Downing	£45,000 for year ending 30 June 2010; £50,000 for year ending 30 June 2011; £55,000 for year ending 30 June 2012; £85,671 p.a. thereafter
Emmanuel	A lump sum of £895,000 was paid on 23 June 2009. A further single lump sum of £9,000 is due by 31 December 2012
Girton	An additional lump sum of £100,000 was paid on 31 March 2009
Newnham	An additional lump sum of £54,441 was paid on 31 March 2009
Peterhouse	An additional lump sum of £100,000 was paid in November 2008, and contributions were increased by 1.25% with effect from October 2008
St Catherine’s	An additional lump sum of £245,000 was paid on 30 June 2009
Robinson	Member contributions will increase by 1% from 1 July 2010 and Employer contributions will reduce by 1% from the same date
Clare Hall	Increasing to 17.68% from 1 July 2012

17 College Funding Levels

College	Funding Objective Basis				Solvency Funding Basis				PPF Basis			
	Technical Provisions (£)	Asset Values (£)	Surplus/ (Deficiency) (£)	Funding Level (%)	Technical Provisions (£)	Asset Values (£)	Surplus/ (Deficiency) (£)	Funding Level (%)	Technical Provisions (£)	Asset Values (£)	Surplus/ (Deficiency) (£)	Funding Level (%)
Contracted-out Colleges with BSP Offset Removed												
Christ's	7,126,980	5,677,768	(1,449,212)	80%	9,966,989	5,677,768	(4,289,221)	57%	7,700,100	5,677,768	(2,022,332)	74%
Churchill	7,234,035	5,967,777	(1,266,258)	82%	10,162,763	5,967,777	(4,194,986)	59%	7,894,999	5,967,777	(1,927,222)	76%
Corpus Christi	4,685,652	3,753,943	(931,709)	80%	6,880,908	3,753,943	(3,126,965)	55%	5,208,375	3,753,943	(1,454,432)	72%
Downing	3,548,844	3,077,300	(471,544)	87%	5,552,485	3,077,300	(2,475,185)	55%	4,268,274	3,077,300	(1,190,974)	72%
Emmanuel	4,897,863	4,002,663	(895,200)	82%	7,596,513	4,002,663	(3,593,850)	53%	5,831,811	4,002,663	(1,829,148)	69%
Girton	6,397,741	5,699,514	(698,227)	89%	9,765,631	5,699,514	(4,066,117)	58%	7,446,841	5,699,514	(1,747,327)	77%
Gonville & Caius	8,368,395	6,944,290	(1,424,105)	83%	11,811,189	6,944,290	(4,866,899)	59%	9,210,943	6,944,290	(2,266,653)	75%
Magdalene	4,599,882	3,624,245	(975,637)	79%	6,595,562	3,624,245	(2,971,317)	55%	5,178,349	3,624,245	(1,554,104)	70%
Murray Edwards	3,818,429	3,168,928	(649,501)	83%	5,428,476	3,168,928	(2,259,548)	58%	4,232,736	3,168,928	(1,063,808)	75%
Newnham	2,838,031	2,466,161	(371,870)	87%	4,080,868	2,466,161	(1,614,707)	60%	3,196,686	2,466,161	(730,525)	77%
Pembroke	4,948,681	3,973,738	(974,943)	80%	7,235,331	3,973,738	(3,261,593)	55%	5,504,787	3,973,738	(1,531,049)	72%
Peterhouse	5,185,715	4,994,460	(191,255)	96%	8,058,539	4,994,460	(3,064,079)	62%	6,171,862	4,994,460	(1,177,402)	81%
Queens'	7,266,610	6,121,818	(1,144,792)	84%	11,340,737	6,121,818	(5,218,919)	54%	8,411,620	6,121,818	(2,289,802)	73%
Selwyn	4,653,313	4,156,860	(496,453)	89%	6,803,786	4,156,860	(2,646,926)	61%	5,334,994	4,156,860	(1,178,134)	78%
St Catharine's	4,827,928	3,802,804	(1,025,124)	79%	6,952,834	3,802,804	(3,150,030)	55%	5,394,879	3,802,804	(1,592,075)	70%
St John's	14,253,914	11,324,788	(2,929,126)	79%	21,623,818	11,324,788	(10,299,030)	52%	16,585,144	11,324,788	(5,260,356)	68%
Trinity Hall	5,826,654	4,793,819	(1,032,835)	82%	8,618,148	4,793,819	(3,824,329)	56%	6,643,114	4,793,819	(1,849,295)	72%
Contracted-out Colleges with BSP Offset Retained												
King's	9,418,757	7,776,664	(1,642,093)	83%	13,827,815	7,776,664	(6,051,151)	56%	10,447,598	7,776,664	(2,670,934)	74%
Robinson	7,238,788	5,528,631	(1,710,157)	76%	10,595,411	5,528,631	(5,066,780)	52%	7,980,035	5,528,631	(2,451,404)	69%
Contracted-in Colleges with BSP Offset Removed												
Clare Hall	742,036	801,520	59,484.16	108%	1,052,008	801,520	(250,488)	76%	840,804	801,520	(39,284)	95%
Darwin	1,382,382	1,254,116	(128,266)	91%	2,078,885	1,254,116	(824,769)	60%	1,575,046	1,254,116	(320,930)	80%
Lucy Cavendish	216,896	159,758	(57,138)	74%	317,373	159,758	(157,615)	50%	254,647	159,758	(94,889)	63%
St Edmund's	398,238	327,596	(70,642)	82%	568,700	327,596	(241,104)	58%	443,753	327,596	(116,157)	74%
Wolfson	2,397,767	2,141,825	(255,942)	89%	3,540,537	2,141,825	(1,398,712)	60%	2,713,046	2,141,825	(571,221)	79%
Contracted-in Colleges with BSP Offset Retained												
Hughes Hall	448,105	390,755	(57,350)	87%	594,978	390,755	(204,223)	66%	445,413	390,755	(54,658)	88%

18 Actuary's Certificate of the Calculation of Technical Provisions

Name of Scheme: Cambridge Colleges' Federated Pension 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 Management Committee of the Scheme and set out in the Statement of Funding Principles dated 10 June 2009.

Signature:		Date:	31 July 2009
Name:	R J Sweet	Qualification:	Fellow of the Institute of Actuaries
Address:	Mill Pool House Mill Lane Godalming Surrey GU7 1EY	Name of Employer:	Cartwright Group Ltd.

19 Statement of Funding Principles

Name of Scheme	Cambridge Colleges' Federated Pension Scheme
Status	This statement was prepared by the Management Committee for the purposes of the actuarial valuation as at 31 March 2008 after obtaining the advice of Robert J Sweet of Cartwright Group Ltd, the actuary to the Scheme, and after consulting the Colleges.
Statutory Funding Objective	This statement sets out the Management Committee's policy for securing that the statutory funding objective is met. The statutory funding objective is defined in section 222 of the Pensions Act 2004. Every scheme must have sufficient and appropriate assets to cover its technical provisions.
Technical Provisions - Method	The actuarial method to be used in the calculation of the technical provisions depends on whether or not the Section is open or closed to new entrants: If a Section is open to new entrants or closed to all accrual the Projected Unit Method is to be used. If the Section is closed to new entrants then the Attained Age Method is to be used.
Technical Provisions - Assumptions	The following sets out the principles behind setting the actuarial assumptions for the funding of the Scheme. A full set of the assumptions used in the actuary's triennial valuation is set out as an Appendix to this document.

Post Retirement discount rate

On retirement, members' pensions are paid from the fund. Bonds provide a reasonable match for pensions in payment. The Management Committee defines the post retirement discount rate as the gross redemption yield, as at the valuation date, on the FTSE 15 Year Gilt Index, rounded to the higher 0.1% p.a. plus 0.8% p.a. to allow for expected higher returns on corporate bonds.

Pre Retirement discount rate

The Management Committee invests in a wide range of assets including equities and property, which are expected to give long term returns in excess of those available on gilts. They wish to take credit for some of this out-performance and to that end propose to use an interest rate of the gross redemption yield, as at the valuation date, on the FTSE 15 Year Gilt Index, rounded to the higher 0.1% p.a. plus 2.5% p.a. to allow for this expected out-performance.

Pension increases in deferment

The Management Committee's assumption is the same as the expected future increase in the Retail Prices Index (RPI).

RPI will be determined at the valuation date and is based on the difference between the real yield on over 5 years duration Index Linked Gilts (average of 0% and 5%pa inflation) and the gross redemption yield on nominal Gilts of 15 years duration.

As RPI is likely to be overstated using this method due to the current excessive demand for index linked gilts, the Management Committee will deduct 0.25% from this calculated yield and then round the answer to the higher 0.1%.

Salary Increases

Pay increases are expected to exceed RPI increases by up to 1.5%pa compound.

However the Management Committee believe that due to Colleges' salary banding structure that in future this relationship will be limited to RPI+1% for the foreseeable future.

This relationship with RPI is monitored for accuracy and may be subject to change in future valuations.

Pension increases in payment

Pension increases in payment, depending on the College and when benefits were accrued are defined in the Rules as either:

- increasing in line with the RPI;
- Increasing in line with RPI to a maximum of 5%pa compound
- Increasing in line with RPI to a maximum of 3%pa compound (post April 1988 GMP)
- Level in payment (pre April 1988 GMP only)

For these increases the Management Committee will use:

- Calculated RPI for any RPI increases (as calculated above);
- RPI less 0.2% (or the LPI Cap less 0.2% if lower) for those assumptions where there is a cap on future RPI increases to reflect the fact that these benefits are calculated on a year by year basis and RPI increases will be limited in some cases.

Mortality

It is the intention of the Management Committee to use both pre- and post-retirement mortality tables that reflect, as much as possible, actual Scheme experience with a suitable allowance for likely mortality improvements over the medium to long term.

To that end the Management Committee asked the Actuary to carry out a mortality investigation on the Scheme experience. This investigation was used to adjust standard tables produced by the Continuous Mortality Investigation Bureau (CMIB). The findings of the Actuary were that mortality was up to 20% heavier than that shown in the adjusted PA92 base tables. The Trustees therefore decided to rate up the base table by 15%.

In addition, the Management Committee wish to ensure that adequate provision is made for future longevity improvements. On the advice of the Actuary they will use the Medium Cohort projection produced by the CMIB, with a 1%pa minimum improvement for future longevity improvements.

These tables and adjustments are subject to regular review and will be updated in future valuations as more up-to-date data becomes available.

New Entrants

The Management Committee does not allow explicitly for new entrants. However, by adopting the Projected Unit Method for Colleges open to new entrants, to give a stable normal contribution rate, they are implicitly assuming that the active membership average age remains relatively constant – i.e. that new entrants will continue to join the Scheme.

Leaving Service

The Scheme is relatively large; as it is prudent to assume that no-one leaves early, the Management Committee therefore makes no allowance for early leavers. Any members leaving early are likely to release a surplus to the Scheme; this will be used to reduce future contribution rates when appropriate.

Retirement

The Scheme's Pensionable Age is 65 although many members have the right to take at least part of their pension benefits without actuarial reduction at age 60. The Management Committee wishes to fund active member benefits to assumed average expected ages of retirement for Males of age 65 and for Females of age 63.

For members who have previously left the Scheme but who retain the option to retire at age 60 with no reduction to at least part of their pension , the Management Committee will assume that Females retire at age 60 rather than age 63 for this part of the pension.

From April 2004 some Colleges introduced a Rule that for benefit accrued thereafter the benefits could be taken only at age 65 without actuarial reduction. In such cases the Female assumed retirement age will be 65.

These retirement ages will continue to be reviewed by the Actuary at each triennial valuation to ensure that they remain appropriate.

Age difference of dependants

The average age difference between partners is also to be reviewed on a triennial basis at each valuation.

Female spouses are assumed to be 3 years younger than their male partner.

Percentage with dependants' benefits at death

The average percentage of members with partners at date of death will be reviewed on a triennial basis at each valuation.
The current assumption is that 90% of members are married at date of death.

Member Options

The Management Committee believe that the vast majority of members take the maximum tax free cash option at retirement.

The Committee therefore wish to make allowance for this as follows:

- 80% of members take maximum tax free cash at retirement;
- Commutation (cash) factors are at the level of 80% of the Scheme funding assumptions.

This feature will be monitored at each future valuation.

Expenses

Expenses of administering the Scheme are borne by the Scheme. Part of the expenses may relate to past service and part relates to current and future service.

The Management Committee's policy is for the Actuary to review the allowance for expenses at each valuation and make a recommendation for both elements.

The purpose of the **past service expense reserve** is to have sufficient assets such that, if the Scheme were to discontinue, there would be sufficient assets to continue to administer the Scheme.

In the previous (2005) valuation the view of the Management Committee was to hold a past service expense reserve to 0.75% of the Past Service Liability.

The purpose of the **future service expense reserve** is to have sufficient income to continue to administer the Scheme. In the previous valuation this reserve was taken as 0.75% of Contribution Pay.

The Actuary has reviewed the expense provisions in the light of recent experience and is now recommending 1.5% of Contribution Pay for future service and 0% for past service. In addition, he has recommended a fixed amount for Churchill as they have no active members.

Policy on discretionary increases and funding strategy

The current policy is not to fund for or pay any additional discretionary increases. In certain individual cases the Management Committee can use their discretion to increase a member's benefits but only if the participating College meets the additional cost (Clause 20 of the Trust Deed & Rules dated 9 March 2004).

Period within which and manner in which a failure to meet the statutory funding objective is to be rectified

The Management Committee desire that any funding shortfalls identified at an actuarial valuation should be eliminated as quickly as the Colleges can reasonably afford by the payment of additional contributions. In determining the length of the actual recovery period at any particular valuation the Management Committee's principles are to take into account the following factors:

- the size of the funding shortfall;
- the maturity of the Section concerned;
- the Management Committee's assessment of the financial covenant of the Colleges; and
- any contingent security offered by the Colleges.

The Management Committee normally expect the recovery period to be no longer than 10 years from the valuation date for funding deficiencies.

The assumptions to be used in the calculations to determine the additional contributions required will be those set out above for calculating the Technical Provisions except that the expected rate of return (the return on existing assets and on new contributions paid during the recovery period) will be the gross redemption yield on 15 year gilts plus a margin of up to 4% p.a., the exact level of the margin will be such as the Management Committee determine to be appropriate in any particular case.

Arrangements by a person other than the Colleges or a Scheme member to contribute to the Scheme

No such arrangements exist.

Policy on reduction of cash equivalent transfer values (CETVs)

The Management Committee does not ask the actuary to advise them at each valuation of the extent to which assets are sufficient to provide CETVs for all non pensioners without adversely affecting the security of the benefits of other members and beneficiaries.

If at any time, after obtaining advice from the actuary, the Management Committee is of the opinion that the payment of CETVs at a previously agreed level may adversely affect the security of the benefits of other members and beneficiaries, the Management Committee will commission a report from the actuary to decide whether, and to what extent, CETVs should be reduced.

Frequency of valuations and circumstances for extra valuations

The Scheme's first actuarial valuation under Part 3 of the Pensions Act 2004 is being carried out as at the effective date of 31 March 2008 and subsequent valuations will in normal circumstances be carried out every three years thereafter. An actuarial report on developments affecting the Scheme's funding level will be obtained as at each intermediate anniversary of that date for Colleges where their total section membership exceeds 100.

The Management Committee may call for a full actuarial valuation instead of an actuarial report when, after considering the actuary's advice, they are of the opinion that events have made it unsafe to continue to rely on the results of the previous valuation as the basis for future contributions. However, the Management Committee will consult the Colleges before doing so.

This statement was agreed by the Management Committee at their meeting on 2 June 2009:

Signed on behalf of the Management Committee

Name: Mrs J M Womack

Position: Chair

Date: 10 June 2009

Appendix to the Statement of Funding Principles

Market conditions as at 31 March 2008	
Gross redemption yield on FTSE Gilt Index – 15 years:	4.49%
Out performance of assets over returns on FTSE Gilt Index – 15 years:	2.5%
Real yield on over 5 years duration Index Linked Gilts (0% inflation):	0.96%
Real yield on over 5 years duration Index Linked Gilts (5% inflation)	0.81%
Calculated Inflation Rate (see RPI calculation description in “Pension Increases in Deferment”)	3.4%

Economic (% per annum compound)	**2008 Funding Basis**
Rate of interest: • Before retirement • After retirement	 7.0% 5.3%
Rate of earnings increases:	4.4%
Rate of increase in pensions in payment: • Guaranteed Minimum Pension (GMP) earned for service before 6 April 1988 • GMP earned for service between 6 April 1988 and 5 April 1997 • Pension in excess of GMP earned to 31 March 2004 • Pension earned after 31 March 2004	 0.0% 2.8% 3.4% 3.4% or 3.2%
Rate of increases in pensions in deferment:	3.4%

Assets & Expenses	
Valuation of assets:	Surrender value of the assets
Expenses: • Past service • Future service	0% of Technical Provisions 1.5% of Pensionable Salaries
Death in Service Premiums:	Not applicable
Pension Protection Fund levy:	Included in expense allowance

Demographic Assumptions	
Rates of mortality: Before and after retirement	115% PA92 for males and females with an allowance for future longevity improvements based on the Medium Cohort year of birth projection with a 1%pa minimum underpin
Age at Retirement: Males Females: Active Members Deferred Members	 Age 65 Age 63 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65) Age 60 (65 for service after 31 March 2004 where an actuarial reduction applies on retirement before age 65)
Proportion Married:	90% (males and females)
Withdrawal Rates:	Nil
Age Difference:	Wives 3 years younger than their husbands
Other Member Options	80% of Members will take their maximum tax free cash allowance on the basis that commutation factors are at the 80% of the funding basis factors.