HEALTH WEALTH CAREER

SAUL

SCHEME FUNDING REPORT OF THE ACTUARIAL VALUATION AS AT 31 MARCH 2017

SUPERANNUATION ARRANGEMENTS OF THE UNIVERSITY OF LONDON

APRIL 2018

MAKE TOMORROW, TODAY

MERCER

CONTENTS

1 INTRODUCTION

This report is addressed to the Trustee of the Superannuation Arrangements of the University of London ("the Trustee") and is provided to meet the requirements of Section 224(2)(a) of the Pensions Act 2004. It describes the factors considered by the Trustee when carrying out the actuarial valuation of the Superannuation Arrangements of the University of London ("SAUL") as at 31 March 2017 and the decisions reached.

SAUL covers a number of employers that have links with higher education. The term "Employers" in this report is used as a collective name for the employers that participate in SAUL.

The purpose of the actuarial valuation is for the Trustee to determine:

- the expected cost of providing the benefits built up by Members at the valuation date (the "liabilities"), and compare this against the funds held by SAUL (the "assets");
- an appropriate plan for making up any shortfall in SAUL's assets, should they be lower than its liabilities; and
- the contributions needed to cover the cost of the benefits that active Members will build up in the future, together with other costs incurred in operating SAUL.

SIGNATURE		DATE OF SIGNING	
SCHEME ACTUARY	Christian Hardy	QUALIFICATION	Fellow of the Institute and Faculty of Actuaries

This report has been prepared in accordance with Technical Actuarial Standards TAS 100: Principles for Technical Actuarial Work and TAS 300: Pensions which are issued by the Financial Reporting Council. The calculations referred to in the report use methods and assumptions appropriate for reviewing the financial position of SAUL and determining a contribution rate for the future.

Neither I nor Mercer accepts liability to any third party in respect of this report; nor do we accept liability to the Trustee if the information provided in this report is used for any purpose other than that stated. The report may be disclosed to Members and others who have a statutory right to see it. If the Trustee and Mercer consent, this report may be disclosed to other third parties.

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KEY RESULTS OF THE SCHEME FUNDING ASSESSMENT

PAST SERVICE FUNDING POSITION – TECHNICAL PROVISIONS

The table below compares the assets and liabilities of SAUL as at 31 March 2017. Figures are also shown for the last valuation as at 31 March 2014.

	31 March 2017 (£m)	31 March 2014 (£m)
Total assets[1]	**3,205**	**1,927**
Liabilities:		
Active members	1,066	679
Deferred pensioners	885	503
Non-CDF Pensioners[1]	482	804
CDF Pensioners	630	-
Expense reserve	45	-
Other reserves	41	-
Total liabilities / technical provisions	**3,149**	**1,986**
Past service surplus / (shortfall)	**56**	**(59)**
Funding level	**102%**	**97%**

[1] Including insured pensioners (£0.9m in 2014, £0.4m in 2017)

The table shows that there was a surplus of £56m at 31 March 2017. SAUL's assets were sufficient to cover 102% of its liabilities – this percentage is known as the "funding level".

The previous valuation at 31 March 2014 showed a shortfall of £59m - a funding level of 97%. The key reasons for the changes between the two valuations are considered in Section 3.

The liability value at 31 March 2017 shown in the table above is known as SAUL's "technical provisions". The technical provisions are calculated using assumptions that the Trustee has determined are appropriate based on its assessment of the strength of the Employers' covenant. Having taken professional advice and consulted with the larger Employers in SAUL, the Trustee has assessed the strength of SAUL's covenant to be "tending to strong".

The Trustee holds additional prudent reserves from time-to-time. The following reserves were held for the 2017 valuation:

- **Expense reserve:** a reserve of approximately £45m to meet SAUL's future administrative costs, and PPF levies. At the previous valuation these expenses were allowed for within the cost of future benefit accrual.

- **NRA reserve**: the Trustee has anticipated the increase in SAUL's Normal Retirement Age ("NRA") to 66 from 2020 in determining the cost of future benefit accrual at the 2017 valuation. The capitalised value of the resulting reduction in the future service cost over the period until 2020 has been added to the technical provisions as a reserve of approximately £10m at 31 March 2017.

- **GMP equalisation reserve:** a reserve of 1% of the technical provisions (approximately £31m) is also held for the potential cost of equalising GMPs (Guaranteed Minimum Pensions).

Further details of the way in which the technical provisions (and future service costs) are calculated are set out in Appendix A.

FUTURE SERVICE COSTS

The valuation also looks at the cost of the benefits that will be built up in the future.

The table below gives a breakdown of the future service cost at 31 March 2017 together with the cost at the last valuation - 31 March 2014. Active Members pay contributions to SAUL, as a condition of membership, at the rate of 6% of CARE Salaries ("Salaries").

	% OF SALARIES	
	31 March 2017	**31 March 2014**
Cost of pension benefits	28.4	19.8
Insured lump sum benefits	0.3	0.4
Administrative expenses	-	1.4
Total future service cost	**28.7**	**21.6**
Less Members' contributions	(6.0)	(6.0)
Less Employer ongoing contributions	(16.0)	(13.0)
Contribution Strain	**6.7**	**2.6**

Lump sum death benefits are insured; the cost reflects the rate negotiated at the most recent review (the rate is typically tested every two years).

As noted above, the allowance for administrative expenses has been removed from the future service contribution calculation and the Trustee now holds an explicit past service reserve within the technical provisions.

SAUL's benefit structure was amended from 1 April 2016. The 31 March 2014 figures in the above table represent the estimated cost of benefit accrual over the year to 31 March 2015. The 2016 benefit changes were expected to eliminate the Contribution Strain (the difference between the cost of benefit accrual and total contributions paid) revealed at the 2014 valuation by reducing the cost of future benefit accrual (including expenses and insured benefits) at 31 March 2014 from 21.6% of Salaries to around 19% of Salaries from 1 April 2016.

Despite the benefit changes introduced in 2016, a fall in real gilt yields since the last valuation has led to an increase in the cost of future benefit accrual and the re-emergence of a material Contribution Strain: 6.7% of Salaries as at 31 March 2017. This figure is after a number of agreed changes described in Section 3.

In order to eliminate the funding shortfall at the last valuation, the Employers agreed to increase their contributions to SAUL from 13% to 16% of Salaries from 1 April 2016. The Employers also agreed that this contribution rate would be maintained until at least 31 March 2020, irrespective of SAUL's funding level.

The Trustee and the Employers have agreed that no further benefit changes or contribution increases will be required at the 2017 valuation – the existence of a small surplus provides scope for the Trustee to consider whether a change to, or review of, SAUL's investment strategy / approach could address the Contribution Strain. It is anticipated that this review will have concluded prior to the next formal valuation, due at 31 March 2020.

In the meantime, the Trustee will be monitoring closely SAUL's financial development; the Trustee has worked with the SAUL Negotiating Committee ("SNC") to develop and document a contingency plan framework which will assist them in reacting appropriately and proportionally to any downside risks that materialise.

PAST SERVICE FUNDING POSITION – SECONDARY FUNDING OBJECTIVE

The Trustee also maintains a secondary funding objective which includes prudent margins in addition to those held for the purposes of calculating the technical provisions.

The assumptions used for the secondary funding objective are the same as those used for the technical provisions, with the exception of the non-CDF discount rate assumptions. Under the secondary funding objective, the non-CDF discount rate assumption is currently 0.4% per annum above gilt yields before and after retirement, but may be reviewed subject to changes in SAUL's investment strategy and objectives.

The table below compares the assets of SAUL as at 31 March 2017 with the liabilities determined using the secondary funding objective assumptions. Figures are also shown for the last valuation as at 31 March 2014 for comparison.

	31 March 2017 (£m)	31 March 2014 (£m)
Total assets[1]	**3,205**	**1,927**
Liabilities:		
Active members	1,379	847
Deferred pensioners	1,123	615
Non-CDF Pensioners[1]	478	799
CDF Pensioners	630	-
Expense reserve	45	-
Other reserves	41	-
Total liabilities	**3,696**	**2,261**
Past service surplus / (shortfall)	**(491)**	**(334)**
Funding level	**87%**	**85%**

[1] Including insured pensioners (£0.9m in 2014, £0.4m in 2017)

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EXPERIENCE SINCE LAST VALUATION

REASONS FOR THE CHANGE IN FUNDING POSITION SINCE THE LAST ACTUARIAL VALUATION

As noted in Section 2, the technical provisions shortfall at the last valuation date was £59m. The table below sets out the main reasons for the change in the funding position between 31 March 2014 and 31 March 2017.

	£m
(Shortfall) / Surplus at 31 March 2014	**(59)**
Interest on shortfall	(10)
Higher than expected investment returns	963
Recovery plan contributions	11
Future service contributions lower than cost of accrual (“Contribution Strain”)	(162)
Actual inflation lower than 2014 expectation	88
Miscellaneous / membership movements	23
Change in market conditions (fall in real yields)	(788)
(Shortfall) / Surplus at 31 March 2017 (before reserves and assumption changes)	**66**
Change in underlying assumptions: - Change in mortality assumption - Change in inflation volatility model	 69 7
Reserves (see Section 2): - Administrative expenses - NRA increase - GMP equalisation	 (45) (10) (31)
(Shortfall) / Surplus at 31 March 2017	**56**

SUMMARY OF KEY INTER-VALUATION EXPERIENCE

A number of factors have affected SAUL’s financial development in the three years since the last valuation (the “inter-valuation period”).

- **Recovery plan contributions:** as noted earlier, in order to eliminate the funding shortfall at the last valuation, the Employers increased their contributions to SAUL from 13% to 16% of Salaries from 1 April 2016. The additional contributions (3% of Salaries), paid over the year to 31 March 2017, improved SAUL’s funding position by £11m.

- **Contribution Strain:** the ongoing contributions paid by Employers and Members (i.e. 13% + 6%) have been lower than the cost of benefit accrual over the inter-valuation period. The total “Contribution Strain” over the period was approximately £162m after allowing for the benefit changes implemented in April 2016 and the fall in yields over the period.

- **Inflationary increases:** the majority of increases in SAUL are linked to CPI inflation. Actual CPI inflation was lower than anticipated leading to a gain of c£88m, due to lower than expected CARE revaluations, deferred revaluations and pension increases in payment over the period since the last valuation.

- **Change in market conditions:** the yields on fixed-interest and index-linked gilts fell significantly over the inter-valuation period, leading to an increase of approximately £788m in SAUL's liabilities. This excludes the impact of falling yields on the cost of accrual which is allowed for in the Contribution Strain item described above.

- **Investment returns:** the increase in SAUL's liabilities was, to a significant extent, mitigated by an increase in SAUL's assets. During the inter-valuation period, the investment return on SAUL's assets was approximately 18% per annum. This was significantly higher than expected, and was therefore, a source of surplus (£963m) over the period

  A significant reason for the asset gain was the Trustee's interest and inflation hedging strategy: SAUL's interest rate and inflation hedge ratios were 82% and 90% respectively (on the technical provisions basis) at 31 March 2017 (and are higher at the time of signing this report) compared to c52% and c65% respectively at the previous valuation.

- **Miscellaneous / membership movements:** there were a number of smaller experience items over the period, including:

  - the impact of using a CDF-consistent discount rate to value the CDF-pensioners at the valuation date;
  - actual administrative expenses and PPF levies being higher than expected;
  - differences between the actual and expected impact of the 2016 benefits changes;
  - other experience items relating to member movements and options, including the impact of the bulk transfer from the University of Essex Pension Scheme in September 2014.

The following changes were made to the technical provisions at this valuation:

- **Reserves:** as noted in Section 2, the Trustee has adopted reserves for the anticipated increase in NRA from 2020, administrative expenses and GMP equalisation. These reserves increased the technical provisions by £86m at 31 March 2017.

- **Inflation assumptions:** the 5bps inflation risk premium at the last valuation has been removed and the assumed RPI /CPI gap has been increased by 5bps (to 90bps). The overall funding impact is neutral.

- **Mortality assumptions**: the Trustee has updated the baseline life expectancy assumption to reflect SAUL's most recent experience and demographic profile. In line with general market trends, the CMI (Continuous Mortality Investigation) model used has been updated from the CMI2013 model to the CMI2016 model.

The long term improvement rate has also been increased from 1.5% p.a. to 1.75% p.a.

The overall impact of changes to mortality assumptions has been a reduction of £69m in SAUL's technical provisions.

- **Inflation volatility model:** the Trustee has adopted the "Jarrow-Yildirim" inflation volatility model for determining assumptions for annual pension increases subject to caps and floors. This change reduced the technical provisions by approximately £7m at 31 March 2017.

CHANGE IN FUTURE SERVICE COSTS

As shown in Section 2, the total future service cost was 28.7% of Salaries at 31 March 2017. The table below shows the impact of the changes adopted at this valuation.

	% of Salaries
Cost of pension benefits –based on the 2014 assumptions set out in the SFP*	**30.9**
Allowance for administrative expenses (2014 approach)	1.4
Insured lump sum death benefits (reflecting latest premium rates)	0.3
Total Future Service Cost using 2014 SFP	**32.6**
Anticipate increase in SAUL's Normal Retirement Age to 66	(0.9)
Replace expense allowance with past service reserve	(1.4)
Update mortality assumption (CMI 2016 [1.75%])	(0.8)
Adopt Jarrow-Yildirim inflation volatility model	(0.8)
Total Future Service Cost	**28.7**
Less Members' contributions	(6.0)
Less Employer ongoing contributions	(16.0)
Contribution Strain	**6.7**

* Statement of Funding Principles

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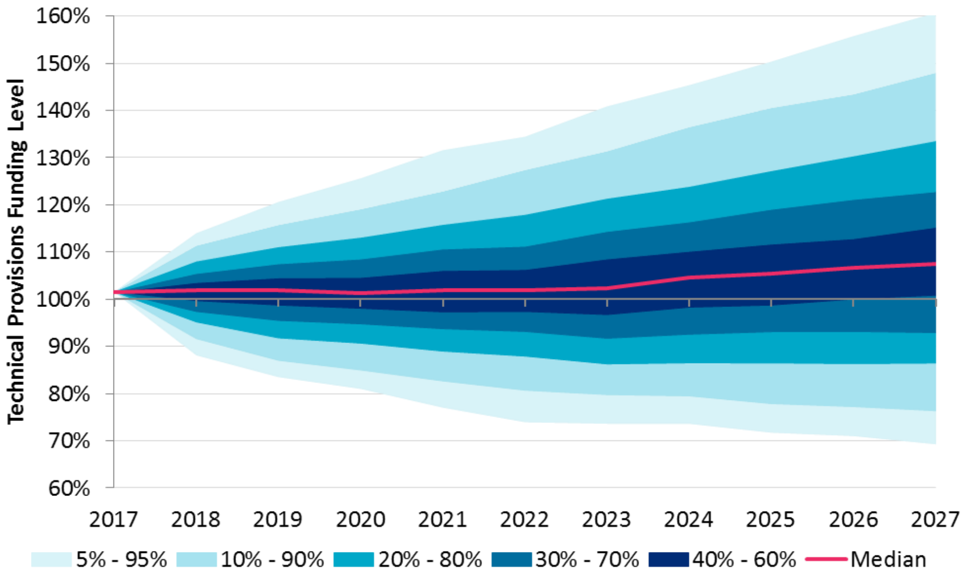
PROJECTED FUTURE FUNDING LEVEL AND VOLATILITY

PROJECTED FUNDING POSITION

The following chart illustrates a range of potential outcomes of SAUL's technical provisions over a ten-year projection period from 31 March 2017. The projections assume that Member and Employer contributions will remain at an aggregate level of 22% of Salaries.

We have also assumed that the investment strategy remains unchanged over the period. The 10 year "best-estimate" median investment return in our modelling is 2.2% per annum in excess of gilt yields.



Funding Level in 10 Years

95th Percentile	161%
90th Percentile	148%
80th Percentile	133%
70th Percentile	123%
60th Percentile	115%
Median	107%
40th Percentile	101%
30th Percentile	93%
20th Percentile	86%
10th Percentile	76%
5th Percentile	69%

The median technical provisions funding level in 10 years is 107%. Based on the assumptions used, there is approximately a 61% likelihood of SAUL being fully funded on the 2017 technical provisions basis in 10 years, based on market conditions at 31 March 2017, best-estimate investment returns and 22% contributions.

The Trustee frequently monitors SAUL's financial development and has considered the impact of market experience since the valuation date.

MATERIAL RISKS FACED BY SAUL

SAUL is subject to some potentially material risks that are, to an extent, outside the Trustee's control, but could affect the funding level. Any material worsening of the funding level could mean that more contributions are needed to provide the benefits built up in SAUL although experience could act in other ways to improve the funding level. Examples of such risks, and how the Trustee manages them, are:

- If the Employers become unable to pay contributions or to make good deficits in the future, SAUL's assets will be lower than expected and the funding level will be worse than expected.
    - *The Trustee regularly monitors the financial strength of the Employers and any new employer joining SAUL is subject to due diligence on its financial strength.*
- If future investment returns on assets are lower than assumed in the valuation, then SAUL's assets will be lower and the funding level worse than expected.
    - *The Trustee has a process in place to monitor investment performance at least quarterly. It also monitors the performance of its investment managers, and reviews SAUL's investment strategy from time to time.*
    - *The Trustee's investment strategy also takes SAUL's demographic profile into account (for example investing in cashflow matching assets in respect of pensioners over age 65 which reduces the effect of market movements on funding levels).*
- If gilt yields change such that SAUL's technical provisions increase by more (or decrease by less) than the assets, the funding level against the technical provisions and on the wind-up basis (see section 5) will be worse than expected. The Trustee has taken the following actions to substantially mitigate (but not fully remove) the risk.
    - *The Trustee's investment strategy is designed to hedge the majority of interest rate and inflation risk. This is achieved by investing a significant proportion of SAUL's assets in bonds and Liability Driven Investment ("LDI"), which will help to offset some of the risk associated with movements in gilt yields.*
- If improvements in life expectancy are greater than assumed, the cost of benefits will increase because members are living longer than expected. This will mean the funding level will be worse than expected.
    - *The Trustee manages this risk by regularly reviewing SAUL's experience and ensuring that the assumptions made about members' life expectancy take the most recent information available into account.*
- If members make decisions about their options, which increase SAUL's liabilities, the funding level will be worse than expected. An example would be if members retire early on enhanced terms more often than assumed.
    - *The Trustee reviews SAUL's experience at each valuation to ensure that its treatment of member options remains appropriate.*

SENSITIVITY OF FUNDING POSITION AND COST OF ACCRUAL TO CHANGES IN THE KEY ASSUMPTIONS

The value placed on SAUL's liabilities and the calculated cost of accrual both depend on the assumptions used.

The tables below show how the valuation results at 31 March 2017 would have differed given small changes in the key assumptions; this illustrates how sensitive SAUL's funding level and future service costs are to experience being different from that assumed.

	CHANGE IN TECHNICAL PROVISIONS AT 31 MARCH 2017 (£m)
Initial technical provisions	**3,149**
Pre-retirement investment return is 0.25% p.a. lower than assumed	57
Post-retirement investment return is 0.25% p.a. lower than assumed	95
Long-term inflation is 0.25% p.a. higher than assumed	141
Future minimum improvements in mortality of 2% p.a.(0.25% p.a. higher than assumed)	35

	CHANGE IN COST OF ACCRUAL AT 31 MARCH 2017 (% OF SALARIES)
Initial future service cost	**28.7**
Pre-retirement investment return is 0.25% p.a. lower than assumed	1.5
Post-retirement investment return is 0.25% p.a. lower than assumed	1.1
Long-term inflation is 0.25% p.a. higher than assumed	1.8
Future improvements in mortality of 2% p.a. (0.25% p.a. higher than assumed)	0.5

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WIND-UP POSITION

If the Employers were to become insolvent or decide not to support SAUL, the Trustee could wind up SAUL and secure the benefits built up with an insurance company. Insurance companies use different assumptions from those used by the Trustee for calculating the technical provisions.

The table below shows an estimate of the funding level of SAUL at 31 March 2017 assuming that all benefits were bought out with an insurer. The estimated wind-up position at 31 March 2014 is also shown. These figures are shown for information only: it does not mean that the Trustee, or the Employers, are considering winding-up SAUL.

	31 MARCH 2017 (£m)	**31 MARCH 2014 (£m)**
Total assets[1]	3,205	1,927
Liabilities:		
Active members	2,148	1,275
Deferred pensioners	1,723	969
Non-CDF Pensioners[1]	552	965
CDF Pensioners	698	-
Expenses	99	64
Total liabilities	5,220	3,273
Past service surplus / (shortfall)	(2,015)	(1,346)
Funding level	61%	59%

[1] Including insured pensioners (£1.1m in 2014 and £0.4m in 2017)

As the table shows, were SAUL to have wound up at 31 March 2017, it would have had an estimated shortfall of £2,015m. This means that, on average, Members could only have expected to receive 61% of the benefits earned to that date (although the percentage coverage would have differed between Members depending on age and when their benefit was earned).

In practice, if SAUL were to be wound up due to the Employers becoming insolvent, the Members could be eligible for compensation from the Pension Protection Fund (PPF) if its assets were to be less than those needed to buy that compensation from an insurance company.

In this scenario Members could receive a higher proportion of the benefits they have earned to date than illustrated in the table. Further details of the compensation payable from the PPF are given in Appendix D.

If experience from 31 March 2017 is in line with the technical provisions assumptions, and contributions are paid at the agreed rates, the shortfall at 31 March 2020 on a wind-up basis is estimated to be £2,300m, equivalent to a funding level of 61%.

APPENDICES

A
ASSUMPTIONS

HOW THE BENEFITS ARE VALUED

In order to calculate the liabilities, the Trustee needs to make assumptions about various factors that affect the cost of the benefits provided by SAUL – for example, how long Members will live, or the future level of inflation. The table below explains the key assumptions being made in the valuation.

ASSUMPTION	WHY IT IS IMPORTANT AND HOW IT IMPACTS ON THE LIABILITIES
Discount rate	The majority of benefits in a pension scheme will be paid many years into the future. In the period before the benefits are paid, the Trustee invests the funds held with the aim of achieving a return on those funds. When calculating how much money is needed now to make these benefit payments, it is appropriate to make allowance for the investment return that is expected to be earned on these funds. This is known as "discounting". The higher the investment return achieved, the less money needs to be set aside now to pay for benefits. The calculation reflects this by placing a lower value on the liabilities if the "discount rate" is higher.
Inflation	Pensions in payment typically increase in line with price inflation, subject to a cap. Pre-retirement increases (i.e. CARE revaluations and deferred pension revaluation) are also normally linked to price inflation. A higher inflation assumption will, all other things being equal, lead to a higher value being placed on the liabilities.
Life expectancy	Pensions are paid while the member (and potentially their spouse or partner) is alive. The longer people live, the greater is the cost of providing a pension. Allowing for longer life expectancy increases the liabilities.

The liabilities of SAUL are calculated by projecting forward all of the future benefit cash flows and discounting them back to the effective date of the valuation. For example, the liability for a single pensioner is calculated by estimating the amount of each pension payment received in the future, multiplying by the probability that the member will still be alive by the date of each payment, and then discounting each payment back to the effective date of the valuation. The liability for this pensioner is then the sum of all of these discounted amounts.

The liabilities for SAUL are calculated by summing the liabilities for each individual Member.

ASSUMPTIONS USED TO CALCULATE TECHNICAL PROVISIONS

The tables below summarise the key assumptions used in the calculation of the technical provisions and those used for determining the cost of future benefit accrual.

The past service (i.e. technical provisions) financial assumptions have been derived from the estimated cashflows from SAUL's total membership. The assumptions used to determine the cost of future benefit accrual are based on the projected cashflows from SAUL's active membership only. This results in a different underlying gilt yield for past and future service assumptions.

FINANCIAL ASSUMPTIONS	31 MARCH 2017		31 MARCH 2014	
	Technical Provisions	Future Service Costs	Technical Provisions	Future Service Costs
Discount rate:				
Pre-retirement	4.06% p.a.	4.03% p.a.	5.96% p.a.	6.04% p.a.
Post-retirement (non-CDF)	1.96% p.a.	1.93% p.a.	3.86% p.a.	3.94% p.a.
Post-retirement (CDF pensioners)	2.22% p.a.	n/a	n/a	n/a
Price inflation (RPI)	3.39% p.a.	3.35% p.a.	3.57% p.a.	3.60% p.a.
Price inflation (CPI)	2.49% p.a.	2.45% p.a.	2.72% p.a.	2.75% p.a.
Salary increases	3.49% p.a.	3.49% p.a.	3.72% p.a.	3.75% p.a.
Pension increases in payment (Excess over GMP):				
Pre 2016 (CPI)	2.49% p.a.	n/a	2.72% p.a.	2.75% p.a.
Post 2016 (CPI max 2.5%)	1.77% p.a.	1.70% p.a.	n/a	n/a

DEMOGRAPHIC ASSUMPTIONS	31 MARCH 2017	31 MARCH 2014
Retirement - Active final salary Members - Other Members	 All at age 62 Earliest age unreduced	 All at age 62 Earliest age unreduced
Mortality – base table	S2PA year of birth tables weighted 100% for males and 94% for females	S2PA year of birth tables adjusted by +0.4 years for males and -0.4 years for females
Mortality – future improvements:	CMI 2016 projections with a long-term improvement rate of 1.75% p.a.	CMI 2013 projections with a long-term improvement rate of 1.5% p.a.
Proportion Married	75% of LG 59/60 table	75% of LG 59/60 table
Spouse's Age	Wives/partners are on average three years younger than their husbands/partners	Wives/partners are on average three years younger than their husbands/partners
Ill-health retirement	40% of LG59/60 MO (males) / 40% of LG59/60 FO (females)	40% of LG59/60 MO (males) / 40% of LG59/60 FO (females)
Promotional Salary Scale	LG 59/60 M (males) / LG 59/60 F (females)	LG 59/60 M (males) / LG 59/60 F (females)
Commutation	No Members take up the option to exchange cash for additional pension, or pension for additional cash	No Members take up the option to exchange cash for additional pension, or pension for additional cash

The mortality assumptions used for the 31 March 2017 valuation result in the following life expectancies. This information may be useful to the Trustee when completing the annual return.

	COHORT	PERIOD
Life expectancy for a male aged 65 now	22.4 years	20.8 years
Life expectancy at 65 for a male aged 45 now	24.5 years	n/a
Life expectancy for a female aged 65 now	24.8 years	23.0 years
Life expectancy at 65 for a female aged 45 now	26.9 years	n/a

These assumptions have been agreed by the Trustee to reflect its funding objective, and have been agreed with the Employers. In setting the assumptions, the Trustee has assumed that SAUL is ongoing (i.e. it is not in the process of being wound up).

ASSUMPTIONS USED TO CALCULATE THE SECONDARY FUNDING OBJECTIVE

The assumptions used for the secondary funding objective are the same as those used for the technical provisions, with the exception of the non-CDF discount rate assumptions. Under the secondary funding objective, the non-CDF discount rate assumption is currently 0.4% per annum above gilt yields before and after retirement, but may be reviewed subject to changes in SAUL's investment strategy and objectives.

METHOD USED TO CALCULATE THE FUTURE SERVICE COST

The method used is the Projected Unit Method ("PUM").

ASSUMPTIONS USED TO CALCULATE THE WIND-UP POSITION

The wind-up position looks at SAUL's financial position on the assumption that it had been discontinued on the valuation date and the benefits bought out with an insurance company. 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.

The wind-up position has been estimated using Mercer's experience of recent buyout quotations and our understanding of the factors affecting this market.

Detailed analysis of the reserves that would need to be held by an insurance company has not been carried out. Consideration has been given to the market terms for the financial instruments in which insurance companies would be expected to invest. An approximate allowance has been made for the reserves an insurance company would maintain to cover the risks involved and the statutory reserving requirements. The results are, therefore, 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 buyout business, mean that if a buyout ultimately proceeds, actual quotations may differ.

The wind-up 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 buyout.

The tables below set out the assumptions used to assess the funding level in the event of SAUL being wound up. The assumptions used at 31 March 2014 are also shown for comparison.

FINANCIAL ASSUMPTIONS	31 MARCH 2017	31 MARCH 2014
Discount rate:		
Non-pensioners Pre-retirement Post-retirement	 1.10% p.a. 1.50% p.a.	 3.10% p.a. 3.40% p.a.
CDF/non-CDF Pensioners	1.80% p.a.	3.40% p.a.
Pension increases:		
Pre 2016 (excess over GMP) - CPI Retired Members Non-retired Members	 3.20% p.a. 3.50% p.a.	 3.60% p.a. 4.30% p.a.
Post 2016 – CPI max 2.5% p.a. Retired Members Non-retired Members	 2.30% p.a. 2.30% p.a.	 n/a n/a

DEMOGRAPHIC ASSUMPTIONS	31 MARCH 2017	31 MARCH 2014
Retirement	Earliest age without reduction	Earliest age without reduction
Mortality – base table	S2PA year of birth tables weighted 100% for males and 94% for females	S2PA year of birth tables with an age rating of +0.4 for males and -0.4 for females
Mortality – future improvements:	CMI 2016 projections with a long-term improvement rate of 2.0% p.a. and 1.5% p.a. for males and females respectively	CMI 2013 projections with a long-term improvement rate of 2.0% p.a. and 1.5% p.a. for males and females respectively
Commutation	No Members take up the option to exchange cash for additional pension, or pension for additional cash	No Members take up the option to exchange cash for additional pension, or pension for additional cash
Proportion married	75% of LG 59/60	75% of LG 59/60
Spouse's age	Wives/partners are on average three years younger than their husbands/partners	Wives/partners are on average three years younger than their husbands/partners
Expense allowance	In line with the calculation of PPF expenses	2% of liabilities

As the Trustee's current investment strategy includes investment in different assets than would typically be held by an insurer (which includes a material proportion invested in return seeking assets), the wind-up position on a given date may be significantly different from the position estimated at the valuation date.

B
SUMMARY MEMBERSHIP DATA

The membership data is summarised in the table, with figures at the previous valuation shown for comparison.

Data in relation to Members of SAUL were supplied by the Trustee via SAUL Trustee Company ("STC"). The accuracy of the data provided has been relied on. While reasonableness checks on the data have been carried out, they do not guarantee the completeness or the accuracy of the data. Consequently neither I, Christian Hardy, nor Mercer accept any liability in respect of our advice where we have relied on data that is incomplete or inaccurate.

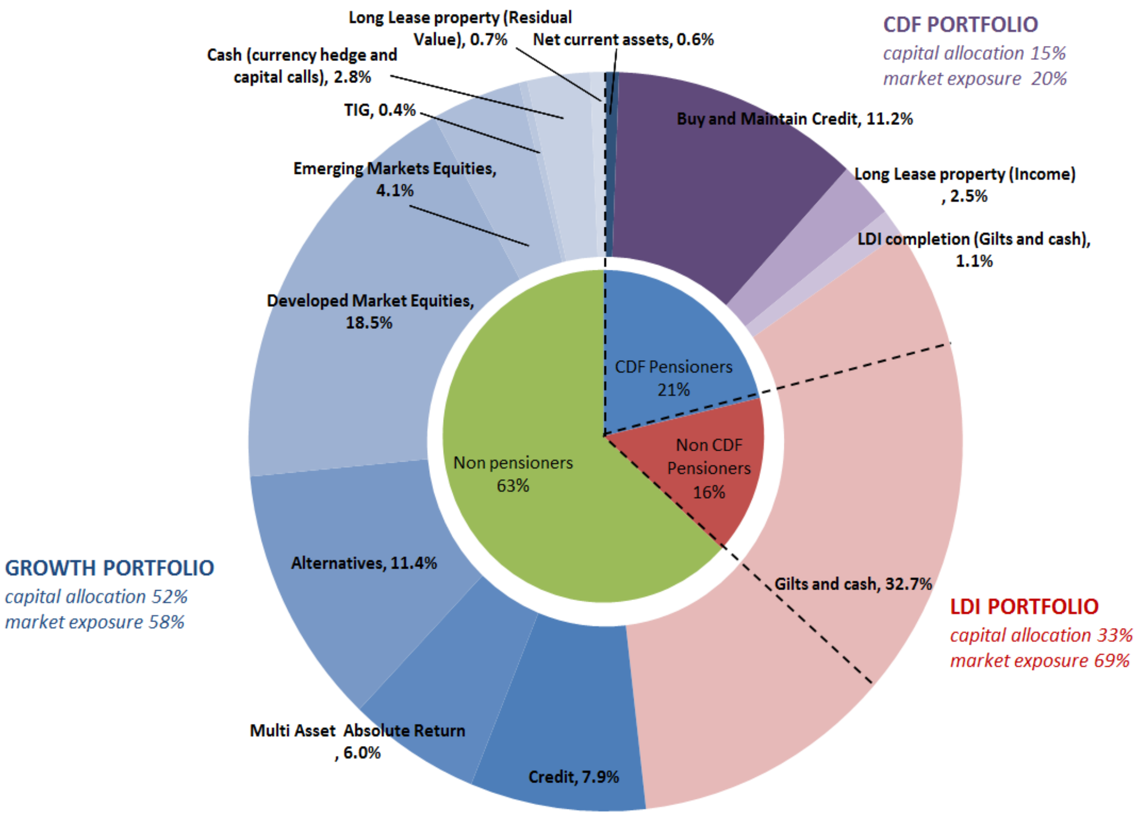
	31 MARCH 2017	31 MARCH 2014
Active members		
Number	17,034	13,505
Total Pensionable Salaries (£000s p.a.)[1]	396,771	324,606
Average Pensionable Salary (£ p.a.)	23,293	24,036
Average age (weighted by Salary)	40.5	41.0
Average past service (weighted by Salary)	6.6 years	7.9 years
Deferred pensioners		
Number	23,362	15,887
Total deferred pensions revalued to valuation date (£000s p.a.)	28,909	23,820
Average deferred pension (£ p.a.)	1,237	1,499
Average age (weighted by pension)	48.3	48.4
Pensioners		
Number[2]	9,796	8,816
Total pensions payable (£000s p.a.)	53,500	46,520
Average pension (£ p.a.)	5,461	5,276
Average age (weighted be pension)	71.3	70.8

[1] Total Pensionable Salaries includes salary in respect of Members over NRA where, for the purposes of the valuation, it is assumed that these Members retire immediately. The total Salaries for future service calculations at the 2017 valuation was £383m.

[2] Total number of pensioners includes insured pensioners.

C
ASSETS

The market value of SAUL's assets was £3,204,334,000 (excluding insured pensioners) on the valuation date. The distribution of the assets as at 31 March 2017 by asset class is shown in the chart below.



Source: Northern Trust and STC Office (Subject to Rounding Errors)

Note: The "Net Current Assets" includes Annuities, Cash at Bank, Contributions Due, Other Debtors etc.

The Trustee holds a group life insurance policy with Legal & General which insures the lump sum death benefit. The Trustee also holds insurance policies in respect of insured pensioners that were transferred to SAUL as part of the Royal College of Arts and UMDS bulk transfers.

The details of the assets at the valuation date and the financial transactions during the inter-valuation period have been obtained from SAUL's audited accounts.

D
SUMMARY OF PPF BENEFITS

If SAUL winds up when the Employers are insolvent, its Members may be eligible for compensation from the Pension Protection Fund. Normally, a scheme's assets and liabilities would only transfer to the PPF if the assets were insufficient to buy out the benefits provided by the PPF. The compensation that the PPF could provide would be broadly 100% of the pension in payment for Members over pension age and 90% of a capped amount of the pension built up 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 Consumer Price Index (CPI), in respect of service after 5 April 1997 only. Pensions accrued before 6 April 1997 are not increased.

- Benefits in deferment are revalued in line with the scheme's rules for any period between the member's exit and the scheme's entry into the PPF. With limited exceptions, revaluation between the entry date and the member's normal pension age will be in line with increases in the CPI subject to a maximum of 5% per annum compounded over the revaluation period in respect of service pre-6 April 2009, and CPI subject to a maximum of 2.5% per annum for service post-5 April 2009.

- With limited exceptions, spouses' pensions will be 50% of Members' PPF compensation.

- 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 when the pension is paid and is increased from time to time. For example, in 2017/18 the cap was £38,506 at age 65 – so, the maximum amount of compensation for Members retiring at their normal pension age of 65 would have been 90% of this, £34,655 per annum.

E

CERTIFICATE OF TECHNICAL PROVISIONS

Name of the Scheme	Superannuation Arrangements of the University of London (“SAUL”)

Calculation of technical provisions

I certify that, in my opinion, the calculation of SAUL’s technical provisions as at 31 March 2017 is made in accordance with regulations under section 222 of the Pensions Act 2004. The calculation uses the method and assumptions determined by the Trustee of SAUL as set out in the statement of funding principles dated April 2018.

Signature	
Name	Christian Hardy
Date of signing	
Name of employer	Mercer Limited
Address	Four Brindleyplace Birmingham B1 2JQ
Qualification	Fellow of the Institute and Faculty of Actuaries

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