USS

Report and accounts

for the year ended 31 March 2018

Universities Superannuation Scheme

About Universities Superannuation Scheme

We are the principal pensions scheme provided by universities and other higher education and associated institutions in the UK. We have over 400,000 members across more than 350 institutions.

Our mission is to be the pensions service of choice for the higher education sector for the long term.

An appropriate governance structure and value for money framework are important for a mutual scheme like USS. We rely on robust processes to ensure that our decisions and benefit promises are aligned to the needs of employers and members and are delivered effectively.

About the trustee company

Universities Superannuation Scheme Limited is the trustee of the scheme. We hold scheme assets on trust for the purpose of paying pensions and other benefits under the scheme rules.

Our primary duty is to ensure there are sufficient funds available to provide income and capital for members in retirement, guided by the USS mission.

The Annual Report and Accounts of the trustee company can be found on our website (**www.uss.co.uk**).

Our mission statement is supported by five strategic themes

This year we have continued to develop our presentation of the annual report in line with our ongoing commitment to communicate with our members and employing institutions in an open and accessible manner. We have attempted where possible to highlight key elements that are of interest to our main readership and have indicated where certain information of a more specialist nature can be found on our website.

Key performance indicators

In order to measure and manage delivery in respect of our core themes we use Key Performance Indicators which are laid out below:

MISSION STATEMENT

'To be the pensions service of choice for the higher education sector for the long term'

Client Service:

Employers

- 69% employer satisfaction (2016/17: 61%) but lower than the target of 73%.
- 80% overall positive relationship (2016/17: 56%), higher than the target of 62%.

Further information on page 17.

Members

- 48% member satisfaction (2016/17: 66%), lower than the target of 68%.
- 38% overall positive relationship (2016/17: 53%), lower than the target of 70%.

Further information on pages 13 - 16.

Investment performance relative to internal benchmark

- 1.44% (1yr), Target 0.55%.
- 0.78% p.a. (5 yrs) Target 0.52% p.a.

Further information on pages 23 - 30.

Collaboration

- 82% Employee engagement (2016/17: 85%), higher than target of 80% *(See page 18).*
- Constructive engagement with employers and stakeholders to review the 2017 valuation *(See page 89).*

Capabilities

- Online self service model available.
- Online engagement increased with 69,000 website visitors.
- 78,000 members have registered for the "My USS" web portal.

Further information on pages 13 - 16.

Control and Compliance

- DC payments 100% on time *(See page 47).*
- Clean audit report with no material adjustments or high priority control issues.
- 100% of significant Internal Audit findings remediated in line with agreed deadline by the end of the year (2016/17: 100%) achieving our target of 100%.

Cost effectiveness

- Pensions administration cost per member £79 (increase from £69 per member due to scheme changes), in line with expected cost per member.
- Investment management cost as a proportion of value of assets under management 31bps (a reduction of 1bp and 11.6bps lower than the peer group average), in line with our expected cost.

Further information on page 11.

Value For Money

Contents

1 Introduction

Chair's introduction 4
Group Chief Executive Officer's update 5

2 Scheme Management

Performance overview 9
Administration and investment expenses 11
Member services 13
Employer services 17
Our people approach 18
Remuneration and incentives 19
Investment matters 23

3 Governance

Legal and regulatory 32
Risk management framework 33
Principal risks and uncertainties 34
Other compliance matters 38
Governance 40

4 Chair's Defined Contribution Statement

Governance of the default option 45
Default investment approach 46
Quality controls 47
Cost and charges associated with the USS Investment Builder 47-48
Trustee skills, knowledge and understanding 49
Non-affiliation of trustee directors and member representation 50
Communications and member engagement 50
USS Default Lifestyle Option Statement of Investment Principles 51

5 Scheme Financials

Statement of trustee's responsibilities 55
Independent auditor's report to the trustee of Universities Superannuation Scheme 56
Universities Superannuation Scheme financial statements 58-79
Report on actuarial liabilities (forming part of the trustee's report) 80
Actuarial certificate of technical provisions 87
Actuary's certification of schedule of contributions 88
A timeline of the 2017 valuation 89

Online information

To keep our members and employers fully up to date, we publish a range of communications available on our website ***www.uss.co.uk***

Chair's introduction

This has been a challenging year for USS, for our members and for our sponsoring employers. Public and disruptive disagreements on what level of guaranteed pension is affordable in the current economic climate have given rise to a high-profile debate on the key issues.

There are no easy answers. We will continue to work as closely as we can with our stakeholders on the best solution possible, ensuring as we must that the pensions promised are secure, sustainable, and can be paid in the future without the risk of placing undue strain on the sector's finances.

Guaranteed pension benefits, like those offered by USS, are now rare in the private sector, as sponsors have reflected on the significant increase in costs and risk that are entailed in funding them. The ability of universities to underwrite such guarantees with their future cash flows and balance sheets is also a key issue for higher education. Individual institutions' willingness to mutualise this risk regardless of their different financial constraints and ambitions has been challenged by current conditions, and is exacerbated perhaps by the growing diversity of university business models.

These issues have been challenging for stakeholders. In the debate, differing views have been proffered on the health of the scheme and the performance of the trustee. Often the lines around accounting rules, pension funding and legislation were blurred. The trustee is responsible for ensuring that pensions promised will be paid when due, and benefits yet to be earned will be secure. Hence the trustee board has to have a high degree of confidence that the scheme can do that.

Uncertainty, therefore, continues to be our single greatest challenge. No one can predict the future with certainty but with Brexit, the slow recovery from the financial crisis and our aging society, the price of delivering certainty in the world of pensions has changed significantly over the past decade. In 2017/18, we have had to consider carefully how much weight to give to the impact of these issues on the scheme's funding position. In doing so, we have engaged in complex and challenging consultations with stakeholders.

I would, therefore, like to place on record my thanks to the many individuals within USS, UUK and UCU who have dedicated significant amounts of time and scrutiny to these matters this year. Our commitment to working constructively with our stakeholders' representatives on the Joint Negotiating Committee is clear from our actions – in particular, repeatedly affording additional time to seek a resolution. Whilst this came at the expense of missing the statutory deadline it was justified, in our eyes, in order to maximise the opportunities to reach an accord. The path we must therefore now follow to complete the 2017 valuation – as required by statute – is set out in the scheme rules, and is being given our full attention.

Throughout these challenges, we have remained as dedicated to our core mission as our members are to their contributions to academic research and education. I am pleased to present a report that evidences indisputably why members can – and should – continue to have every confidence in the scheme and its enduring ability to deliver value for money and high performance. We have worked tirelessly to improve the service we offer to members and their employers. The USS Retirement Income Builder has outperformed its benchmark in the year under review and we can also celebrate the strong performance of the USS Investment Builder in its first full year of existence (see page 23).

The USS Investment Builder was, of course, designed around the needs of our members, based on extensive research, and drawing upon industry best practice. It is a further demonstration that USS provides a bespoke pension plan – tailored to employers' and members' needs, driven by their feedback – delivered by an innovative, dynamic and very capable trustee company.

Such a broad and challenging agenda means it has never been so important to have a strong and capable trustee board, and I thank my colleagues for applying their wide-ranging experience and expertise in making such complex decisions, and their constructive oversight of the executive teams to ensure we are maintaining the highest of standards for members. I am very grateful that at this time we have on the board some of the most insightful and well-regarded individuals in both the pensions and higher education sectors – we have leant on that expertise very considerably this year, and will continue to do so.

We were privileged to count Bill Trythall in our number before he stepped down in October after 25 years' service to USS. The quality of Bill's contribution to the work of USS was of the highest standard, and we wish him well. Bill was replaced as our Pensioner Director by the returning Dave Guppy- who has also given many years of service to the scheme.

The trustee board and the wisdom and scrutiny it provides has greatly assisted USS to continue to deliver value for money, consistently strong investment returns and demonstrably member-focussed services. All of these strengths will be called upon in a turbulent economic and political climate and as our member and employer representatives continue to discuss the future shape of the scheme. As ever, we stand ready and willing to contribute to that discussion and to the development of your scheme into the future.

Professor
Sir David Eastwood
Chair

Group chief executive officer's update

At USS we have one overarching goal: to serve our members and the institutions that participate in the scheme as best we can. Everybody that works at USS understands that in doing their job better, they contribute to better outcomes in retirement for our members.

That is a powerful motivator to delivering high performance and maintaining high standards in our investment and pension administration business areas. I am proud of the achievements of my colleagues this year, set as they were, against a backdrop of challenging discussions on the future shape of the scheme.

Once again, the investments supporting the defined benefit (DB) section of the scheme have achieved above benchmark returns over our key five-year measurement period – and this has been achieved in a way that has been independently assessed by CEM Benchmarking, as £61m cheaper than comparable pension funds in the latest 12 month period assessed.

A key driver of our very positive performance on value for money (see page 12) is our ability to manage around three quarters of DB assets in-house. The costs associated with this approach – of employing highly skilled investment professionals in a very competitive market – remain substantially lower than the fees that would otherwise have to be paid to external managers. The benefits of this strategy are demonstrated very clearly in the latest benchmarking analysis (covering 2016): our investment costs as a proportion of assets under management were 11.6 basis points lower than our global peer group average. To continue to deliver successfully with this business model, it is essential that we can attract and retain individuals and teams who can deliver consistent, cumulative, long-term results.

Our employment offering must therefore be competitive. We do not pay the types of salaries available at some of our competitors, but we do offer a clear and inspiring mission and the opportunity to take a truly long term approach to decision making. Together with fairly structured remuneration packages (see page 20), this approach has succeeded in attracting talented individuals with the right motivations. This is not an easy balance to maintain, but we work very hard on this, as it is so clearly in our beneficiaries' interest.

This is also the first Annual Report & Accounts where we can look back on a full year's performance of the defined contribution (DC) section of the scheme – the USS Investment Builder — and the results here, too, are very positive. The USS trustee now manages one of the fastest growing portfolios of DC assets in the country. We believe the range of tailored funds offered to members compares very well to other such offerings. In addition, almost all of the associated management costs are currently subsidised by our sponsoring employers. This represents very good value for members compared to other private pension schemes. In the first full year of operation, almost all of the funds matched or bettered the market benchmarks set by the Investment Committee.

We look to complement the product design with a strong focus on engaging with members on their choices, and making it as easy as possible to manage their accounts on our portal, My USS. The high levels of online interaction with our members suggests that we have been successful. We know, however, that we have more to do on our digital offering, and this is an ongoing priority.

Members' accounts of their experiences of USS, of our systems and processes and of our people, are a crucial barometer of our success in managing the scheme. The introduction of the hybrid model – including the development and launch of the USS Investment Builder product and supporting services like My USS and our dedicated contact centre – involved the complete transformation of our administrative and IT platforms, and a concerted move towards a 'digital first' approach. In 17/18 we focussed on improving online transactions to give members (now including deferred members) simpler and easier ways to manage their accounts and take greater control of their retirement plans.

The results demonstrate how we've focussed on improving the member experience. Members now have greater control of their retirement plans than ever before and demand more decision support and greater ease of transaction with us. We will look to advance these areas further, driven and focussed by member feedback.

Almost **13,000 (17%)** invested in a combination of lifestyle and self-select fund options, or self-select funds only.

In addition to member ratings, the service we offer to members is compared independently by CEM to a selection of other UK pension schemes and (on their measure) we have continued to perform in line with the peer group average.

However despite all this progress, the valuation and its potential impacts on our members' future benefits are understandably paramount for members. The strength of feeling about developments during the year has clearly impacted our overall member satisfaction and perception scores and as laid out elsewhere, we work hard, and will continue to do so, to ensure members value USS and the service we offer.

Our renewed focus on better engagement with our participating employers has also made a real difference: 80% of respondents to our 2017/18 survey rated their engagement with USS as good or very good. This is a significant improvement against our 2016/17

Group chief executive officer's update

In 2017/18, there were **69,000 unique visitors** to the My USS portal; of the members we surveyed...

88%
said it was easy to start making contributions to the USS Investment Builder,

83%
said it was easy to view or change their contribution

72%
said it was easy to view their investment fund value.

rating of 56% and also exceeds the target we set for the year. Our Net Promoter Score rating was 69%, which compares favourably with our 16/17 rating score (61%). This feedback reflects our focus on and investment in employer engagement, system and process enhancements, and improving our communications with participating institutions. We are pleased with these results. We also believe they've been achieved in a very efficient way.

In the five years to 31 March 2018, the total cost per member has fallen by 12%. We're starting now to realise the benefits of the strategic investments we've made in our administrative systems and processes, and this has made us much more efficient in our operations. That's clear not only from member feedback and lower per member total costs but also in the improvements we can report in management statistics on the efficiency of member contribution reconciliations, data processing and member case turnaround times, against a backdrop where volumes of each activity has increased, as the scheme has grown.

Total operating costs for the year ended 31 March...

£127.2m
2017/18

£124.9m
2016/17

See page 11 for analysis of total operating costs and scheme costs

We have also continued to invest in our teams, in attracting talented individuals and giving them opportunities to develop. In 2017/18, we launched a new careers website to increase our profile and reach in what is a very competitive recruitment market. We also introduced a major programme of learning for our managers, and focussed on succession planning at executive and senior levels. I am pleased to report that even as participation in our employee engagement survey increased by 15% to 85%, we continued to maintain very high levels of self- reported engagement with our mission and goals, compared to our peers.

It is my belief that the scheme's performance levels are underpinned by how many of our people share, and are committed to, its goals – and 88% tell us they share a strong commitment, which is no doubt allied to their own membership of the scheme. This key factor is core to our ability to continue to provide a unique, bespoke and (we believe) highly valued service to our members and their employers. However, our first statutory gender pay gap report showed that we clearly have more to do: **www.uss.co.uk/gender-pay-gap**. Published this year, it shows that we – like many of our peers in the financial services sector – have a greater proportion of men than women in senior roles. To achieve the change we seek in this area, we will look to develop the talented individuals we have, and ensure that they progress to fulfil their potential through our succession planning and management development work.

In addition, we want to provide as flexible and as accommodating working conditions as possible for all employees. We are consulting internally on these important issues.

As a business, we have taken on much new activity in recent years – such as launching DC, more direct investments, and new in-house mandates in credit and emerging market debt. We focussed much effort in 2017/18 on ensuring our control environment progressed proportionately. We invested heavily in our compliance team, bolstered our operational risk teams and devoted much attention to the control activities that support our investment record keeping and accounting.

Our key performance indicators for the year indicated that we experienced a small increase in 'out-of-appetite' control events compared with previous years. These included two instances of failure to respond quickly enough to the requirements and limits of trading exchange limits. Whilst this was not in keeping with our previously strong record of avoiding such events, the response of the business was appropriate and diligent, and systems and controls across the business are improved as a result. Overall, the control environment at USS remains robust, and is a strong focus for us. Our investment in our risk and control framework reflects the level of focus on integrity and reputation expected in a mutual, not-for-profit service provider of our scale.

In parallel with our ongoing work to deliver the pension offer to our members and institutions, this year has seen a major commitment to working with our stakeholders to calibrate an appropriate response to the increasing cost of insuring against the worse outcomes that might affect the scheme and our sponsors in the future.

Group chief executive officer's update

The valuation has been a momentous endeavour, and has generated much comment. A large amount of detailed information on the decision making and progress of the 2017 valuation is available on our website: **www.uss.co.uk/2017-valuation**.

Almost two years of investigation and analysis on the issues related to the valuation led to a report to the Joint Negotiating Committee (JNC) in December 2017. This report concluded that the deficit in respect of past service had increased since the last formal review in 2014 and, much more significantly, that the cost of contributions in respect of pensions being accrued today had increased
very substantially.

These conclusions are driven by assumptions on the future investment returns that are available to the scheme from allocating to return-seeking assets, and the capacity and appetite of our sponsoring employers to underwrite these returns, at a time when returns from investing in securities that provide more certain cashflows (i.e. government and corporate debt) have fallen very substantially. This outcome presented difficult questions to our stakeholders who, despite several extensions to the periods available for negotiations, were unable to agree a response that would balance the scheme's contributions with its expected investment returns and its benefits. The proposals put forward by the JNC were, ultimately, not accepted by representatives of the scheme's membership, resulting in industrial action. A subsequent ACAS negotiated proposal was also rejected.

As a result, stakeholders have established a Joint Expert Panel (JEP) to review the valuation.

The trustee remains hopeful that stakeholders will agree an appropriate response and has engaged and will engage constructively and openly with the panel's efforts to resolve the differences that exist. In parallel, the trustee will finalise the latest valuation in line with the scheme rules and the law, based on the current defined benefit structure.

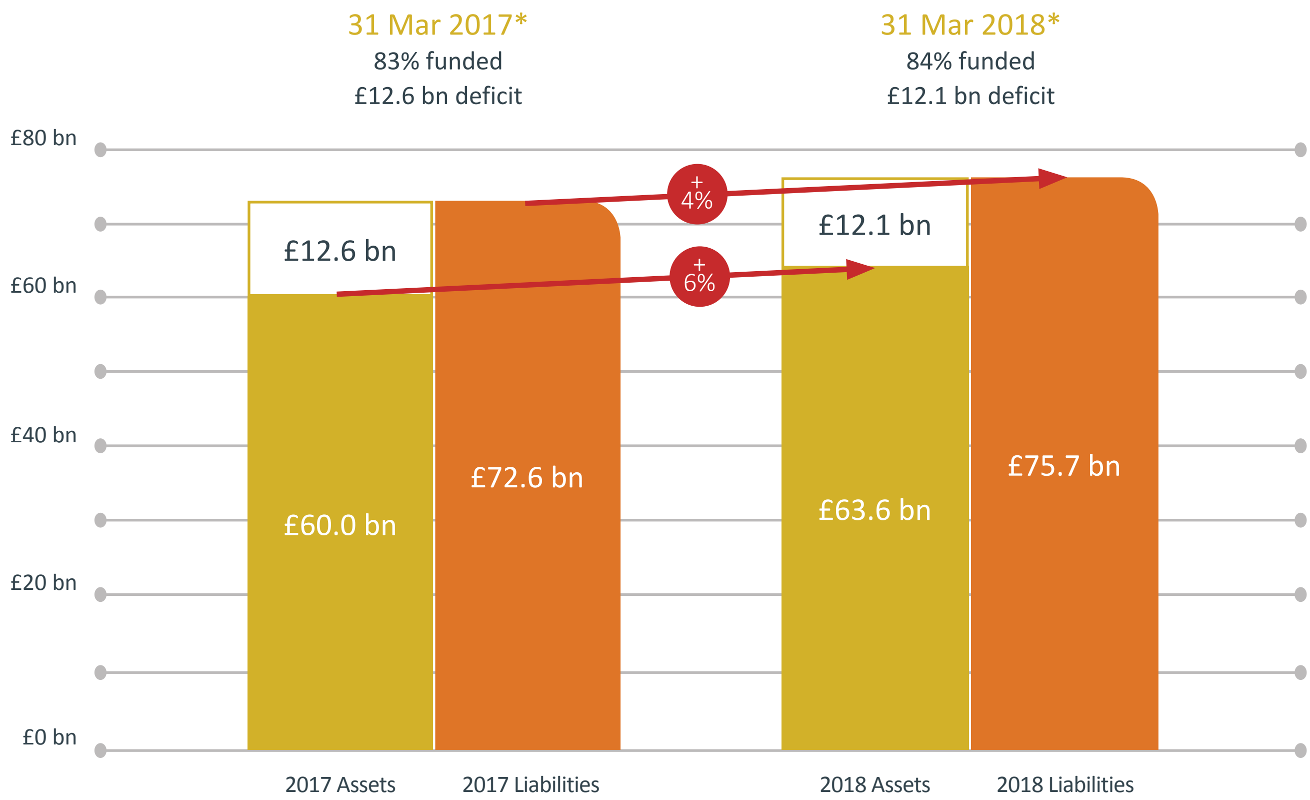
We lay out some of our work on the valuation to date inside the back cover of this report. We have worked flexibly and diligently to support the process. We will continue to do so, both to comply with our statutory obligations and to support a successful conclusion to the JEP which should avoid employers and members having to adjust to very high contribution levels in the medium term.

Our focus this year will be on supporting stakeholders in setting out the future for USS. We will work hard to ensure we can continue proudly to play our role in delivering the best possible retirement outcomes for members. It will involve continued efforts from my colleagues in USS to deliver the best member engagement, the best employer services and the best value for money that we can. USS has always been a leader in the UK's private pensions market, and even as we change to reflect the current challenges, our goal is to ensure that remains the case.

Bill Galvin
Group Chief
Executive Officer

Performance overview

This overview is intended to provide a highlight of the key numbers of the scheme. This should be read in conjunction with the financial statements on pages 58 to 79, Investment Matters on pages 23 to 30, and the Report on Actuarial Liabilities included on pages 80 to 86.



*Position is based on 2014 valuation assumptions updated for changes in the discount rate and inflation assumptions based on changes in yields of index-linked gilts.

**Retirement Investment Builder assets have grown to £0.8bn from £0.5bn during the year. These assets are excluded from the net assets available for benefits shown in the figures above.

The above chart shows one method of tracking the financial position of the USS Retirement Income Builder section. As we have not finalised the 2017 actuarial valuation, the financial position has been updated by using our monitoring approach. This uses the current value of assets and an updated estimate of the value of the earned pension benefits (the liabilities).

This estimate uses the same assumptions as those used in the most recent full scheme valuation (31 March 2014) but with the discount rate and inflation assumptions updated. The discount rate is the rate used to adjust the future pension benefits to a current value. Under this method the discount rate and inflation assumptions are assumed to move based on changes in yields of index-linked gilts. Under our monitoring approach, the deficit has reduced from £12.6bn as at 31 March 2017 to £12.1bn as at 31 March 2018. Both net assets available to pay benefits and the value of accrued pension benefits (liabilities) have grown, but net assets have grown at a faster rate than the estimated liabilities in the year.

Alternative measures of scheme funding can help to illustrate the financial position of this section. In the Report on Actuarial Liabilities on pages 80 to 86, we explain the monitoring approach in more detail and also describe other estimates of liabilities (on a self-sufficiency, a best estimate and buy-out basis) and when in the valuation cycle these methods are used. As discussed elsewhere in this report, the 2017 valuation has not yet been finalised. In our work to date on the new valuation, of which a synopsis is included inside the back cover, assumptions have been reviewed. More information on the latest position with regard to the 2017 valuation can be found on the USS website at **www.uss.co.uk/2017-valuation**

Performance overview

Net assets of the scheme

In relation to net assets, the purpose of the financial statements is to show, amongst other things, the fair value of net assets at a fixed point in time, being the financial year-end of 31 March 2018. They also provide a comparative fair value at the same point a year earlier. A summary of net assets is shown in the table below. Within the net assets, the fair value of investments can change as a result of market volatility, and this is considered further below in the summary of the fund account.

As at 31 March, in £bn	2018	2017
Securities (equities and bonds)	45.2	43.5
Pooled investment vehicles	14.2	13.1
Derivatives (net)	0.1	0.2
Property	2.2	2.1
Cash balances	2.7	2.0
Other investment balances	(0.8)	(0.9)
Total defined benefit investments	63.6	60.0
Total defined contribution investments	0.8	0.5
Total net assets of the scheme	64.4	60.5

Summary fund account

For the year ended 31 March, in £bn	2018	2017
Contributions	2.2	2.1
Benefits paid	(2.0)	(1.8)
Net return on investments	3.7	10.0
Net increase in the fund	3.9	10.3

Employer contributions generated £1.9bn of inflows in the year (including salary sacrifice contributions of £0.5bn), and employee contributions generated £0.3bn of inflows.

Benefits paid have increased due to a slight increase in the amount of pensions paid in the year.

The net return on investments principally consists of:

- Investment income of £1.4bn, including £0.7bn arising from dividends from equities, £0.5bn bond income, and £0.2bn other income including from pooled investment vehicles.
- Increase in the market value of investments of £2.3bn. This change in value was mainly driven by a £1.9bn movement in the value of derivatives. The impact of market volatility can be pronounced over a one-year period, and therefore investment performance is primarily assessed within the trustee's annual report over a five-year period, and against the reference portfolio that is used as the internal benchmark. Assessing investment performance over rolling five-year periods is consistent with the scheme's requirement for long-term returns and the nature of its investment approach, including private market investments. It also mitigates the distraction from inevitable short-term market volatility.

You can find more information in the investment matters section on pages 23 to 30.

Administration and investment management expenses

Our investment costs as a proportion of the scheme's assets under management were 31 basis points[1] (bps) in 2017/18 and have reduced by 16bps since 2013/14. These costs are benchmarked each year by an independent company (CEM Benchmarking), and for 2016 (the most recent analysis), were found to be 11.6 bps (equivalent to £61m) lower than our global peers.

We also benchmark our pension administration costs (currently to UK peers). The latest available analysis shows we are comparatively a high-cost scheme at £79 per member (£29 per member higher than the peer group average). However, this cost comparison is against a peer group that in many cases operates in a very different way to USS, such as single employer or group schemes many of which are not hybrid schemes with the associated, increased complexity this brings. We are nonetheless consistently working to improve our service levels (please see the member experience section of this report for more information) and identify opportunities to reduce costs by continuing to monitor cost effectiveness across the scheme.

The operating costs of administering the pension scheme and its investments are incurred by the trustee company and its investment management subsidiary. Costs are recharged to the scheme as incurred, and are shown in the Fund Account of the scheme as administrative expenses and investment management expenses respectively. The costs are shown in the table below.

For the year ended 31 March, in £millions	2017/18	2016/17 Underlying	2016/17 Exceptional	2016/17 Total
Employee incentives – investment	17.2	17.7	–	17.7
Employee incentives – non-investment	1.9	2.0	–	2.0
Wages and salaries	41.6	39.5	2.1	41.6
Other Personnel Costs	3.6	3.1	–	3.1
Total personnel costs	**64.3**	**62.3**	**2.1**	**64.4**
Premises costs	4.5	3.8	–	3.8
Investment costs	29.0	28.8	–	28.8
Other costs	29.4	26.8	1.1	27.9
Total operating costs	**127.2**	**121.7**	**3.2**	**124.9**

Total operating costs have increased by £2.3m and on an underlying basis (excluding exceptional costs) have increased £5.5m or 4.5% year on year.

Exceptional costs are defined as costs that are material (from the trustee company's perspective) and unusual by incidence or by nature, and total £nil (2016/17: £3.2m). The exceptional costs incurred last year related to scheme-change expenditure to introduce the defined contribution section. There were no exceptional costs in 2017/18.

[1] Basis points (bps) refers to a common unit of measure for interest rates and other percentages in financial services. One basis point is equal to 1/100th of 1%, or 0.01%, i.e the relationship between percentage points and basis points is thus summarized as follows: 1% change = 100 basis points.

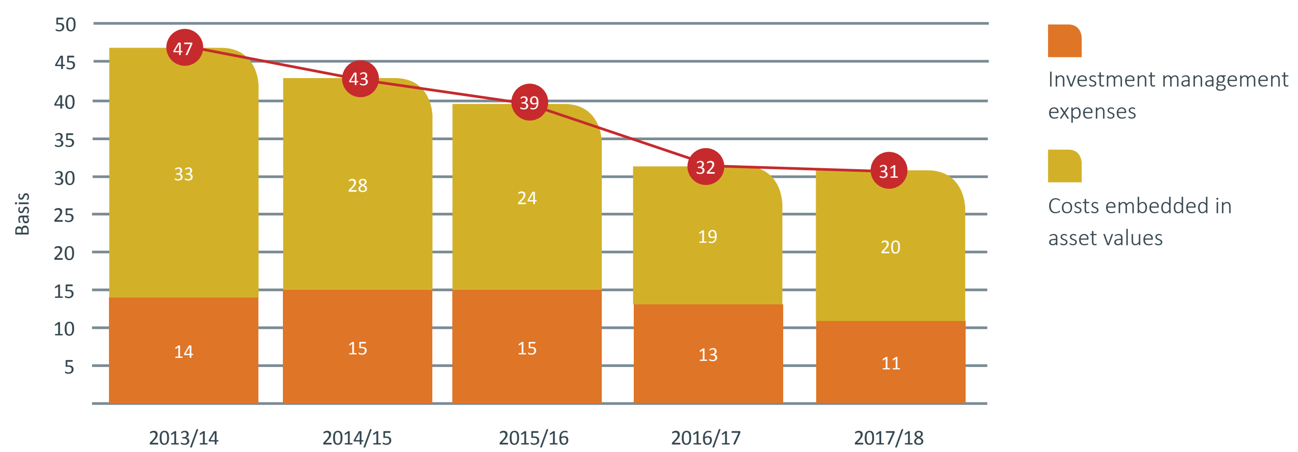
Administration and investment management expenses

The key movements in underlying operating costs are:

- Incentive compensation decreased by £0.6m. The majority of the reduction this year was linked to lower discretionary awards based on the overall performance of USS Investment Management Ltd against the agreed strategic KPIs and scheme performance.
- Wages and salaries are in line with the prior year. However, on an underlying basis there has been an increase of £2.1m reflecting the increase in headcount and full-year impact over this period. The successful completion of the scheme-changes project last year has meant that the exceptional costs of £2.1m have not recurred in the current year.
- Premises costs have increased by £0.7m reflecting an increase in rates and service charges and one off credits in the prior year.
- Other personnel costs have increased by £0.5m with key increases in directors' fees and national insurance of £0.1m and recruitment costs of £0.1m
- Other costs include computer and information services of £11.7m (2016/17: £11.0m) and professional fees of £10.2m (2016/17: £9.1m). The increases in these costs reflect the increased activity levels in the scheme and the full year impact of charges from Capita in relation to the administration of the DC section including certain back office services.

The total operating costs shown in the table on the previous page represent costs that are invoiced directly or incurred internally (for example, employee remuneration costs). These operating costs include investment management costs that are invoiced by external managers of scheme assets. However, the majority of external management and performance fees, notably from private equity and hedge fund managers, are embedded fees deducted from the value of the assets that they are managing. Under generally accepted accounting principles, these costs are not reported in the Fund Account under investment management expenses, but they reduce the value of the net assets available to the scheme. Therefore, when providing an explanation of the costs of the scheme, limiting the information to those shown in the Fund Account does not give stakeholders the full picture of the investment management costs to which the scheme is exposed. This is not unique to USS and transparency of these costs is a priority for many pension schemes. Both types of investment costs (those embedded in asset values and those directly incurred) are monitored by the trustee throughout the year alongside the costs of internal management. We show these investment costs in basis points in the chart below.

Investment cost as a proportion of assets under management



For those costs that are shown in the Fund Account of the scheme, further analysis can be seen in the audited consolidated financial statements of the trustee company, which are available on the USS website. The external auditors issued an unqualified opinion on these financial statements.

Member services

Our members' experiences of USS – of our systems and processes, and of our people – are a crucial barometer of our success in managing the scheme. We have invested in our administrative and support functions to reflect the increasing complexity of the scheme and the regulatory environment in which we operate in order to maintain high standards of service our members expect.

Some member service highlights for 2017/18 are:

- Enhancements to the web offering including access to My USS for members who have left the scheme but are not yet retired, and improvements to the investment fund performance pages
- Delivery of personalised member statements including both defined benefit and defined contribution benefits; and
- **www.uss.co.uk** and other member communications identified as one of the key strengths offered by USS.

Overall relationship with USS

We are constantly working to improve our service and the relationship our members have with USS. As one of the ways we measure our performance, the overall rating of service we provide to members is compared independently by CEM Benchmarking to a selection of other UK pension schemes. Consistent with recent years, the rating for USS was in line (68%) with the peer group average (68%). We believe that the goals set out below will improve this position in future.

Despite this strong service rating, other KPIs have moved adversely in the year and have also diverged from employer satisfaction scores. The change in employer and member Net Promoter Scores (69%/+8%; 48%/-18%) respectively between 2016 and 2017 is pronounced, and is mirrored in the movement of their perception survey scores which is a survey aimed at measuring their overall relationship with USS (80% positive, +24%; 38% positive, -15%).

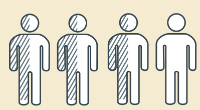
While these surveys are still in their infancy and we are still learning the factors which may influence the results, it is unsurprising if the valuation, its potential impacts on future benefits, and the strength of feeling this generated in the past year has impacted members' perceptions of USS. This is, however, markedly different to their experiences of engaging with USS shown in the results, described in the Member Perceptions of USS section below, of our regular surveys of members' experience of using our products and services. All of the feedback we receive, however, gives us important and valuable insights that will inform our priorities as we continue to work hard to ensure members and employers value USS and the service we offer. The KPIs are reviewed each year to support our annual business objectives. In 2018/19, we will measure and monitor a revised set of KPIs, ranging from digital metrics reporting monthly member engagement to annual surveys capturing members' perceptions of their relationship with us. We will also focus on:

- Online content, so members can access information about pensions matters and scheme options on My USS, our dedicated member portal;
- Making our communications simpler, so it is easier for members to understand what is important to them;
- Tailoring communications, so they address member needs at key life events; and
- Developing the choice of products, which are uniquely tailored to the sector.

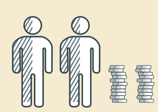
Member engagement

We continue to improve the digital experience for our members by providing simple and easy access to information about their USS pension and preparation for retirement. More than 407,000 individual users visited **www.uss.co.uk** during the year, an increase of 63,000 unique users from 2016/17. Additionally, 2017/18 saw 69,000 individual users visit My USS, our dedicated member portal, using a range of different devices. Use of the online modellers and tools also rose, with around 22,000 individual users accessing the USS Benefits Illustrator Modellers and 19,000 accessing the Additional Contributions Modeller. The focus on enhancing our digital channels reflects survey findings, with 71% of respondents to the Member Engagement and Action Survey in 2017 saying their preferred channel for receiving communications from USS was through member emails directly from us. Enhancements to My USS have been delivered throughout the year including: the addition of My Documents, new tax modellers, improved functionality for self-managing investment funds and a clearer overview of the USS Investment Builder fund performance. These enhancements respond directly to employer and member feedback we have received. Access to My USS for deferred members who have left the scheme but are not yet retired and a combined view of USS Retirement Income Builder and USS Investment Builder benefits is now live and continuous improvements to the Member Dashboard are being made, including content update, and pension-related articles and blogs to further support member decision making.

Awareness of scheme changes
(from Member Engagement and Action survey 2017)



75%
were aware of the match



71%
were aware that all members of USS, regardless of how much they earn can choose to pay into the USS Investment Builder

Member services

Membership age bands at 31st March 2018

Actives	%
30 and under	12.0
31-35	16.1
36-40	16.7
41-45	14.2
46-50	13.4
51-55	12.0
56-60	8.8
61 and over	6.8
Total	100

Total number of active members:

198,652

Pensioners	%
60 and under	6.0
61-65	18.5
66-70	27.5
71-75	22.2
76-80	12.8
81-85	7.6
86-90	3.9
91 and over	1.5
Total	100

Total number of pensioner members:

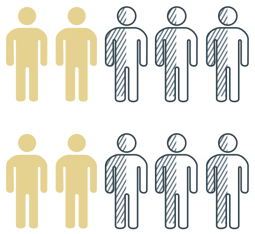
69,193

Deferred	%
30 and under	7.2
31-35	12.8
36-40	16.7
41-45	16.4
46-50	16.8
51-55	15.3
56-60	10.3
61 and over	4.5
Total	100

Total number of deferred members:

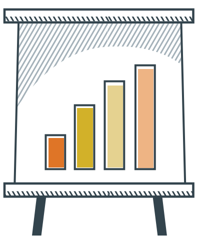
151,119

The ongoing development of the Member Service Desk complemented our objective to increase the support provided directly to members.



28,716

New active members were welcomed into the scheme during the year.



69,193

individual pensions were in payment at the year end.

An increase of 3% compared to 2016/17.

> "USS should continue to improve the benefit illustrator with the aim that all members can get an estimate of their pension via the website"
>
> Comment from Member Perceptions Survey 2017

Member services

Membership numbers

USS provides a snapshot of members at a specific and consistent date each year. The date chosen is the financial year end and the table below shows the active membership of the scheme at the beginning and end of the year along with changes during the year:

Active Members	University institutions	Non-university institutions	Total
Membership at 1 April 2017 as reported	184,088	6,458	190,546
Change in active members*	(943)	(33)	(976)
Membership at 1 April 2017 as restated	183,145	6,425	189,570
New members	27,481	1,235	28,716
Re-joiners	3,617	90	3,707
	214,243	7,750	221,993
Leavers and exits during the year			
- Retirements	(2,139)	(79)	(2,218)
- Retirements through incapacity	(79)	(3)	(82)
- Deaths in service	(95)	(2)	(97)
- Refunds	(668)	(49)	(717)
- Deferrals	(15,150)	(736)	(15,886)
- Retrospective withdrawal	(4,161)	(180)	(4,341)
	(22,292)	(1,049)	(23,341)
Total active members at 31 March 2018	191,951	6,701	198,652

*These figures reflect adjustments owing to member processes being carried out with an effective date prior to this date but were completed subsequently.

The number of pensioner members, along with an analysis of the movements in the year is provided in the table below:

Pensioner Members	University institutions	Non-university institutions	Total
Membership at 1 April 2017 as reported	63,954	2,465	66,419
Change in pensioner members*	487	24	511
In payment at the start of the year	64,441	2,489	66,930
New pensioners in year resulting from:			
- Retirement of active members	2,218	82	2,300
- Retirement of deferred members	1,362	78	1,440
	68,021	2,649	70,670
Re-joiners	(170)	(2)	(172)
Deaths in retirement	(1,270)	(35)	(1,305)
In payment at 31 March 2018	66,581	2,612	69,193

* In addition to the pensioner numbers above are 12,035 pensions in payment at 31 March 2018 which are paid in respect of the service of another person (for example a surviving spouse or dependant). During the year, the trustee company was notified of approximately 4,341 employees of participating employers who were eligible to join the scheme but elected not to do so, which equates to 15%. This represents an increase from approximately 4,000 or 12% seen in 2016/17. In addition to members included in the tables above, the scheme has 151,119 deferred members not yet receiving a pension, giving the total number of members at 31 March 2018 of 418,964. Included in the above are 74,093 active members in the USS Investment Builder as at 31 March 2018.

Member services

Member perception of USS

My USS received positive feedback in the Member Perceptions Survey carried out in November 2017. More than half (54%) of respondents had used My USS in the last 12 months, and those who used it found it easy to use, with 88% saying it was easy to start making contributions to the USS Investment Builder, including taking up the match. 83% said it was easy to view or change their contributions, and 72% said it was easy to view their investment fund value.

Member awareness of features of the scheme has been increasing. 75% of members are aware they can take the match, with their employers matching the first 1% of any additional contributions they make. 71% of members know that all members, regardless of salary, can pay into the USS Investment Builder. Most members also understand how the default investment option works, with 60% aware that if you do not choose your own investment funds, contributions will be automatically invested in the default.

The Member Service Desk received around 19,950 calls and 2,450 emails. The number of calls about member identification numbers, which has consistently been high, has reduced since they started being displayed on My USS and since the Annual Member Statements, (which contained member identification numbers), were distributed.

We have taken steps to provide members with simpler, easier and more personalised communications, relevant to their career and life stages and the decisions they might wish to make about their USS benefits. Our Annual Member Statement Campaign in 2017/18 provided a combined view of USS Retirement Income Builder and USS Investment Builder benefits, and included personalised messaging, for the first time.

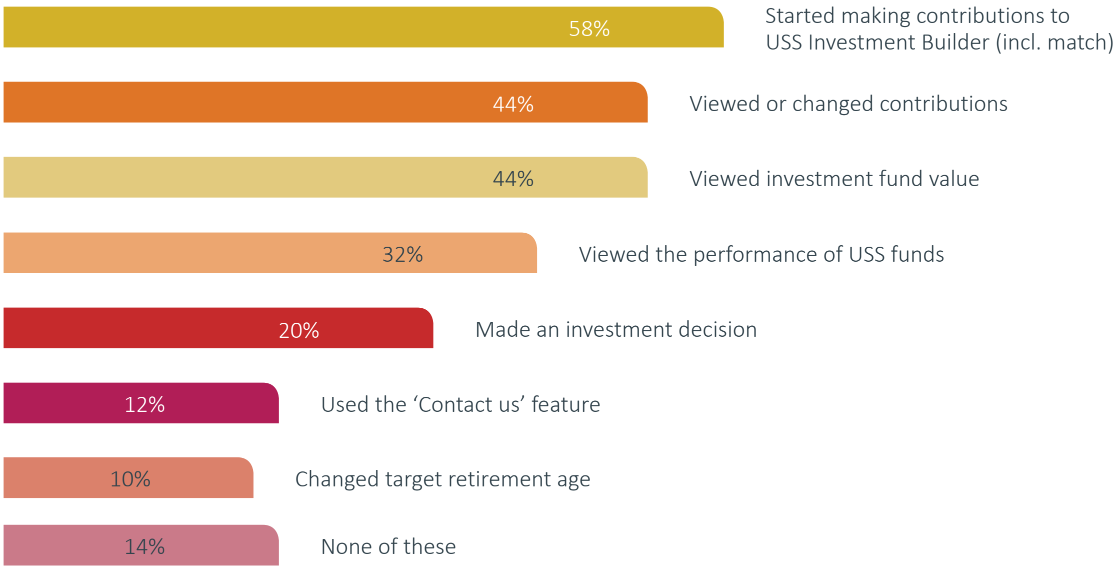
Of the 40% of respondents to the Member Engagement and Action Survey who said they had received and read their annual benefit statement from 2016/17, 72% rated it good or very good in terms of usefulness. 69% rated it good or very good for level of detail, and 67% rated it good or very good for ease of understanding. We will continually review member feedback on the statements and build in improvements each year.

The most tangible sign of member engagement is members taking action in relation to the scheme. There are now almost 45,000 active members paying additional contributions. Of these, more than 43,000 have taken the match. According to 42% of respondents to our Member Engagement and Action Survey, the main reason for not taking the match was that they could not afford it or had other priorities.

More than 60,000 (81%) of our active members with a Defined Contribution (DC) fund invest wholly in the USS Investment Builder Default Lifestyle, whilst just under 1,000 (1%) invest wholly in the ethical lifestyle option and almost 13,000 (17%) invest in a combination of lifestyle and 'Let Me Do It' options, or 'Let Me Do It' funds only. This level of active decision-making by members with regard to their DC choices is high compared to pension schemes generally and indicates that our approach to supporting member decisions and engagement with this section of the scheme has been well received.

Member Perceptions Survey feedback on My USS:

Activities undertaken on My USS in the last 12 months



Employer services

Employer experience

Teams at USS work closely with employers to deliver an efficient, timely and high quality service to our members. We seek feedback from employers through the daily contact we have with scheme administrators, through our engagement and relationship – management teams and through more formal channels, such as the Institutions' Advisory Panel (IAP) and the Institutions' Meeting.

As mentioned on page 13 we will keep developing how we measure the perceptions of our members and employers to ensure our measures are sufficiently sophisticated to drive the right actions.

Net Promoter Score (NPS)*

In 2017/18, our NPS rating was 69. This compares favourably with our 2016/17 rating of 61. This was largely achieved by focusing on employer engagement, system and process enhancements and improving our communications.

Employer Perception Survey

The main objective of employer perceptions survey is to gain a better understanding of their views of their interactions and overall relationship with USS. 80% of those employers who participated in the survey rated the overall relationship as good or very good. This represents a significant improvement against our 2016/17 rating of 56% and is ahead of our target for the year.

We will look to build on this progress and strengthen our employer relationships throughout 2018/19 by:

- Focussing on our employer insight capabilities to generate a greater understanding of employer needs;
- Improving our turnaround times for key processes;
- Developing and enhancing our communications to provide more targeted and streamlined information;
- Increasing the level of support available to employers to enable them to fulfil their administrative obligations more easily;
- Evolving our employer engagement, relationship and support plans; and
- Rolling-out a formal employer training programme.

"USS has experienced staff that know the scheme well, meeting our needs when we need information at short notice, and they are polite and helpful."

"Regular and timely communications with members and employers."

"Easy to use online system in relation to contributions."

Comment from Member Perceptions Survey 2017

*The Net Promoter Score is an index ranging from-100 to 100 that measures the willingness of employers to recommend a USS products or services to others, based on a survey of employers with whom we work.

Our people approach

"We continue to invest in our people because a motivated high quality workforce is key to the scheme's success. This year saw a renewed focus on management capability and the delivery of an enhanced performance management system. Our core objective is to involve our people in our mission and to enable them to be the best they can be in delivering value for money pensions and investment services to employers and members"

Bill Galvin – Group Chief Executive

- Focus on management capability
- Planned talent management
- Hiring the best talent is a strategic imperative
- Maintain high levels of employee engagement

82%

Engagement score -3 percentage points vs. 2016/17

Management capability

2017/18 saw the launch of a major programme of training for managers. The training was delivered over a series of modules that focus on leadership, setting goals and building and empowering a team.

Talent cycle

2017/18 saw the introduction of a planned 'talent cycle'. This joined up succession planning at senior management levels with talent development and reporting on capability and gaps. The outputs link into all aspects of talent management, from attracting the best recruits to deployment and development. Our succession capability has stood us in good stead with several senior appointments coming from our existing team. Further development and deployment of this model is planned for next year.

Resourcing

Hiring the best talent is a strategic imperative. 2017/18 saw the launch of a new model, with the introduction of a careers website, on-boarding site and induction programme. This was complemented by a fully automated system and process for managers, enabling real-time update and management information to the desktop. This focus raises our market profile providing a broader cross-section of candidates at reduced cost.

USS employee engagement

2017/18 saw a heightened profile for USS in the media as a result of the valuation. This combined with significant internal change impacted overall engagement, with the score moving back 3 points to 2015/16 levels.

Given the circumstances, we were encouraged by the resilience of our people: 88% reported a commitment to the goals of USS. We also believe our focus on management capability helped the overall results.

Encouragingly, participation in the survey saw a significant upswing, rising from 70% to 85%. We see engagement as a key indicator of our success.

"Engagement can be defined as a deep connection to the organisation, characterised by feelings of pride, commitment and motivation."

David Barr – Chief People Officer

Remuneration and incentives

We are committed to providing a high quality pensions and investment service to employers and members, and delivering value for money. It is therefore vital that we have access to the right mix of skills and expertise to deliver our long-term priorities, and that is what our remuneration framework is designed to achieve.

Philosophy

Our remuneration framework is designed to ensure the scheme has access to the right mix of skills and expertise to deliver our long-term priorities. One of our fundamental objectives is to deliver value for money for members. We are committed to providing a high quality pensions and investment service to employers and members. We hire expert people, who can deliver cumulative, long-term results, and we pay them at market rates commensurate with the skills and experience they bring to the scheme. A cornerstone of the remuneration and incentive objective is to pay for performance, which means to reward contribution that is aligned to the needs of the employers and members in a cost effective manner. The investment managers represent the largest proportion of the compensation paid, representing 89% of the variable incentive in the year. Our compensation approach includes the following key elements:

- Base salary, which is benchmarked annually (either in its own right or part of total remuneration). Base salary is designed to attract and retain high-performing individuals.
- Annual incentives, aimed at motivating and rewarding top performance, aligned to the USS values. In the investment management subsidiary, where incentives exceed a £50,000 threshold, payment is partially deferred for three years. For investment managers, the annual incentive includes an element that is linked to scheme performance, calculated on a rolling five-year basis.
- Long-term incentive plans (LTIPs) available to a limited population, designed to incentivise delivery of scheme performance over the long-term and to encourage retention of the key management personnel.
- All employees are eligible to join the USS pension scheme which aligns the employee's own personal objectives with the purpose of the scheme itself.
- Trustee board directors and other non-executives receive only the agreed fee level for their services.

Benchmarking of base salary and/or total compensation

Given the importance of attracting and retaining high-calibre employees in a competitive talent pool, we offer fair and competitive salaries in comparison with our peers. Salaries reflect the experience, responsibility and contribution of the individual and of their role within USS. Annual benchmarking is performed on salaries. This minimises the disruption caused by employee turnover, and minimises any potential negative impact on employee engagement. At the same time, salary benchmarking is vital to ensure we deliver value for money to employers and members. Two external benchmarking agencies are used: one for investment management and support services; and one aimed at pensions services roles and their support functions.

Remuneration and incentives

Incentive payments

The incentive payments detailed here reflect that USS met its targets in relation to its strategic priorities over the financial year and delivered strong investment performance on a rolling five-year basis. There are three types of incentive payment:

	Annual Incentive	Investment LTIP*	Group LTIP*
Main features and objectives	• To drive strategic change and individual delivery of the business plan • To recognise and reward individual contributions to USS priorities • Individual contribution is calibrated annually	• Restricted to a minority of roles in the investment management subsidiary • Value at vesting depends on scheme or, where applicable, private markets investment performance • Promotes performance and retention of key personnel	• Restricted to those not in receipt of an Investment LTIP • Enables the recruitment of the executives necessary to deliver the strategy • Promotes performance and retention of key personnel
Performance conditions	For investment managers: • Scheme performance over five years and mandate performance (where applicable) over five years • Qualitative measures aligned to USS values and delivery of strategic objectives For other employees: • Qualitative elements aligned to longer-term strategic goals and behavioural competencies	• Scheme performance over multiple years • Specific investment performance measures for Private Markets employees over multiple years	• All qualitative – not linked to scheme performance • Reflects achievement of personal objectives • Promotes objectivity of senior management within the second or third lines of defence
Service conditions	• Must be in employment and not serving notice at date of award • For deferrals, must be in employment and not serving notice at the date of payment	• Must be in employment and not serving notice at date of award and through to vesting although 'good leaver' provisions may apply • LTIPs vest in tranches, the earliest being three years and the latest being five years after award	• Must be in employment and not serving notice at date of award and through to vesting although `good leaver' provisions may apply • LTIPs vest after either three years or five years
Deferred element	• Incentives above threshold are deferred for three years as follows: – 30% over £50,000; – 40% over £200,000; and – 50% over £400,000 Where the deferred element is calculated as less than £5,000, this is paid immediately	• As a long-term plan, the payment is deferred until conditions have vested	• As a long-term plan, the payment is deferred until conditions have vested

*Long-term investment plans

Remuneration and incentives

Remuneration in 2017/18

We remain committed to openly reporting the total remuneration of the trustee board directors, key management personnel and highly paid employees (who are typically the investment managers). For the last group of employees, the remuneration disclosure goes beyond what legislation requires and reflects our commitment to transparency.

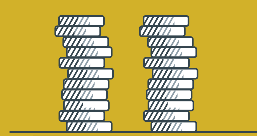
The table below shows remuneration of highly paid employees, including key management personnel.

Remuneration levels for highly paid individuals	2018	2017
For the year-ended 31 March, showing numbers of individuals in bands of £50,000		
£100,001 to £150,000	47	40
£150,001 to £200,000	25	21
£200,001 to £250,000	16	14
£250,001 to £300,000	11	8
£300,001 to £350,000	4	3
£350,001 to £400,000	2	5
£400,001 to £450,000	8	5
£450,001 to £500,000	1	4
£500,001 to £550,000	4	3
£550,001 to £600,000	2	3
£600,001 to £650,000	2	2
£650,001 to £700,000	-	-
£700,001 to £750,000	2	1
£750,001 to £800,000	2	2
£1,000,001 to £1,050,000	1	-
£1,050,001 to £1,100,000	1	1
£1,200,001 to £1,250,000	-	1
Total	128	113

The table to the left includes the remuneration earned in respect of base salary, annual and long-term incentives. A significant proportion of the annual incentive is deferred for three years. The LTIP expense included is an estimate based on future scheme performance and estimated eligible staff turnover until maturity. The amount disclosed in the year includes changes to the estimated value of LTIP plans previously awarded, which will mature over the next five years. This estimate depends on the scheme performance and is reviewed each year until maturity.

Overall, there are more employees earning over £100,000 because we continue to enhance our in house investment management capabilities. The direct costs associated with this approach – of employing highly skilled investment professionals in a very competitive financial services market – are much lower than the embedded fees that would otherwise be charged by external managers. Investment costs as a proportion of assets under management ('AUM') are one of our KPIs (see page 2). On page 12 we show graphically the reduction of that cost ratio over time. It is one of the reasons our investment costs compare so favourably to our global peers (independently assessed by CEM Benchmarking as £61m lower than our peer group average in 2016 – see page 12). Variable remuneration for investment managers is linked to overall scheme performance over rolling five calendar year periods, and outperformance net of investment costs for this period was somewhat lower to end 2017 than to end 2016. More information can be found on page 26.

Useful facts about remuneration for all employees



Mean average base salary 2017/18:

£66,000

2016/17: £63,000

Median average base salary 2017/18:

£49,250

2016/17: £48,500

Remuneration and incentives

The tables below show the total combined remuneration of the high earners shown on the previous page, and key management personnel. It includes amounts earned during the financial year and cash amounts paid during the year.

Remuneration	High Earners	Group Executive (A)	Trustee Board (B)	Total Key Management Personnel (A+B)
For the year-ended 31 March 2018, in £m				
Total base salary	17.0	2.0	0.6	2.6
Annual incentive	10.3	0.9	–	0.9
LTIP allocated*	2.9	0.9	–	0.9
Total compensation earned	**30.2**	**3.8**	**0.6**	**4.4**
Less:				
Annual incentives earned in the year deferred until 2020	(1.8)	(0.2)	–	(0.2)
LTIP allocated*	(2.9)	(0.9)	–	(0.9)
Add:				
Annual incentives from 2014 paid in the year	1.6	0.2	–	0.2
LTIP vested	2.0	0.6	–	0.6
Total compensation paid	**29.1**	**3.5**	**0.6**	**4.1**

* The LTIP allocated refers to the apportionment of the movement in LTIP provision and corresponds to a proportion of the expense incurred in the year
Note: brackets indicate minus figures.

LTIP awards

A notional amount is awarded in respect of LTIPs and amounts eventually payable depend on the performance and service conditions explained earlier in this report.

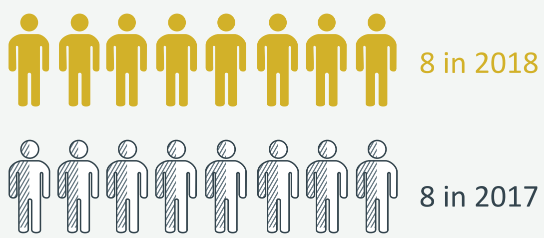
Forty two investment LTIP awards were made in the current year with a notional value of £7.1m, of which two related to key management personnel with a notional value of £1.0m. Six group LTIPs were awarded in the year with a notional value of £0.6m.

The trustee board director fees are shown below with the comparison to 2016/17. Their remuneration is included within the analysis table above.

Total emoluments of the directors of the trustee company:	2018	2017
For the year-ended 31 March, in £thousands		
Fees (non-executive directors)	627	569
Employer National Insurance contributions	162	105
Expenses reimbursed	73	57
Total	**862**	**731**

Employers' national insurance contributions (NIC) includes an additional one off charge of £69,000 relating to additional NIC arising on expenses reimbursed to directors from prior years.

The number of directors who are members of the USS defined benefit scheme (100% of those eligible)



Directors are remunerated on a basis which is approved by the Joint Negotiating Committee and is in accordance with the contribution which they make to the work of the trustee company and their legal responsibilities.

The Remuneration Committee report provides a summary of the oversight and governance of the compensation awards and can be found in the Governance Report on our website at **www.uss.co.uk/report-and-accounts**

.

Investment matters

Here we report on our investment strategy, and its implementation, across both the USS Retirement Income Builder (DB) section and the USS Investment Builder (DC) section, including the investment returns achieved during the year compared to the appropriate benchmark and a summary of the investment managers in place for each asset class.

USS Retirement Income Builder investment return

1yr +6.2%
5yrs +10.6% p.a.

Investment performance relative to reference portfolio

1yr 1.44%
5yrs 0.78% p.a.

Net value added over five years

£1.7bn

Our investment approach

The Statement of Investment Principles (SIP), the scheme's Financial Management Plan (FMP) and the trustee's investment beliefs and principles underpin our investment activities. These are laid out in the Investment Approach section of our website at **www.uss.co.uk/how-we-invest/our-prinicples-and-approach**

The investment committee monitors compliance with the SIP at least annually and during the year the scheme operated within the agreed framework.

USS Investment Management Ltd

USS Investment Management Limited (USSIM) is a wholly owned subsidiary that acts as our principal adviser. The day-to-day management of the scheme's investments, including the specifics of asset allocation, implementation and reporting, is delegated to it – with robust and appropriate oversight through our formal governance structures as well as our organisational culture.

One of our key beliefs as trustee is that a well-run and appropriately governed internal investment team is the best way to meet our long term investment objectives in the most cost-effective manner. On behalf of USS, one of the largest pension schemes in the UK, USS Investment Management Limited can leverage economies of scale to develop the requisite skills, experience and operational systems to manage a large part of the scheme's investments in-house.

While there are direct costs associated with this approach, they can be much lower than the fees that would otherwise be charged by external managers. It is one of the reasons our investment costs and returns compare so favourably to our global peers. See page 12 (where we graphically show reduction in investment costs over time) Where it is not cost effective, timely or otherwise desirable to take the in-house approach, USS Investment Management Limited selects external managers to undertake investment on its behalf. Around three quarters of assets supporting the USS Retirement Income Builder are currently managed in-house. For the USS Investment Builder, USS Investment Management Limited's input has thus far focussed on design of the fund range and default strategy, as well as selection and oversight of external active and passive managers.

As a result of its scale, USS Investment Management Limited is able to invest in the resources, training and career development opportunities needed to attract and retain high quality investment professionals in a very competitive financial services market. This, in turn, supports the development and delivery of sophisticated and innovative strategies. Another of our core beliefs as trustee is that investing responsibly and engaging as long term owners reduces risk, over time, and may positively impact investment returns. Accordingly, USS Investment Management Limited has one of the largest responsible investment (RI) teams among our peers, consisting of six professionals who work with the investment managers to ensure that material environmental, social and governance (ESG) considerations are taken into account in the financial assessment of investment selection, retention and realisation for the scheme.

The in-house responsible investment team engages with companies and with global policy makers on issues that could impact long term sustainable returns across the range of asset classes in which USS Investment Management Limited invests. More information is available on pages 29 and 30.

Investment matters

USS Retirement Income Builder – investment strategy

As the starting point, the trustee board approves a hypothetical portfolio – known as the reference portfolio – that is expected, over the long term, to deliver the investment returns assumed in the scheme's Financial Management Plan (FMP) at a level of risk consistent with the scheme's risk appetite.

The reference portfolio, which is set on the recommendation of the Investment Committee and reviewed at least annually, works on the basis that it could largely be implemented passively at a low management cost.

As such, it provides a suitable long-term benchmark for measuring the value added by, and the level of risk in, USS Investment Management Limited's approach to managing the scheme's assets.

USS Investment Management Limited is tasked with implementing a portfolio that delivers greater returns than the reference portfolio, at a similar (or lower) level of risk over the long term. USS Investment Management Limited achieves this by diversifying into other asset classes not included in the reference portfolio, and by using active management. One of the most significant differences is USS Investment Management Limited's investment in private market assets overseen by a specialist internal team of 38 people. Private market investments are made either directly by the internal team or via funds. Whilst private market assets are less liquid than their publicly traded equivalents, they provide access to industries and return streams that are difficult to access via public markets. For example, USS has significant investments in the financing of wind farms and waste and biomass energy production, in the Virginia International Gateway (VIG) port facility in Virginia, USA, and in timber production in Portland, USA and Queensland, Australia. Our active ownership of assets has seen us work with partners to maximise value for our members; see below for a post-completion impression of a significant re-development we helped to finance at VIG.

> "The scheme has benefited from its scale, time horizons and the dedicated service of broad investment capabilities."
>
> Roger Gray Chief Investment Officer

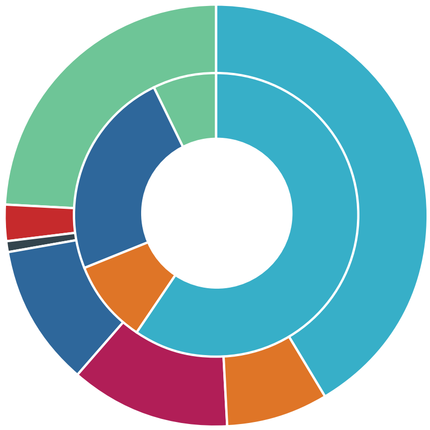
Investment matters

USS Retirement Income Builder – investment strategy (continued)

The chart below highlights diversity within the investment portfolio.

Implemented Portfolio (outer ring)

44.1% Equities
8.1% Credit and emerging market bonds
13.7% Nominal government bonds
11.9% Inflation Linked government Bonds
1.0% Commodities
3.0% Absolute Return
23.7% Private Markets



Reference Portfolio (inner ring)

62.5% Equities
10.0% Credit and emerging market bonds
0.0% Nominal government bonds
25.0% Inflation Linked government Bonds
0.0% Commodities
0.0% Absolute Return
7.5% Private Markets

*Graph excludes cash category, which is a minus figure for both portfolios.

USS Retirement Income Builder risk management

In targeting higher returns than the reference portfolio, the implemented portfolio must be invested in a different mix of assets. This, in turn, presents the risk that returns could instead be lower – and it is a risk that needs to be measured and monitored to ensure it is consistent with the scheme's risk appetite. The implemented portfolio's risk is compared, on a daily basis, to the risk exposure of the reference portfolio, with the aim of taking the same level of risk or less over time.

We use three complementary measures: **Mismatch risk or 'tracking error'** (which estimates the potential deviation of the Implemented Portfolio from the Reference Portfolio outcome); **Deficit Volatility ratio** (which measures volatility of the deficit of the Implemented Portfolio relative to that of the Reference Portfolio); and **Deficit VaR ratio** (which measures Value-at-Risk of the deficit of the Implemented Portfolio relative to that of the Reference Portfolio).

With advice from the Investment Committee, the trustee board has established tolerance ranges for these three metrics which are set out in the investment management agreement with USS Investment Management Ltd. If the level of risk exceeds our risk appetite, arrangements between the Investment Committee and USS Investment Management Ltd will come into effect. During the year, investment risk remained within the tolerance ranges, with the mismatch risk averaging 2.3% and the other two risk metrics 100% and 101% respectively.

The following table shows the principal investment managers, their mandate and their share of total USS Retirement Income Builder investments managed as at 31 March 2018:

	Mandate	% Assets
USSIM Ltd (Internally managed)	Multiple	76.5%
External funds (Private markets and absolute return)	Multiple	10.8%
Legal & General Assurance (Pensions management)	Multiple	6.9%
Ashmore	Emerging Market Debt	1.3%
Marshall Wace	US Equities	1.2%
Other public	Multiple	3.3%

Investment matters

USS Retirement Income Builder – investment performance

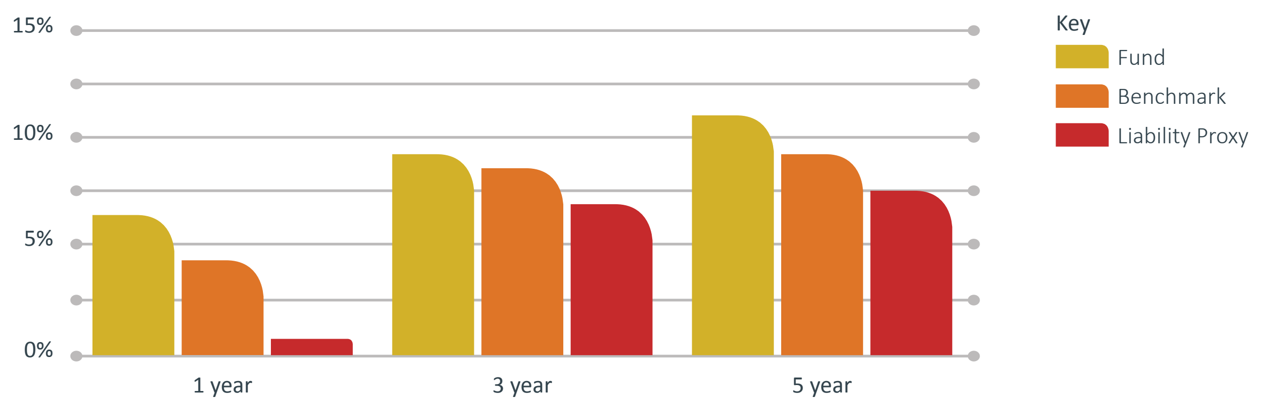
The implemented portfolio aims to outperform the reference portfolio by 0.55% or more per year on an annualised basis over rolling five-year periods to 31 March (net of applicable costs).

Prior to 2015, the relevant outperformance target was 0.45% so the weighted target over five years to the end of 2017/18 was 0.52%.

Investment performance is inherently volatile and at times may fall beneath the target outperformance, which itself represents a strong outcome over periods of five years and longer given the rarity of sustained outperformance in asset management. Performance was ahead of the benchmark in the 2017/18 year by 1.44% and over the five-year period exceeded the benchmark by 0.78% per year net of applicable costs. Performance is regularly monitored by the Investment Committee, with a formal review process related to a RAG scale with triggers if performance deviates too widely from target. Performance relative to a gilts proxy of the scheme's liabilities is also reported as an indicator of changes in the scheme's funding position.

The chart below shows the performance of the scheme, its performance benchmark and the liability proxy (gilts) over 1, 3, and 5 years.

USS Retirement Income Builder; annualised returns to March 2018



Absolute returns were somewhat lower in the 2017/18 year than in the 2016/17 year and were more aligned to our expected long term returns from markets. Equity and other risk assets outperformed liability hedging assets such as index linked gilts. Outperformance from the implemented portfolio over both the 1 and 5 year horizons has been broadly spread with equities, fixed income and private markets all beating their benchmarks.

When viewed gross of applicable costs, over the last five years, the scheme assets have returned 10.6% per year. In the same time period, net of applicable costs, the scheme assets have returned 10.5% per year, and outperforming the gilts liability proxy by 2.76% per year. Over this five-year period, net added value from active management net of applicable costs has been 0.78% per year, contributing £1.7bn to the scheme's asset value.

USS Investment Builder – investment objectives

As explained in the Chair's Defined Contribution statement on page 45, the USS Investment Builder offers members a choice as to how they wish their contributions to be invested. This range of options provides a range of different types of investment with different levels of risk and return. For members who do not wish to make any explicit investment decisions, the USS Investment Builder has a default investment approach, known as the USS Default Lifestyle Option. In addition to this, members are able to choose from the USS Ethical Lifestyle Option and ten individual funds, which are referred to as the self-select options.

USS Investment Builder – investment strategy

The USS Investment Builder uses funds managed by external managers that are selected and monitored by USS Investment Management Limited using a process approved by the Investment Committee. The components of the Default Lifestyle Options, the Growth Fund, Moderate Growth Fund and Cautious Growth Fund, all benefit from the investment allocation insights of the USS Investment Management Limited team. The active asset allocation decisions here broadly mirror those made in the USS Retirement Income Builder section.

Unlike the USS Retirement Income builder, these funds do not currently (with the exception of property) invest in illiquid assets. We recognise that with appropriate controls, the diversification benefit available from private market investments and the greater flexibility and lower cost available from increased internal management could be of better value to members. We have therefore asked USS Investment Management Limited to consider this and they will present proposals to the trustee board on these potential enhancements to the USS Investment Builder.

Investment matters

Distribution of the USS Retirement Income Builder assets

The table below sets out the approximate distribution of the scheme's asset exposure, and its position relative to the reference portfolio as at 31 March 2018. The table excludes the assets held in the USS Investment Builder section of the scheme and the money purchase AVC programme, which has been separately managed by Prudential.

	% Implemented portfolio	% Reference portfolio	% Difference
Equities	44.1	62.5	-18.4
– UK	10.0	15.6	-5.6
– Europe Ex-UK	5.5	6.9	-1.4
– N America	13.7	25.2	-11.5
– Pacific inc Japan	5.1	5.4	-0.3
– Emerging Markets	9.8	9.4	0.4
Credit	8.1	10.0	-1.9
Nominal government bonds	13.7	0.0	13.7
Inflation Linked Bonds	11.9	25.0	-13.1
Commodities	1.0	0.0	1.0
Absolute Return	3.0	0.0	3.0
Private Markets	23.7	7.5	16.2
– Inflation Linked Debt/ Equity	7.4	0.0	7.4
– Private Debt/ Equity	8.5	0.0	8.5
– Special Situations	2.4	0.0	2.4
– Property	5.4	7.5	-2.1
Cash*	-5.5	-5.0	-0.5
Total Fund	100	100	0

* Includes Liability-Driven investment funding

Top twenty holdings

Below are the top 20 holdings in the scheme as at 31 March 2018 excluding the external manager mandates laid out earlier in this section.

Asset Grouping	Asset Description
Equities - UK	Royal Dutch Shell plc
Equities- Europe excl UK	Roche Holding AG
Equities- Emerging Markets	Tencent Holdings Ltd
Nominal Government Bonds	UK Treasury 1.5% 22/07/2047 UK Treasury 4.25% 07/03/2036 UK Treasury 4.25% 07/09/2034 US Treasury 2.125% 15/02/2041
Inflation Linked Government Bonds	UK Treasury 0.75% IL 22/03/2034 US Treasury 1.375% IL 15/02/2044 US Treasury 0.625% IL 15/02/2043 US Treasury 0.75% IL 15/02/2042 UK Treasury 0.625% IL 22/03/2040 UK Treasury 0.125% IL 22/03/2044 US Treasury 2.125% IL 15/02/2040
Private Inflation Linked Debt/Equity	Heathrow Airport Holdings Limited Thames Water Utilities Ltd Redexis Gas SA ConnectEast Pty Ltd Globalvia Infraestructuras Sarl
Private Debt/Equity	Moto International Holdings Limited

The private market assets listed above are held by the scheme via intermediate holding or special purpose vehicle investment companies

Investment matters

USS Investment Builder – investment performance

The investment performance of the various USS Investment Builder funds over the past 12 months, and since inception (3 October 2016) to 31 March 2018 is set out below. Performance is shown after the subsidy[1].

	Asset distribution as at 31 March 2018			Performance since inception	
Fund name	Distribution of assets £m as at 31 March 2018	Benchmark return%	Difference to benchmark	Benchmark return%	Difference to benchmark%
USS Growth Fund*	252.5	5.0	+1.4	8.1	+1.9
USS Moderate Growth Fund*	69.4	4.0	+1.3	5.8	+1.9
USS Cautious Growth Fund*	22.5	3.5	+1.2	4.2	+1.6
USS Cash Fund*	27.0	0.2	+0.1	0.2	+0.2
USS Bond Fund	23.1	1.2	(0.1)	(0.5)	+0.4
USS UK Equity Fund	21.1	1.1	(0.5)	6.1	(0.5)
USS Global Equity Fund	32.5	2.0	+0.7	9.1	+0.4
USS Emerging Market Equity Fund	4.6	10.7	+0.9	15.1	+1.0
USS Ethical Equity Fund	14.4	1.8	+4.5	9.0	+1.7
USS Sharia Fund	0.3	2.4	+0.1	7.6	+0.1
USS Ethical Growth Fund (Lifestyle only)	11.8	2.6	+3.0	7.0	+1.7
USS Ethical Moderate Growth Fund (Lifestyle only)	3.6	2.2	+2.2	4.8	+1.5
USS Ethical Cautious Growth Fund (Lifestyle only)	0.7	1.9	+1.5	3.1	+1.1
USS Ethical Cash Fund (Lifestyle only)	0.7	0.2	+0.1	0.2	+0.1

* The components of the USS Default Lifestyle Option

The USS Growth Fund is the largest fund by assets with 52% of the total USS Investment Builder assets. This fund is a key component of the USS Default Lifestyle Option.

You can find further information on the governance of the USS Default Lifestyle Option in the Chair's Defined Contribution Statement on page 45.

Further details on the funds and performance can be found in the fund factsheets which are available for members to download from the MyUSS Member portal.

Performance of the funds against their comparator benchmarks is broadly positive since inception (3 October 2016), with the USS UK Equity Fund being the only under performing fund. The under performance can be attributed to poor returns in a number of holdings in the fund, including its overweight position in the retail sector. The Investment Committee continues to monitor the funds on a frequent basis and periodically reviews reports from USS Investment Management Limited on the selected managers and, where relevant, asset allocation decisions. In line with its procedures in the USS Retirement Income Builder, USS Investment Management Limited have an established portfolio review process related to a RAG scale with triggers if portfolio performance deviates too widely from target.

[1] The employers have agreed to subsidise the investment management costs of the default fund, and any other funds up to the cost of the default fund. Currently only one self-select fund has a charge borne by members, the Emerging Market Equity fund, which costs 15bp after the subsidy. The cost and operation of the subsidy is kept under regular review by the trustee company and the joint negotiating committee who, within the scheme rules, determine whether the level of the subsidy remains appropriate in light of experience.

Investment matters

Responsible investment (RI)

We aim to provide secure pensions for our members by being engaged stewards of the investments USS Investment Management Ltd makes on their behalf.

We believe the way a business is governed, and how it manages environmental and social factors, will impact the long-term returns it will achieve for its investors – and USS Investment Management Ltd's interests in a company, once invested, can last for many years.

Our Responsible Investment (RI) team comprises six specialists – making it the largest dedicated RI team for a UK pension fund – who work with USS Investment Management Ltd's internal fund managers to ensure environmental, social and governance (ESG) issues are taken into account. When they are material, we aim to integrate ESG issues into investment decisions. We will act as stewards, actively engaging with companies and the other assets in which we invest to encourage improved management of ESG issues. We will also engage with policymakers to encourage them to put in place appropriate frameworks to address ESG issues across the whole market and raise market standards.

Most recently, we have increased our focus on encouraging better disclosure on key environmental and social indicators, in particular:

- Carbon emissions
- Quality and timeliness of reporting on corporate social responsibility (CSR) issues
- Accidents and fatalities
- Ethical business practices: human rights, child labour and modern slavery

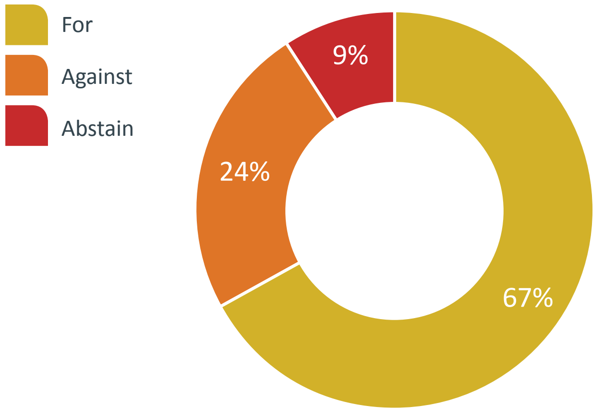
Being an engaged, or active, shareholder is one of the most effective approaches to encouraging positive behaviour in a company and our Stewardship Principles set out our expectations and how we will interact when USS Investment Management Ltd invests. This means proactively engaging with boards and executive teams, and using voting rights effectively (see graphic). For the year ending December 2017, the team voted on 6,909 resolutions at 545 events covering 468 separate companies.

We also actively seek an open and two-way dialogue with companies, and expect them to consult with us when there are material changes and issues which impact long-term shareholders, such as strategy, capital structure, sustainability, and governance.

Our RI activities are not limited to public equities: we aim to apply the scheme's policies as consistently as possible to all assets, whether they are internally or externally managed. We also have an ESG monitoring programme post-investment (something very few other pension funds undertake).

As with most UK trust-based pension funds with a defined benefit section, we are not legally in a position to screen out or divest from companies on ethical or moral grounds alone – UK trust law indicates that these issues can only be taken into account in investment decisions once their financial impact on the company has been assessed. We do not disregard these issues but address them, when material, through engagement rather than divestment. Divestment means not having a "seat at the table", and no longer acting as an active and engaged owner who is working to improve standards and push companies for positive change and for sustained improvement.

USS Global Votes from January to December 2017



Investment matters

Engagement in 2017/18

We continued to engage with policy makers and regulators in the markets in which we invest to protect our rights as investors.

In the UK, we met with the FCA and responded to proposals to create a new premium listing category for sovereign controlled companies such as Saudi Aramco. We believe the proposed dilution of premium listing standards would undermine the integrity and high standards of the listing regime and undermine minority shareholders' rights.

In the Netherlands, we raised concerns over proposals to introduce protectionist measures at Dutch companies that could disenfranchise shareholders for prolonged periods. We co-signed a letter drafted by the International Corporate Governance Network (ICGN) and joined an investor Delegation to the Ministry of Economic Affairs in the Hague to reiterate the points made in the letter directly to senior government officials.

As a long-term investor in AkzoNobel, we took a very proactive position in 17/18 in relation to a takeover approach from PPG, publicly calling on both parties to hold constructive discussions. This included engaging with fellow shareholders and the company itself on the board's handling of the situation, and defending our rights as shareholders to call directors to account through AGMs and EGMs.

This year we also became a signatory to the Workforce Disclosure Initiative (WDI). Run by ShareAction, the WDI has written to the FTSE 50 plus 26 international companies with a detailed questionnaire covering human capital management issues for both their workforce and their supply chain.

Focus on: climate change

In 2017, the Taskforce on Climate related Financial Disclosures (TCFD) published its recommendations for improved transparency by companies and their investors with respect to how they were managing climate change risks and opportunities.

The TCFD's recommendations apply to asset owners like USS and we fully support this initiative (our full response to the TCFD is available at **www.uss.co.uk**): as long-term investors, we believe we can make better investment decisions if we have all the relevant information to include in our projections.

Climate change is an issue of global significance. We subscribe to the scientific consensus that man-made emissions of carbon dioxide and other greenhouse gases are contributing to changes in the atmosphere that will cause significant changes in global temperatures.

While there are uncertainties around the specific impacts, the predicted changes pose a threat to environmental, social and political stability, and to the businesses and other assets in which we invest.

It is an issue that could influence our ability to pay the pensions promised. As active stewards of the capital we invest, we engage with companies to encourage them to manage climate risk.

We consider issues over the short, medium and long term:

- Short term: stock price movements resulting from increased regulation to address climate change;
- Medium term: regulation and other factors leading to changes in consumer behaviour and therefore purchasing decisions – an example of this would be the significant uptake in electric vehicles;
- Long term: Adaptation risk, where changes to the climate mean that there are potential major impacts to assets that USS owns. Examples would include increased flood risk to real estate assets as a result of severe weather events, or drought raising the fire risk associated with timberland investments

Recognising its implications, in 2001, we established the Institutional Investor Group on Climate Change (IIGCC) to co-ordinate investor action in Europe. It now has more than 130 members and, among other actions, has sent open letters to G7 finance ministers and others urging support for long-term emissions reduction goals.

USS Investment Management Ltd also participated in the development and launch of the Transition Pathway Initiate (TPI) which tracks the progress companies are making against policies and practices for shifting to a low-carbon economy. The results are available to other investors and enables us to see where a company is in its transition.

We have signed the Montréal Pledge, which commits signatories to publishing the carbon footprint of their public equities portfolios. This allows us to identify companies that are most exposed to carbon, and see whether companies are increasing or decreasing their exposure over time and which are best at reporting and managing emissions. Through active investment decisions, the scheme has continued to be less 'carbon intensive' than its peers. To read more about the Montréal Pledge go to **www.montrealpledge.org**

Westermost Rough Wind Farm in the North Sea, Yorkshire – an example of the investments we share with USS partners.

Legal and regulatory update

There have been a number of regulatory and legislative developments during the financial year, including changes to some of the pension tax rules and the government's decision to trigger Article 50 in relation to Brexit. In addition, as the USS Investment Builder is a Defined Contribution section, the scheme will be subject to the forthcoming 'Master Trust' supervision by the Pensions Regulator beginning in the financial year 2018/2019.

Rule amendments

There have been minor amendments to the rules of the scheme throughout the financial year. These amendments include changes that clarify the procedures relating to retirement on the grounds of incapacity, and to permit non-statutory transfers of a member's defined benefit right irrespective of that member's age.

Tax

In the autumn budget, the Chancellor confirmed that the standard lifetime allowance would rise to £1,030,000 from the beginning of the tax year 2018/2019. From then on, the standard lifetime allowance will continue to increase in line with the rate of the Consumer Prices Index each tax year, and the exact figure will be announced in regulations each year.

In contrast the government has reduced the money purchase annual allowance from £10,000 to £4,000 per annum. The money purchase annual allowance is the amount that a person can contribute tax free to a registered pension scheme once they have begun to flexibly access pension benefits.

Future developments

The General Data Protection Regulation (GDPR) went live post year end on 25 May, 2018. GDPR improves the legal protections offered to personal data controlled or processed by a third party. We have performed an extensive review of the arrangements we have in place and in order to ensure compliance with the legislation.

Article 50 of the Lisbon Treaty was triggered on 29 March 2017, with the effect that the United Kingdom will leave the EU on 29 March, 2019. Of importance to the scheme is the effect that such discussions could have on EU legislation, such as Institutions for Occupational Retirement Provision II Directive. To this end we, along with our advisers, are monitoring developments with respect to the future relationship between the United Kingdom and the EU and to any transitional arrangements that are agreed.

Finally, we are preparing for the implementation of the Master Trust legislation and the accompanying application for the scheme's authorisation to the Pensions Regulator. The scheme falls within the definition of a Master Trust because the USS Investment Builder has a Defined Contribution arrangement. The application process looks at a number of different elements of the scheme, from how trustee directors are appointed to the suitability of IT systems in respect of the administration of the scheme. We have engaged with the Pensions Regulator in relation to the Master Trust legislation applying to the scheme and to ensure we can meet the criteria.

Risk management framework

Risk management

> "A thorough evaluation of risk is an important component in all decision making."
>
> Guy Coughlan,
> Chief Risk Officer

Our primary duty is to ensure that the benefits promised to members are delivered in full on a timely basis. In conducting our business, we must manage a wide range of risks that could impede the execution of this duty. For the USS Retirement Income Builder this means ensuring there are sufficient funds available to provide members with retirement income, in accordance with the employers' commitments. For the USS Investment Builder this means ensuring that an appropriate range of investment fund options is available, along with an effective investment process, to enable members to manage their investment selections in line with their risk appetite.

We have a comprehensive framework for managing-risks, including a dedicated Group Risk team along with comprehensive risk governance arrangements, policies and processes. The aim of the framework is to ensure that risks are effectively identified, monitored, reported and managed across the business. The Group Risk team is independent of USS front line businesses and its head, the Chief Risk Officer (CRO), reports directly to the Group CEO.

Risk appetite

At the heart of our approach to risk management is our risk appetite. It expresses the desired or target level of risk that we are prepared to accept in delivering strategy. Risk appetite performs two key functions. First, it promotes consistent, risk-aware decision making that is aligned with our strategic objectives. Second, it supports robust governance across the group by setting clear risk-taking boundaries. Taking on too much or too little risk could result in a failure to deliver strategic objectives.

Risk governance

The trustee board has ultimate responsibility for risk management across the group, being the ultimate owner of all risks, retaining responsibility for setting risk appetite and satisfying itself that the risk framework has been implemented effectively. The trustee board has delegated day-to-day implementation of the risk framework to the executive management which ensures that roles and responsibilities for risk management are clear, in accordance with the three lines of defence model, and applied consistently across all business processes and activities. Risk management is overseen by the executive risk committees and non-executive committees, which ensure that our risk-management processes are effective and that risk is appropriately assessed against risk appetite.

Risk framework

At USS, risks are **identified** strategically and operationally on an ongoing basis and through business change, business as usual activity and from consideration of emerging risk areas. Risk **management** effectiveness is assessed proactively after considering the appropriateness and effectiveness of mitigations, including the effectiveness of internal controls. Risk **monitoring** is performed through the prospective identification and assessment of risks and the retrospective analysis of any material control events, such as a financial loss, or a process error. Risk monitoring is also provided by the delivery of a risk-based assurance programme undertaken by the Compliance and Internal Audit functions. Finally, risks are **reported** regularly and comprehensively to the risk oversight committees.

The USS three lines of defence risk-management approach

first line of defence	second line of defence	third line of defence
USS business units risk ownership & management of business divisions	USS functions of group risk, legal, compliance and financial control	USS internal audit function
• risk ownership • management of risk in the business • operation of controls	• risk oversight • challenge to first time • maintenance of the risk framework	• independent review • risk assurance • objective challenge to first and second line

Principal risks and uncertainties

We maintain a comprehensive register of the risks that we face across the various parts of the business.

These risks can arise from internal or external factors and can adversely impact the scheme's funding, investments, operations and reputation.

We have identified the scheme's principal risks and uncertainties based on their potential to threaten the ability of the trustee to deliver its strategic objectives. The tables below set out those principal risks, the potential impact and the mitigation in place.

Defined Benefit Funding Risk

Description:

A deterioration in the financial health of the USS Retirement Income Builder (DB) section driven by a significant increase in the scheme deficit and / or significant deterioration in the ability of employers to make contributions to fund the benefits promised to members.

Impact:

It may lead to the requirement to substantially increase contributions, amend investment strategy and / or reduce future benefits.

Control/mitigation:

- A dedicated funding strategy and actuarial team focussed on funding of the USS Retirement Income Builder section of the scheme.
- Implementation of a comprehensive financial management plan (FMP) as part of the ongoing 2017 Actuarial Valuation, incorporating the acknowledged strength of the employers' covenant, the contribution rate and investment strategy.
- Regular monitoring of the funding level, employers' covenant strength, contribution adequacy and liability in the context of the FMP.
- Regular analysis of the sources of changes in both the liability and the deficit and of the impact of this on the required employer contribution rate..

Stakeholder Risk

Description:

Failure to engage effectively with our stakeholders as a result of ineffective governance or relationship management structures

Impact:

This may lead to an impaired ability to correctly ascertain and respond effectively to the changing needs of employers and members. Employers, or their representative bodies, may no longer view USS as the primary service provider for retirement benefits, or members may no longer want to use USS for their retirement provision.

Control/mitigation:

- Regular meetings are held with employers, member representatives and employer representatives, including both Universities UK and UCU.
- The meeting agenda covers issues of most interest to stakeholders, including valuation, funding, contributions, product development and investment performance.

Principal risks and uncertainties

Service Risk

Description:

Pension service delivery fails to meet requisite quality or timeliness standards, as a result of the failure to manage or execute operational processes effectively.

Impact:

This may lead to poor or incorrect outcomes for our members or beneficiaries with the potential for increased costs and reputational damage.

Control/mitigation:

- Robust operational controls and defined service standards.
- Review and reporting of performance across all administration teams.
- Comprehensive workload forecasting.
- Quality control checking.

Supplier Risk

Description:

The risk that a supplier fails to perform a business-critical contracted service. This could arise as a result of an operational failure by a supplier or in the event of a supplier insolvency.

Impact:

This could result in a failure to perform business-critical activities on a timely basis.

Control/mitigation:

- Dedicated procurement function with responsibility (with Group General Counsel) for controlling the onboarding of suppliers and ongoing monitoring of key suppliers' performance and through the annual supplier review process.
- Appropriate relationship management structures are in place with key suppliers, supported by service-level agreements, management information provision and incident escalation and resolution protocols.

Principal risks and uncertainties

Investment Performance Risk

Description:

A prolonged period of inadequate investment performance, or a sharp fall in the value of investments in either section of the scheme. This may be due to (i) selection of an inappropriate reference portfolio, (ii) under-performance of the implemented portfolio relative to the reference portfolio and/or (iii) unfavourable economic conditions.

Impact:

A significant increase in the deficit of the Retirement Income section of the scheme. This may lead to the requirement to increase contributions, amend investment strategy and/or reduce future benefits.

Lower growth in the size of members' USS Investment Builder funds. This may lead to lower than expected values being available to members on retirement.

Control/mitigation:

- A documented, structured and effective investment process, run by experienced investment professionals, incorporating robust controls and diligent oversight.
- USS Retirement Income Builder: The investment portfolio is diversified across a range of asset classes and risk factors. It is managed relative to a long-term reference portfolio designed to fulfil the goals of the FMP.
- USS Investment Builder: The Self-Select fund range has been chosen to provide members with an appropriate range of risk and return expectations. The default Lifestyle strategy progressively reduces investment risk exposure over the 10 years prior to expected retirement, to provide greater certainty around outcomes.

People Risk

Description:

Failure to attract and retain sufficient people with the necessary skillsets in the right roles or to develop appropriate management structures and business culture.

Impact:

This may lead to an inability to provide the necessary resources to achieve successful delivery of the scheme's strategic priorities, leading to poor investment performance, increased incidence of operational error and failure, and ultimately result in reputational damage with key stakeholders.

Control/mitigation:

- Focussed recruitment processes.
- Talent and succession management.
- Clear objective setting linked to the strategic priorities.
- Regular performance and remuneration reviews with reference to appropriate external benchmarks.
- Training and development programmes.
- Regular employee satisfaction reviews.

Principal risks and uncertainties

Regulatory Risk

Description:

The product and service offering is impacted adversely by changes to pension policy, legislation or regulation. The trustee fails to adopt and apply effective oversight of its legal and regulatory compliance arrangements.

Impact:

Potential for change to impact the scheme's product offering, give rise to additional costs and lead to operational complexity. Failure to respond to such changes in an appropriate and timely manner could lead to fines, compensation costs and censure, as well as damage to stakeholder relationships and reputation.

Control/mitigation:

- Dedicated professionals focussed on assessing existing and emerging regulatory initiatives.
- Legal and regulatory change is monitored via the Group General Counsel canon of law and regulation, which is reviewed quarterly to ensure that relevant updates are captured and flagged to business areas.
- Structured change management methodology for the implementation of necessary changes.
- Ongoing compliance training, advisory and monitoring activity in the relevant business divisions.

Data Risk

Description:

Failure to protect the confidentiality, integrity or availability of critical data (including personal and commercially sensitive data) held by the scheme or its suppliers, or USS data is accessed without appropriate authorisation.

Impact:

Breach of applicable data protection legislation, potential for regulatory censure or fine, loss of reputation with members and employers. Potential for monetary loss and remediation costs.

Control/mitigation:

- A dedicated information security team whose head serves as USS' Data Protection Officer.
- Implementation of appropriate information security and data protection framework and processes.
- Implementation of appropriate cyber risk controls.
- Delivery of regular education and awareness training to employees.
- Ongoing maintenance of the international information security accreditation, ISO 27001

Other compliance matters

The information below sets out those matters of importance which are required to be included in the annual report and accounts but which are not covered elsewhere within this report.

Constitution of the scheme

Scheme benefits payable consists of two elements:

- USS Retirement Income Builder, providing DB benefits on a career revalued benefit basis. All members automatically join this section of the scheme and earn benefits based on their salary up to the salary threshold (£55,550 for 2017/18); and
- The USS Investment Builder, providing DC benefits. Members whose salary is above the salary threshold build up benefits above the threshold in this section. All members can also pay additional contributions to the USS Investment Builder – the first 1% of those additional contributions will be matched by their employer.

Rule changes

Details of three deeds of amendment to the scheme rules are laid out below:

1. Fourth Deed of Amendment, executed 8th March 2017:

- Allowed voluntary Scheme Pays, which extends eligibility for USS members further than the mandatory requirements provided for by HMRC
- To grant the trustee certain powers in respect of DC funds
- Granted the trustee flexibility on DC investment switching
- Reinstated the 2009 version of the GMP increase rules

2. Fifth Deed of Amendment, executed 5th December 2017:

- Amended flexible retirement rules to allow pension to be built up on full salary if part time service fraction is increased.
- Clarified the trustee's powers in respect of partial or full incapacity discretions, and members rights.
- DC flexibilities added for uncrystallised funds pension lump sum (UFPLS) payments prior to retirement, allowing DC-only transfers for all members (including actives) and allowing them to access their funds for Pensions Advice Allowance.
- Clarified maternity rules, specifically for DB AVC payments and payments to the USS Investment Builder (including the match).
- Power of Augmentation added so the trustee may augment, or provide alternative benefits, in respect of a member.
- Amended some minor typographical errors.

3. Sixth Deed of Amendment, executed 28th February 2018:

- Updated the auto-enrolment provisions for re-employed pensioners and flexible retirers.

Internal dispute resolution (IDR)

We have a clear process for members who wish to make a complaint. The first stage of the IDR procedure provides for the Head of Pensions Operations to review the circumstances and take a decision on the matter. In the event that a complainant is not satisfied with the outcome of the decision, members are able to make a further, second-stage application for us to review the matter and either confirm or alter the decision. The second-stage review is undertaken by the advisory committee, augmented for this purpose alone by two members of the trustee board (one nominated by Universities UK and one nominated by UCU). After a complaint has been determined under the IDR procedure, the complainant may then refer the complaint to the Pensions Ombudsman.

Stage one

During the year, 31 complaints were received under stage one of the IDR procedure. Of these, two were upheld, nine were upheld in part, 16 were not upheld, and four remain pending.

Stage two

During the year, 17 complaints were received under stage two of the IDR procedure. Of these, three were upheld in part (two of which had been upheld in part at stage one), 12 were not upheld and two remain pending.

Other

During the year, seven complaints were made to the Pensions Ombudsman. Of these, one was upheld, one was not upheld, and five remain pending.

Financial statements

The financial statements included in this Report and Accounts are the financial statements required by the Pensions Act 1995. They have been prepared and audited in compliance with regulations made under sections 41(1) and (6) of that Act.

Other compliance matters

Pensions increases

USS pensions are generally increased in line with increases in official pensions as defined in the Pensions (Increase) Act 1971, although from 1 October 2011, changes to the scheme rules introduced limits on such increases in respect of rights that accrue after that date. Increases to official pensions are based on the rate of inflation for the 12 months to September, measured using the Consumer Prices Index (CPI). For the year to September 2017, the rate of CPI was 3.0%, and therefore the increase applied to USS pensions in payment and deferment was 3.0%, effective from April 2018.

Changes to advisers

In 2017/18 Ernst & Young were appointed to act as the independent auditor. Grant Thornton resigned as scheme auditor with effect from 25th September 2017. Grant Thornton confirmed in their letter of resignation that they knew of no circumstances connected with their resignation that significantly affected the interests of members, prospective members or beneficiaries under the scheme.

Scheme mergers

There were no scheme mergers during the year.

Late contributions

During the year, there were no late payments of contributions from participating employers.

Actuarial liabilities

The report on actuarial liabilities is included on pages 80 to 86 of the annual report and accounts and by cross reference forms part of this trustee's annual report on the year ended 31 March 2017.

Statement of Investment Principles (SIP)

In accordance with Section 35 of the Pensions Act 1995, a SIP has been prepared by the trustee which incorporates the investment strategy, a summary of this strategy is provided on page 24 of this annual report. The SIP was last updated in April 2016 and a copy is available on our website at **www.uss.co.uk/investment-beliefs-and-principles.pdf** or on request from the Company Secretary of the trustee. A supplementary SIP specifically in relation to the default lifestyle option provided within the USS Investment Builder has also been prepared in the financial year. This is included on page 51.

Enquiries about the scheme

Enquiries should be addressed to the Company Secretary, Mr Jeremy Hill, at Universities Superannuation Scheme Limited, Royal Liver Building, Liverpool, L3 1PY.

Principal officers and advisers

The principal external advisers of the scheme and for the trustee company are:

Scheme Actuary
Ali Tayyebi of Mercer,
Birmingham
B1 2LQ

Independent Auditor
Ernst & Young LLP
25 Churchill Place
Canary Wharf
London
E14 5EY

Bankers

Barclays Bank Plc,
Manchester
M2 1HW

National Westminster Bank Plc,
22 Castle Street
Liverpool
L2 0UP

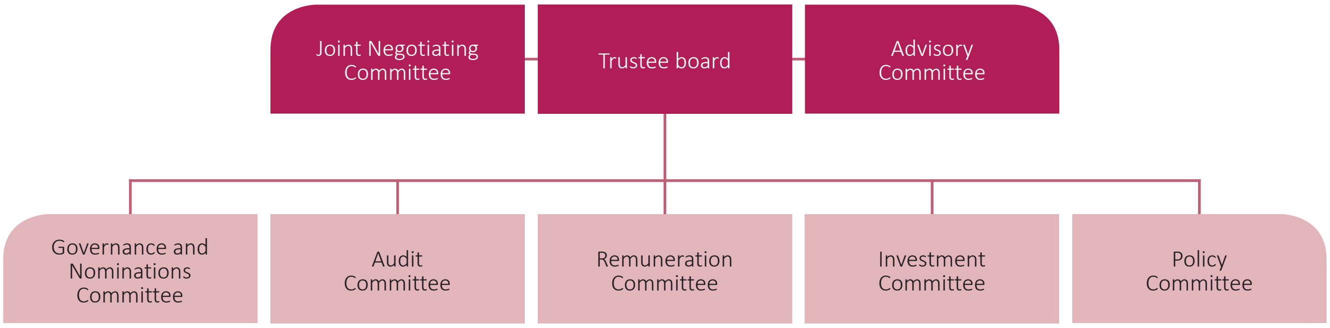
Custodians

JP Morgan
25 Bank St,
Canary Wharf,
London
E14 5JP

Northern Trust
50 Bank Street,
Desk 7-18-F,
London,
E14 5NT

Governance

Our governance structure is sustained by a strong non-executive trustee board which ensures the scheme is run efficiently and effectively. A summary of some of the key matters considered by the trustee board during the year is provided on page 42.



Further information on the role of the trustee board and executive, and the activities and membership of the board's committees is provided on the USS website.

Trustee board composition

The trustee board consists of between 10 and 12 non-executive members comprising:

- Four directors appointed by Universities UK;
- Three directors appointed by the University and College Union (UCU), at least one of whom must be a pensioner member; and
- Between three and five independent directors.

This composition promotes an effective and balanced trustee board with sufficient knowledge and experience of the higher education sector, scheme member viewpoints as well as independent opinion and specialised skills.

Universities UK and UCU each have the authority under the articles of association to remove their appointed directors from office. An independent director may only be removed prior to the expiration of that directors' term of office by resolution of the trustee company in a general meeting with the prior approval of the Joint Negotiating Committee.

Brief details regarding the board members appear on the following pages. Short biographies for each board member are available on the USS website at **www.uss.co.uk/people/uss-board**

Key

This key illustrates the additional appointments of the members of the trustee board as shown on the following pages.

G&N	Governance and Nominations Committee	CC	Committee Chair
A	Audit Committee	P	Policy Committee
USSIM	USS Investment Management Limited Board	R	Remuneration Committee
I	Investment Committee		

Members of the Board

Professor Sir David Eastwood
Chair UUK appointed
G&N, I
Appointed Director January 2007
Chair since 2015

Professor Dame Gynis Breakwell
UUK appointed
CC, P, R
Appointed September 2009

Dr Kevin Carter
Deputy Chair &
Senior Independent Director
USSIM, I, CC, P
Appointed September 2012

Kirsten English
Independent
G&N, CC, A
Appointed May 2014

David Guppy
UCU appointed
Appointed September 2017

Professor Jane Hutton
UCU appointed
A
Appointed November 2015

Ian Maybury
Independent
G&N, A, I, P, R
Appointed November 2013

Michael Merton
Independent
A, CC, R
Appointed February 2014

Professor Sir Anton Muscatelli
UUK appointed
I
Appointed April 2015

Professor Stuart Palmer
UUK appointed
P, R
Appointed March 2016

Rene Poisson
Independent
CC, P, R
Appointed November 2012

Dr Steve Wharton
UCU appointed
G&N, P, R
Appointed September 2016

Governance

Trustee board key activities 2017/18

There was a significant volume of activity carried out by the trustee board during 2017/18, particularly in connection with the actuarial valuation as at 31 March 2017. A summary of some of the key matters considered during the year appears below. Information on the key activity of the board's committees is provided in a separate Governance Report on the USS website.

Topic	Activity
Valuation	Undertook a rigorous and comprehensive review of all the assumptions that underpin the valuation, to propose a valuation for consultation. This involved the trustee liaising extensively with stakeholders throughout the process, as well as a formal consultation exercise with Universities UK.
Strategy	At its strategy session in September 2017, the trustee board discussed: • Possible future member requirements, with the scheme now offering DB and DC benefits and the new flexibility options available at retirement ; • Possible future higher education sector pension requirements; and • How to meet the requirements of its members and the employers that participate in the scheme.
Investment	• Reviewed and approved amendments to the instructions given to the trustee's investment manager ('USS Investment Management Limited') to optimise the risk and align the DB scheme investment portfolio with the scheme's journey plan. • Oversaw the completion of a review by the investment committee of the DC fund range and default investment option for members, following a policy committee review of member requirements. • Reviewed and approved revisions to stewardship principles and voting policy as part of USS's responsible investment programme.
Financial reporting and controls	• Approved the financial statements for the scheme and the trustee company for the year ended 31 March 2017 following recommendation for approval by the Audit Committee. • Reviewed and approved the three year plan, and the annual plan and budget.
Risk management and internal controls	• Reviewed the group risk report on a quarterly basis encompassing all key risks impacting upon the delivery of USS's strategic objectives. • Considered the adequacy of the internal-control and risk management-framework of USS, based on assurance provided by the Audit Committee on each of the three lines of defence.
Corporate governance	• Reviewed group governance and the terms of reference for committees. • Reviewed and approved one appointment to the trustee board.
Performance oversight	Approved a range of key performance indicators, measures and targets against which performance across the group could be monitored and assessed.
Leadership	Discussed the outcomes of the USS employee engagement survey and the executive committee response.
Stakeholders	• Oversaw member and employer communication and consultation activity in the year. • Discussed the outcomes of the member and employer satisfaction surveys and the executive committee response.
Oversight	• Reviewed performance reports from all key business areas on a quarterly basis. • Received and discussed reports at each meeting from all principal committees which had met in the reporting period.

Governance

Trustee board meeting and committee attendance

The trustee board met 14 times during the year. A summary of trustee board activity during the year is outlined on page 42. An overview of the attendance at board and committee meetings is provided below:

	Trustee Board	Investment	Policy	Audit	Remuneration	Governance and Nominations
Meetings held in the year	14	7	5	7	4	3
Trustee board members						
Professor Dame Glynis Breakwell	10	-	5	-	3	-
Dr Kevin Carter	12	7	5	-	-	-
Professor Sir David Eastwood	14	5	-	-	-	3
Ms Kirsten English	13	-	-	6	-	3
Mr David Guppy	9(i)	-	-	-	-	-
Professor Jane Hutton	14	-	-	6	-	-
Mr Ian Maybury	12	7	-	6	-	3
Mr Michael Merton	14	-	-	7	4	-
Professor Sir Anton Muscatelli	13	7	-	-	-	-
Professor Stuart Palmer	14	-	3(ii)	-	4	-
Mr Rene Poisson	14	-	5	-	4	-
Mr Bill Trythall	5(iii)	-	3(iii)	-	1(iii)	1(iii)
Dr Steve Wharton	14	-	-	-	-	2(iv)
Committee members						
Ms Sarah Bates	-	7	-	-	-	-
Mr Gordon Coull	-	-	-	6	-	-
Mr Mark Fawcett	-	6	-	-	-	-
Mrs Virginia Holmes	-	7	-	-	-	-
Mr Tony Owens	-	-	-	7	-	-

(i) Mr David Guppy was appointed as a director on 30 September 2017 and has attended all trustee board meetings in the year following his appointment.

(ii) Professor Stuart Palmer was appointed to the Policy Committee on 1 July 2017 and has attended three of the five meetings in the year following his appointment.

(iii) Mr Bill Trythall attended all trustee board, Policy Committee and Remuneration Committee and Governance and Nominations Committee meetings held in the year prior to retiring as a director on 30 September 2017.

(iv) Dr Steve Wharton was appointed to the Governance and Nominations Committee on 1 July 2017 and has attended all meetings in the year following his appointment.

Chair’s defined contribution statement

Chair's defined contribution statement

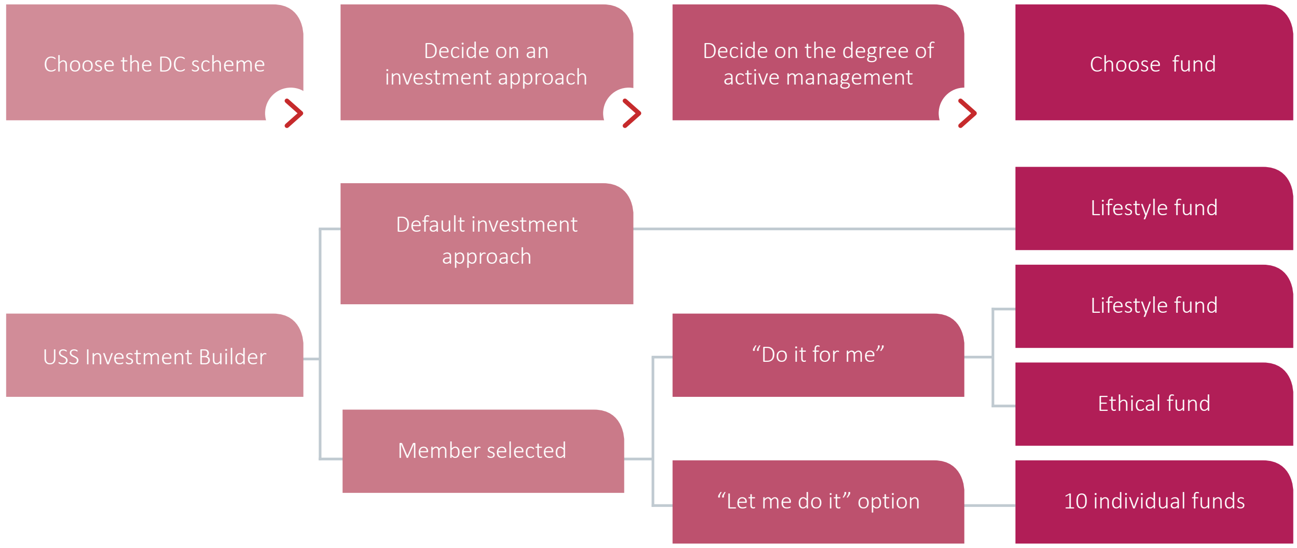
Universities Superannuation Scheme (the scheme) opened to defined contribution (DC) benefits in October 2016 with the introduction of the USS Investment Builder. This is the second annual statement from the trustee (Universities Superannuation Scheme Limited) regarding the governance of the DC section of the scheme in accordance with Regulation 23 of the Occupational Pension Schemes (Scheme Administration) Regulations 1996 (the Administration Regulations).

This statement explains how we ensure that the scheme is governed and managed to the standards expected by the Pensions Regulator and as determined by legislation. The content of this statement is structured around the following areas:

- scheme governance: the design of the scheme, and the choices and flexible options available to members;
- fund performance: the way we manage DC investment options to ensure value for money;
- administration: of the USS Investment Builder through our processes and controls;
- costs: how charges for transactions are structured;
- value: how we manage, monitor and record the scheme running costs;
- trustee skills: how the Board demonstrate their skills and competency for the role they perform;
- communication: engaging with our stakeholders to improve member experience.

Governance of the USS Investment Builder

The USS Investment Builder provides members with a choice of fund, and also whether to use a default investment approach by us, or actively manage their investments themselves. The key decisions available are:



Members who proactively manage their investments can select how they wish their contributions to be invested. There is a range of different types of investment with different levels of risk and return.

The investment choices fall into two broad categories that reflect the degree of self-management that the member wishes to undertake:

- “Do It for Me”- a straightforward broad choice between two lifestyle options – the USS Default Lifestyle Option and the USS Ethical Lifestyle Option.
- “Let Me Do It”- a more customised choice of 10 individual funds that members can choose to invest in if they wish. These are referred to as the self-select options.

Chair's defined contribution statement

My USS portal

By logging onto the member portal (My USS), members can change their investment choices at any time, including moving between "Do It For Me" options and "Let Me Do It" options.

Default investment approach

The USS Default Lifestyle Option provides members, who do not wish to make any explicit investment decisions, with a default approach.

At outset

- Invested in USS Growth Fund
- To provide greater opportunity to generate investment returns over the longer term

Within 10 years of retirement

Switched progressively into the USS Moderate Growth Fund over the next 5 years to reduce the overall level of risk as they approach retirement

Within 5 years of retirement

Start reducing the USS Moderate Growth Fund and switch progressively into the USS Cautious Growth Fund and the USS Cash Fund

At retirement

Invested 50% in the USS Cautious Growth Fund and 50% in the USS Cash Fund

Design of the USS Default Lifestyle Option

This option was designed at the time that the USS Investment Builder was launched in October 2016, and the following items were taken into account:

- a survey to understand the opinion of members on investments, and risk appetite;
- research into the circumstances of members and the impact on risk appetite;
- surveys and research into how members use their funds at retirement;
- extensive investment strategy modelling;
- leveraging the existing defined benefit framework.

At its core, it is based around a lifestyle strategy that automatically reflects the different investment needs of a member during their working life and as they approach their target retirement age.

For members who have not set their own target retirement age, it will be set to the scheme's normal pension age of 65.

A full description of the USS Default Lifestyle Option and its aims and objectives is included in the USS Default Lifestyle Option Statement of Investment Principles on pages 51 to 53.

As at 31 March 2018, approximately 81% of members were invested solely in the USS Default Lifestyle Option.

Fund performance

USS Investment Management Ltd monitors the monthly performance of each of the investment options offered to members within the USS Investment Builder.

The performance of legacy funds held under the Prudential AVC arrangement is reviewed on an ongoing basis by USS senior management.

The trustee board delegates governance oversight of the investment elements of the USS Investment Builder to its investment committee, which reviews fund performance on a quarterly basis.

Fund review framework

A review of the suitability of the USS Default Lifestyle Option is undertaken by the trustee each year, and a formal in-depth review of all investment options is undertaken at least triennially in line with best practice and legislation. The trustee completed a review in November 2017 and concluded that the USS Default Lifestyle Option and current range of self-select investment options were suitable for the scheme membership because they continued to meet the design and performance objectives and criteria described above.

Administration of the USS Investment Builder

The trustee operates processes and controls aimed at ensuring that all transactions are processed promptly and accurately. The trustee recognises that delay and error with these financial transactions can cause loss to members. The financial transactions for the USS Investment Builder arrangement include (but are not limited to):

- investment of contributions to the scheme;
- transfers of assets relating to members into and out of the scheme;
- transfers of assets relating to members between different investments within the scheme;
- payments from the scheme to, or in respect of, members.

Chair's defined contribution statement

Quality controls

In the year, the trustee has ensured that the core financial transactions were processed promptly and accurately by:

- defining the timescales and associated Service Level Agreements (SLAs) both internally and with the third party service providers(see below);
- designing appropriate and effective controls to mitigate the risk of inaccurate transactions;
- identification of errors or delays that have materially affected DC investments in conjunction with a loss remedy procedure;
- regular executive reviews of the effectiveness of the controls and the timeliness of information processing, performance against SLAs and operational risk issues.

Strategic partnerships

The trustee has established strategic partnerships with two external suppliers to deliver different elements of the USS Investment Builder:

- Capita: provides the pensions administration system and some DC related back office administration services;
- Northern Trust: provides the investment platform.

Working with these two partners, we closely monitor the end to-end financial transactions to ensure prompt and accurate processing.

We aim to invest contributions within three working days of the later of receipt and reconciliation to member records. Delays in reconciliation are investigated to identify thematic issues which require improvement.

Processes and controls are now well established across employers and USS teams and provide assurance to the trustee that queries and issues are identified and addressed promptly.

A dedicated engagement team work with employers to manage contribution cycles and other DC processes effectively and to monitor validation matters or queries.

A contribution investment management team maintains oversight and review, including analysis of any queries. This includes the review of the cause of the event, deciding on the mitigating actions required and recommending any additional controls that should be introduced.

The group risk committee monitors the contribution investment management team on a monthly basis. Any significant matters are also reported to the trustee board.

Quality assurance

Quality assurance is embedded into our procedures to ensure that financial transactions are processed promptly and accurately. A suite of processes and controls, including reconciliations, analytical review and sample checking, ensure that:

- Contributions – the correct values are received and automatically invested;
- Disinvestments – due to transfers out, retirements and bereavements are dealt with expeditiously;
- Pensioner payroll – is correct and timely.

In the last year, there have not been any material administration service issues that need to be reported here by the trustee. The trustee is confident that the processes and controls in place are robust and ensure that the core financial transactions are dealt with properly.

USS Investment Builder - costs and charges

Charges and transaction costs borne by members can have a significant impact on the value of USS Investment Builder funds. The approach to member charges was subject to extensive research, review and discussion as part of the design of the USS Investment Builder and were benchmarked against a range of charges published by other DC providers.

Currently, members who are invested in the USS Default Lifestyle Option do not incur any charges directly, since the charges are met by the employers who subsidise the members. There is currently one self-select option, the USS Emerging Markets Equity Fund, for which members are charged directly.

For transparency, we have considered the extent to which the services provided to members in relation to these charges represent good value by comparing to an illustrative charging structure. The trustee reviews the illustrative charges and level of transaction costs on an annual basis, which includes benchmarking against other DC providers. The next review is planned for November 2018.

USS Default Lifestyle Option – illustrative charges

The illustrative charging structure for the USS Default Lifestyle Option consists of two elements, both of which are met by employers:

- annual management charge (AMC): 0.3% of the member's fund value for investment management services, including platform costs;
- annual flat fee of £22 per member: to cover the cost of administration services provided by the scheme.

Self-select options

The trustee has considered the charging structure of the self-select options and compared these charges to those for the USS Default Lifestyle Option. The illustrative flat fee of £22 per year shown above for the USS Default Lifestyle Option also applies to the self-select options, but this is not incurred by the members as it is met by employers.

The AMC is based on the member’s total fund value for the self-select fund options, and charges range from 0.1% to 0.45%. Where the AMC is 0.3% (being the equivalent of the USS Default Lifestyle Option) or less, again the member does not incur a charge. One self-select option currently has a higher AMC at 0.45% – the USS Emerging Markets Equity Fund – and funds of the members who select this are only charged the incremental 0.15%.

Transaction costs

The Financial Conduct Authority (FCA) has recently consulted on investment management transaction costs, and suggests that the full transaction costs incurred in managing a fund should be reported, rather than the cost to members of buying and selling units. The Investment Association is also consulting on a standard template for reporting across investment managers.

Until this is agreed, we continue to report transaction costs for our funds on the same basis as the majority of the industry. Once the FCA and Investment Association have agreed their approach, we plan to move to this new market standard, and we are in discussion with our investment managers on how they plan to provide this information.

Self-select options and the funds in the USS Default Lifestyle Option

Fund	On purchases	On sales
USS cash fund	Nil	Nil
USS bond fund	Up to 0.19%	Up to 0.19%
USS cautious growth fund	Up to 0.50%	Up to 0.26%
USS moderate growth fund	Up to 0.64%	Up to 0.28%
USS growth fund	Up to 0.78%	Up to 0.30%
USS UK equity fund	Up to 0.60%	Up to 0.13%
USS global equity fund	Up to 0.17%	Up to 0.12%
USS emerging markets equity fund	Up to 0.36%	Up to 0.40%
USS ethical equity fund	Up to 0.17%	Up to 0.14%
USS sharia fund	Nil	Nil

Transaction costs for USS DC funds range from zero up to 0.78% in the Default Option and up to 0.73% in the Ethical Option, depending on the particular fund members are invested in, whether they are buying or selling and the day on which they deal. This includes the investment of contributions, requests by members to switch between funds, switching as part of the scheme’s lifestyle options, and transferring assets in from other outside schemes.

These are the costs associated with buying and selling funds, such as fees to market traders. The potential transaction costs for buying and selling funds vary over time and with market conditions. Our investment platform ensures that members pay the lowest transaction costs as possible by automatically netting buy and sell orders into the external funds. Additionally our investment platform is set up to minimise trading in and out of funds by using cash flows to re-balance to asset allocation targets as far as possible. The two tables below provide the details of specific transaction costs for each fund.

Value for members

Overview

Delivering good value for money to our members and to employers is fundamental. In designing and managing the USS Investment Builder, we focussed on the benefits offered to members and employers relative to the costs of providing it. We seek to improve value for money for members and employers over time. In line with the requirements of the Administration Regulations, this review focuses on the value offered by the USS Investment Builder to members of that section of the scheme. For the value offered by the scheme as a whole please refer to pages 23 to 30.

Funds in the USS Ethical Lifestyle Option

Fund	On purchases	On sales
USS ethical growth fund	Up to 0.73%	Up to 0.30%
USS ethical moderate growth fund	Up to 0.63%	Up to 0.30%
USS ethical cautious growth fund	Up to 0.51%	Up to 0.29%
Ethical Cash fund	Nil	Nil

Chair's defined contribution statement

Assessment framework

We monitor whether expenditure incurred is in the members' best interests, and use an assessment framework to focus on the following key areas of service provided:

- administration and service delivery;
- communication and member engagement;
- stewardship and governance;
- design and suitability of DC investments;
- DC investment performance.

Under this framework, we are able to assess the scope and quality of services provided relative to the illustrative or actual cost of these services. The scope and quality assessment takes a broad range of factors into consideration including the scheme's performance in each key area of service. The framework considers whether the quality of service justifies any differential in cost compared to others in the market. Our assessment used a scoring mechanism to identify areas where the level of benefit relative to the associated cost could be improved.

Sources of information used to inform the comparison of cost included the competitive tendering process for key services and the annual global benchmarking service to which USS contributes. These are explained on page 11.

The assessment of the needs of members and employers are identified using engagement and satisfaction surveys, supported by input from subject matter experts within the scheme. In the development of the assessment framework and the evaluation of value, independent advice is received from external parties as required.

We are satisfied that there is a robust process to identify those areas that members and employers value highly. Over the next three years, further work will be conducted to understand the priority of members and how specific categories of members are served, as part of the trustee's commitment to continuous improvement.

Evaluation of value

Using the framework described, the executive undertook a review of value for members. The review was carried out between January and March 2018. We have considered the results of the assessment and concluded that the scheme represents good value for members. Charges compared favourably to relevant benchmarks and, for the default arrangement, are well below the legislative charge cap.

The USS Investment Builder's design continues to be developed to improve value across each of the key areas of service, including communications and member engagement. Additional modelling tools and analysis are being developed in order to help support members in making decisions about their retirement benefits.

We are seeking to increase the level of online registrations and improve the overall digital experience for members via enhancements to My USS. These improvements are being developed without any increase to the current illustrative charges outlined above, leading to an improvement in value for money over time.

Trustee skills, knowledge and understanding

The trustee board meets the levels of knowledge and understanding as stipulated by legislation. Procedures are in place to ensure that each director has the knowledge and understanding required for the role, including of the key scheme documents (trust deed and rules, SIP, trustee policies), the funding and funding strategy of the scheme, and of the law relating to trusts that are pension schemes. This ensures that the collective skills of the trustee board are put to the best use for trustee and committee business. To ensure that the trustee board is as effective as possible, the following activities take place each year:

- a self-assessment skills matrix to identify any training requirements and assist in the suitable deployment of resources across the trustee board's committees;
- formal role descriptions for the recruitment of directors (highlighting the skills and behaviours required of the role);
- a structured induction programme for newly appointed director(s) (including the mandatory completion of the Pensions Regulator's Trustee Toolkit within six months of appointment);
- annual director appraisal meetings with the chair (including a discussion on training needs);
- a bespoke programme of training at trustee board and committee meetings that is reviewed regularly to ensure it meets the needs of the directors and the scheme, plus the mandatory completion by directors of certain e-learning modules; and
- evaluation of the performance and effectiveness of the trustee board and certain of its committees.

The combined knowledge of the trustee board directors is supported by the executive and professional advisers. Specialist internal and external advice and support is available to the trustee board. The board appoints additional specialist committee members (such as investment experts) to bring specialist expertise to those committees when needed. Particular focus is given to governance, knowledge and training issues. The trustee's Governance and Nominations Committee (GNC) oversees these activities for the trustee board. Appropriate recruitment, training and appraisal procedures are in place for executive and senior management.

Chair's defined contribution statement

Non-affiliation of trustee directors and member representation

As a multi-employer trust based pension scheme, the composition of the trustee is subject to certain legislative requirements2. The requirements and how they have been met are detailed below.

Non-affiliation

The majority of the directors (including the chair) appointed to the trustee board are required to be non-affiliated (i.e. they are not connected with any company that provides services to the scheme, nor have they acted as director of the trustee board for an extended period) since the regulations became applicable to the scheme. The trustee meets this requirement because, as at 31 March 2018, eight of the twelve directors, including the chair of the trustee, were non-affiliated directors as determined in accordance with the legislative requirements.

Of the four directors who were counted as affiliated:

- Three directors were affiliated because their re-appointment to the trustee board was made without an external process being undertaken, after each had served terms of office for three years; and
- The fourth director was affiliated because he is also a director of USS Investment Management Limited, which provides investment management and advisory services solely to the trustee. The director's appointment to both boards was a conscious decision by the trustee, and any conflicts of interest which may arise as a result of this relationship are managed by the respective boards.

Transparent appointment process

One trustee director, who was determined to be non-affiliated under the legislative requirements, was appointed during the year by the University and College Union (UCU). UCU has confirmed to the trustee that the appointment was conducted in an open and transparent manner as required by legislation, and therefore the director can be treated as non-affiliated for the purposes of the legislation.

Communications and member engagement

A USS Investment Builder member campaign went live in October 2017, to educate and inform members of the importance of investment performance in relation to their pension benefits. The campaign looked at the fundamentals of investment performance, our approach to investing, the flexibility and choice members have with the USS Investment Builder and the strong performance of the funds for the first year.

Other campaigns and guides (animated and print) outlined the flexibility and options available to our members both before and at retirement, all with the aim of bridging any gaps in member knowledge and understanding.

Combined Annual Member Statements

We issued combined DB and DC statements for the first time for 2016-17. To assist effective tax planning for members, these included information about the tax status of members' pensions (figures for annual and lifetime allowances). The member statements were personalised and highlighted benefits and/or calls to action that were specific to each member.

The development of the new combined statements for the hybrid scheme was a significant project for the trustee during 2017/18 and the statements were not issued to members until early in 2018. In future years, the benefit of this work will mean that the statements can be issued to members much earlier.

We also met our statutory requirements to provide all active and deferred members with Statutory Money Purchase Illustrations (SMPIs) by 31 March 2018.

Member engagement and action

We regularly survey USS members to track awareness of the scheme and the options within the USS Investment Builder. This has helped inform our communications strategy.

We communicate with members through a variety of channels, including regular emails and updates to our online member portal, My USS. My USS allows members to log in and see how much they have saved in the USS Investment Builder, manage their contributions and investment decisions and access fund information through fund factsheets.

Over 75,000 members have now registered for My USS, meeting our Key Performance Indicator for 2017/18, with a third of these registered members accessing the member portal in the first three months of 2018, and in the Member Engagement and Action survey 68% of members said they were aware that they could use MyUSS to manage their USS Investment Builder benefits.

Professor
Sir David Eastwood
Chair

USS Default Lifestyle Option Statement of Investment Principles

Introduction

1. This Statement of Investment Principles specifically covers the USS Default Lifestyle Option and shall be referred to as the Default SIP. It supplements the main Statement of Investment Principles (the SIP) which covers the whole scheme.
2. The trustee makes available a default lifestyle option for members of the DC section. The approach for the default lifestyle option has been formed as a lifestyle strategy. Lifestyle strategies are designed to meet the conflicting objectives of maximising the value of a member's assets at retirement and protecting the value of accumulated assets particularly in the years approaching retirement.
3. Typically, a proportion of members will actively choose this option because they feel it is suitable for them. However, the vast majority of members do not make an active investment decision and are therefore invested in the default lifestyle option by default.
4. The default lifestyle option aims to generate investment returns, in a risk-controlled manner, which are sufficient to provide a reasonable level of retirement benefits for members, given the level of contributions paid over a member's lifetime in to the DC section, whilst also recognising the hybrid nature of the scheme.

Objectives

5. The objectives of the default lifestyle option, and the ways in which the trustee seeks to achieve these objectives, are detailed below:

- To focus particularly on generating returns in excess of inflation during the growth phase of the strategy (up to 10 years before retirement) whilst mitigating downside risk.

  The default lifestyle option's growth phase invests in equities and other growth-seeking and diversifying assets. These investments are structured to maximise real returns over the long term with some downside protection and some protection against inflation erosion. The downside risk from an equity market downturn is mitigated to a degree through diversification away from equities into other asset classes.

- To provide a strategy that reduces investment risk in the consolidation phase (between five and 10 years before retirement) for members as they approach retirement.

  As a member's DC savings grow, investment risk will have a greater impact on member outcomes. Therefore, the trustee believes that a strategy which seeks to reduce investment risk as the member approaches retirement is suitable. In the consolidation phase, the trustee is seeking, through greater diversification of assets, to reduce the likelihood of extreme investment shocks adversely affecting retirement outcomes.

- To provide exposure, at retirement, to a more stable portfolio of assets that are broadly suitable for how members may take their retirement benefits.

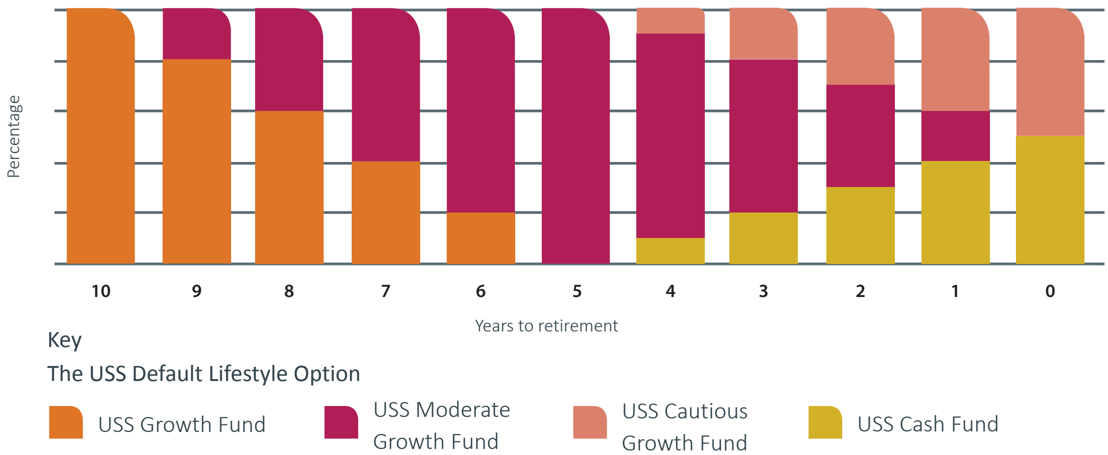
  In the final five years before retirement (protection phase), the trustee has constructed a glide-path that seeks to continue to grow the member's DC savings in real terms while reducing volatility as member's funds get closer to maturity. The trustee expects that the majority of members approaching retirement in the next five years or so will take their benefits as cash. In the protection phase, assets are therefore switched to more cautious assets (such as gilts and corporate bonds), including an allocation to cash. This has been designed additionally to reflect the uncertainty inherent in the timing of retirements, and the post-retirement investment choices that might be made by members. The trustee believes that maintaining a measured amount of risk will improve the average outcome for members.

- To comply with the trustee's policy in relation to the realisation of assets as set out in paragraphs 3.9 of Section 1 of the SIP1.The chart below provides an illustration of the default structure described in paragraph 3.4 of Section 3 of the SIP2, in particular detailing the balance between the different kinds of investments held.

[1] The trustee's policy is that there will be sufficient investments in liquid or readily realisable assets to meet cash flow requirements in foreseeable circumstances so that the realisation of assets will not disrupt the scheme's overall investments, where possible. The internal manager will ensure the scheme holds sufficient cash to meet benefit and other payment obligations.

USS Default Lifestyle Option Statement of Investment Principles

6. The chart below provides an illustration of the default structure described in paragraph 3.4 of Section 3 of the SIP[2], in particular detailing the balance between the different kinds of investments held:



Policies

7. The trustee's policies in relation to the default lifestyle option are detailed below:

- The default lifestyle option manages strategic asset allocation risks through a diversified reference portfolio consisting of traditional and alternative assets. Risk is not considered in isolation, but in conjunction with expected investment returns and outcomes for members. In designing the default lifestyle option, the trustee explicitly considers the trade-off between risk and expected returns and continues to monitor these risks through ongoing reporting.
- Assets in the default lifestyle option are invested in the best interests of members and beneficiaries, taking into account the profile of members. In particular, the trustee considered high level profiling analysis of the scheme's membership in order to inform decisions regarding the default lifestyle option.
- Members are supported by communications aiming to set out clearly the aims of the default lifestyle option and the access to alternative investment approaches. If members wish to, they can opt to make their own choice of investment strategy or an alternative lifestyle strategy from those made available by the trustee. This option is available on joining but also, subject to any restrictions or conditions imposed by the scheme rules of the trustee, at any other future date. Moreover, members do not have to take their retirement benefits in line with those targeted by the default lifestyle option; the target benefits are merely used to determine the investment strategy held pre-retirement.

Kinds and balance of investments held

8. The following are indicative descriptions of the type of investments that may be held by the different underlying funds comprising the default lifestyle option.

- A growth fund – will invest predominantly in growth assets, with an objective to provide long term growth to members, with some diversification to mitigate portfolio risk to a degree.
- A moderate growth fund- will typically invest a majority in growth assets, with more diversification than the growth fund, and with an objective to provide long term growth to members from a balanced, more diversified portfolio of assets. This diversification aims to mitigate portfolio risk to a greater extent.
- A cautious growth fund – with an objective to provide stable growth to members from a portfolio of predominantly low risk, income focussed assets, with some diversification, and minority exposure to growth assets.
- A cash fund – typically aims to produce a return in excess of its benchmark, principally from a portfolio of Sterling denominated cash, deposits and money market instruments.

9. Moving from growth to moderate growth to cautious growth funds would be associated with decreasing proportions in growth assets such as equities, and property and increasing proportions in non-government and government bonds.

[2] Referred to in point 5.

USS Default Lifestyle Option Statement of Investment Principles

Social, environmental or ethical considerations

10. The default lifestyle option is managed in line with the trustee's policy on social, environmental or ethical considerations as set out below:

- The trustee is an active and responsible steward of the assets in which it invests. The trustee expects this approach to both protect and enhance the value of the fund in the long-term.
- The trustee therefore requires its investment managers to integrate all material financial factors, including corporate governance, environmental, social, and ethical considerations, into the decision-making process for all fund investments. The trustee does this in a manner which is consistent with the trustee's investment objectives, legal duties and other relevant commitments e.g. the UN-backed Principles for Responsible Investment and the UK Stewardship Code.
- Specifically, the trustee has instructed the internal manager, as its principal investment manager and adviser, to follow good practice and use its influence as a major institutional investor and long-term steward of capital to promote good practice in the investee companies and markets to which the fund is exposed.
- The trustee also expects its internal and external investment managers to undertake appropriate monitoring of current investments with regard to their policies and practices on all issues which could present a material financial risk to the long-term performance of the fund such as corporate governance and climate change.
- Effective monitoring and identification of these issues can enable engagement with boards and management of investee companies to seek resolution of potential problems at an early stage. The trustee tasks the internal manager to provide oversight of external managers in this respect. The trustee also aims to use its voting rights as part of its engagement work, in a prioritised, value-adding and informed manner. Where collaboration is likely to be the most effective mechanism for encouraging issues to be addressed, the trustee expects its investment managers to participate in joint action with other institutional investors as permitted by relevant legal and regulatory codes.
- The investment committee monitors this activity on an ongoing basis with the aim of maximising its impact and effectiveness. The trustee's governance, social, ethical and environmental policies are also reviewed regularly by the board and updated as required to ensure that they are in line with good practice.

Alternative options

11. In addition to the default lifestyle option, the trustee makes available an alternative ethical lifestyle option reflecting the fact that a large group of the membership has specific objectives around ethical investing. This is built along similar principles to the default lifestyle option but has been specifically designed to reflect members' objectives in this area. As well as this, a range of self-select funds are also offered to members.

Review

12. Taking into account the demographics of the scheme's membership and the trustee's views of how the membership is likely to behave at retirement, the trustee will continue to review this over time, at least triennially, or sooner if there are significant changes to the scheme's investment policy, demographic or other circumstances which the trustee determines warrant a reconsideration of the reference portfolios (as explained in paragraph 7 of this Default SIP) for the default lifestyle option.

Statement of trustee’s responsibilities

The financial statements, which are prepared in accordance with UK Generally Accepted Accounting Practice, including the Financial Reporting Standard applicable in the UK (FRS 102) are the responsibility of the trustee. Pension scheme regulations require, and the trustee is responsible for ensuring, that those financial statements:

- show a true and fair view of the financial transactions of the scheme during the scheme year and of the amount and disposition at the end of the scheme year of its assets and liabilities, other than liabilities to pay pensions and benefits after the end of the scheme year; and
- contain the information specified in Regulation 3A of the Occupational Pension Schemes (Requirement to obtain Audited Accounts and a Statement from the Auditor) Regulations 1996, including making a statement confirming that the financial statements have been prepared in accordance with the relevant financial reporting framework applicable to occupational pension schemes.

In discharging the above responsibilities, the Trustee is responsible for selecting suitable accounting policies, to be applied consistently, making any estimates and judgments on a prudent and reasonable basis, and for the preparation of the financial statements on a going concern basis unless it is inappropriate to presume that the scheme will not be wound up.

The trustee is also responsible for making available certain other information about the scheme in the form of an annual report. The trustee also has a general responsibility for ensuring that adequate accounting records are kept and for taking such steps as are reasonably open to it to safeguard the assets of the scheme and to prevent and detect fraud and other irregularities, including the maintenance of an appropriate system of internal control.

The trustee is responsible under pensions legislation for preparing, maintaining and from time to time reviewing and if necessary revising a schedule of contributions showing the rates of contributions payable towards the scheme by or on behalf of the employer and the active members of the scheme, and the dates on or before which such contributions are to be paid.

The trustee is also responsible for keeping records of contributions received by any active member of the scheme and for adopting risk-based processes to monitor whether contributions are made to the scheme by the employer in accordance with the schedule of contributions. Where breaches of the schedule occur, the Trustee is required by the Pensions Acts of 1995 and 2004 to consider making reports to The Pensions Regulator and the members.

Signed on behalf of the trustee on 19 July 2018.

Professor Sir David Eastwood
Chair

Bill Galvin
Group Chief Executive Officer

Independent auditor's report to the trustee of Universities Superannuation Scheme

Opinion

We have audited the financial statements of Universities Superannuation Scheme for the year ended 31 March 2018 which comprise the Fund Account, the Statement of Net Assets and the related notes 1 to 25, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland'.

In our opinion, the financial statements:

- show a true and fair view of the financial transactions of the scheme during the year ended 31 March 2018 and of the amount and disposition at that date of its assets and liabilities, other than liabilities to pay pensions and benefits after the end of that year;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice including FRS 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland'; and
- contain the information specified in Regulation 3A of the Occupational Pension Schemes (Requirement to Obtain Audited Accounts and a Statement from the Auditor) Regulations 1996, made under the Pensions Act 1995.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report below. We are independent of the scheme in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the trustee's use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the trustee has not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the scheme's ability to continue to adopt the going concern basis of accounting for a period of at least 12 months from the date when the financial statements are authorised for issue.

Independent auditor's report to the trustee of Universities Superannuation Scheme

Other information

The other information comprises the information included in the Report and Accounts other than the financial statements and our auditor's report thereon. The trustee is responsible for the other information.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in this report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the trustee

As explained more fully in the trustee's responsibilities statement set out on page 55, the trustee is responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustee determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements the trustee is responsible for assessing the scheme's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going-concern basis of accounting unless the trustee either intends to wind-up the scheme or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at **www.frc.org.uk/auditorsresponsibilities**

This description forms part of our auditor's report.

Use of our report

This report is made solely to the scheme's trustee, as a body, in accordance with the Pensions Act 1995 and Regulations made thereunder. Our audit work has been undertaken so that we might state to the scheme's trustee those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the scheme's trustee as a body, for our audit work, for this report, or for the opinions we have formed.

Ernst & Young LLP
Statutory Auditor
1 More London Place
London SE1 2AF
19 July 2018

Fund account for the year ended 31 March 2018

Contributions and benefits	Note	2018 £m	2017 £m
Employer contributions receivable	4	1,929	1,860
Employee contributions receivable	4	238	211
Total contributions		**2,167**	**2,071**
Transfers in	5	43	43
		2,210	**2,114**
Benefits paid or payable	6	1,780	1,702
Payments to and on account of leavers	7	125	74
Administrative expenses	8	54	54
		1,959	**1,830**
Net additions from dealings with members		**251**	**284**

Return on investments	Note	2018 £m	2017 £m
Investment income	9	1,432	1,509
Taxation		(25)	(19)
Change in market value of net investments	10	2,326	8,566
Investment management expenses	11	(73)	(71)
Net return on investments		**3,660**	**9,985**
Net increase in the fund during the year		**3,911**	**10,269**
Net assets of the scheme at the start of the year		**60,546**	**50,277**
Net assets of the scheme at the end of the year		**64,457**	**60,546**

Statement of net assets available for benefits as at 31 March 2018

	Note	2018 £m	2017 £m
Investment assets			
Equities		24,088	23,925
Bonds		21,070	19,563
Pooled investment vehicles	13	14,224	13,129
Derivatives	14	526	510
Property	15	2,226	2,052
Cash and cash equivalents		2,747	1,960
Defined contribution investments		777	543
Other investment balances	16	2,738	1,499
		68,396	63,181
Investment liabilities			
Derivatives	14	(447)	(304)
Other investment balances	16	(3,515)	(2,359)
		(3,962)	(2,663)
Total net investments		64,434	60,518
Current assets	21	223	212
Current liabilities	22	(200)	(184)
Net assets of the scheme at 31 March		64,457	60,546

The financial statements summarise the transactions of the scheme and deal with the net assets at the disposal of the trustee. They do not take account of obligations to pay pensions and benefits which fall due after the end of the scheme year. The actuarial position of the scheme, which does take account of such obligations, is dealt with in the report on Actuarial Liabilities on page 80 and should be read in conjunction with this report.

The defined contribution investments included within total net investments includes additional voluntary contributions invested with the Prudential. These assets are specifically allocated to secure extra benefits for those members that have made these additional voluntary contributions.

The financial statements on pages 58 to 79 were approved by the trustee, Universities Superannuation Scheme Limited, on 19 July 2018 and were signed on its behalf by:

Professor Sir David Eastwood
Chair

Bill Galvin
Group Chief Executive Officer

The notes on pages 60 to 62 form part of these financial statements.

Notes to the financial statements for the year ended 31 March 2018

1 Basis of preparation

The financial statements have been prepared in accordance with the Occupational Pension Schemes (Requirement to obtain Audited Accounts and a Statement from the Auditor) Regulations 1996, Financial Reporting Standard 102 (FRS 102) – The Financial Reporting Standard applicable in the UK and Republic of Ireland issued by the Financial Reporting Council and the guidance set out in the Statement of Recommended Practice (Revised 2015) (the SORP).

Universities Superannuation Scheme is a registered Pension Scheme under Chapter 2 of Part 4 of the Finance Act 2004 and is therefore not normally liable to income tax on income from investments directly held, nor to capital gains tax arising from the disposal of such investments.

2 Treatment of subsidiary undertakings

The trustee company, Universities Superannuation Scheme Limited, owns the share capital of a number of investment holding companies to aid the efficient administration of the scheme's investment portfolio. In accordance with FRS 102 and the SORP, the trustee is not required to prepare consolidated accounts which include these entities and has chosen not to do so because the companies are held for investment purposes and not as operating subsidiaries. The results are included in the net assets at fair value within investment assets (see note 19). Details of these companies may be obtained by writing to the Company Secretary of Universities Superannuation Scheme Limited, Mr J P Hill, at Royal Liver Building, Liverpool L3 1PY.

3 Accounting policies

The principal accounting policies of the scheme are set out below and have been applied consistently by the scheme in both the current and prior years.

(a) Contributions receivable
Contributions represent the amounts returned by the participating employers as being those due to the scheme under the Schedule of Contributions for the year of account and includes contributions in respect of deficit funding. The responsibility for ensuring the accuracy of contributions rests with institutions which, under the terms of the trust deed regulating Universities Superannuation Scheme, are ultimately responsible for ensuring the solvency of the scheme. Retirement augmentation receipts and benefits payable are accounted for in the period in which they fall due under the agreement under which they are payable.

Employer S75 debt contributions are accounted for when a reasonable estimate of the amount receivable can be determined.

(b) Benefits paid or payable
Pensions in payment are accounted for in the period to which they relate.

The principal scheme benefits are provided under the main section. The supplementary section, which is funded by a contribution of 0.35% of salary from the members, provides additional benefits payable when a member retires on the grounds of ill health or incapacity or dies in service.

Where members can choose whether to take their retirement benefits as a full pension or as a lump sum with reduced pension, retirement benefits are accounted for on an accruals basis, which ever is the later of the retirement date and the date the scheme is advised of the member's choice. Other benefits are accounted for on the date of retirement or death as appropriate.

Opt-outs are accounted for when the scheme is notified of the opt-out.

Where the trustee agrees or is required to settle tax liabilities on behalf of a member (such as where lifetime or annual allowances are exceeded) with a consequent reduction in that member's benefits receivable from the scheme, any taxation due is accounted for on the same basis as the event giving rise to the tax liability and shown separately within benefits.

(c) Transfers in and out
Transfers to and from the fund are accounted for when member liability is accepted or discharged, which is normally when the transfer amount is paid or received.

(d) Administrative and investment management expenses
Administrative and investment management expenses represent the costs incurred by the trustee company in managing and administering the scheme. These costs are recharged to the scheme in accordance with its rules and recognised in the scheme accounts on an accruals basis.

(e) Investment income
Investment income is brought into account on the following bases:

(i) Dividends, tax and interest from investments, on the date that the scheme becomes entitled to the income;

(ii) Interest on cash deposits and bonds, as it accrues; and

(iii) Property rental income, on a straight-line basis over the period of the lease.

continued overleaf...

(f) Change in the market value of investments
The change in market value of investments during the year comprises all increases and decreases in the market value of investments held at any time during the year, including profits and losses realised on sales of investments during the year.

(g) Investments
Investments are included in the statement of net assets at fair value at the year end as follows:

(i) Quoted equities and bonds – Quoted equities and bonds in active markets are stated at closing prices; these prices may be last trade prices or bid market prices depending on the convention of the stock exchange on which they are quoted;

(ii) Fixed interest securities – Interest is excluded from the market value of fixed interest securities and is included within investment income receivable;

(iii) Unquoted equities and bonds – Unquoted equities and bonds are stated at fair value estimated by the trustee using appropriate valuation techniques. Significant direct investments are valued by independent valuation experts; and

(iv) Pooled investment vehicles- Pooled investment vehicles are stated at unit prices or values as advised by the fund administrator based on the fair value of the underlying assets;

Unit trusts and managed funds
Unit trusts and managed funds are stated at latest available bid price or single price, as advised by the fund manager, based on the market valuation of the underlying assets;

Private equity funds
Private equity funds are stated at the latest available cashflow adjusted valuations prepared in accordance with International Private Equity and Venture Capital Guidelines; and

Hedge funds
Hedge funds are stated at fair value based on prices determined by the independent administrator of each respective investment manager.

(v) Derivative contracts
Derivative contracts are included in the statement of net assets at fair value. Exchange traded derivatives with positive values are included as assets at bid price, and those with negative values as liabilities at offer price.

Derivatives with an initial purchase price are reported as purchases. Those that do not have an initial purchase price but require a deposit, such as initial margin to be placed with the broker, are recorded at nil cost on purchase.

Derivatives comprise the following types of contracts which are either exchange-traded or over the counter (OTC).

Options (exchange-traded)
Traded options are recognised at the fair value as determined by the exchange price for closing out the option as at the year end. Collateral payments and receipts are reported within cash, and are not included within realised gains or losses reported within change in market value.

Futures (exchange-traded)
Open futures contracts are recognised in the statement of the net assets at their fair value, which is the unrealised profit or loss at the current bid or offer market quoted price of the contract, as determined by the closing exchange price as at the year end. Margin balances with the brokers represent the amounts outstanding in respect of the initial margin and any variation margin due to or from the broker. Amounts included in the change in market value represent realised gains or losses on closed futures contracts and the unrealised gains or losses on open futures contracts.

Swaps (OTC)
Swaps (OTC) are recognised at fair value, which is the current value of future expected net cash flows arising from the swap, taking into account the time value of money. Net receipts or payments are reported within change in market value. Realised gains or losses on closed contracts and unrealised gains and losses on open contracts are included within change in market value. The notional principal amount is used for the calculation of cash flow only

Forward foreign exchange contracts (OTC)
Forward foreign exchange contracts outstanding at the year end are stated at fair value, which is determined as the gain or loss that would arise if each outstanding contract was matched at the year end with an equal and opposite contract at that date. Changes in the fair value of the forward contracts are reported within the change in market value in the fund account.

(vi) Property
Property is stated at open market value as at the year end date determined in accordance with the Royal Institute of Chartered Surveyors' (RICS) Valuation- Professional Standards Global – January 2014 and the RICS Valuation Professional Standards UK January 2014 (revised April 2015), taking into consideration the current estimate of rental value and market yields.

(vii) Defined contribution investments
Defined contribution investments are stated at net asset value provided by the fund administrator at the year end date.

(viii) Repurchase agreements (repos)
The scheme continues to recognise and value the securities that are delivered out as collateral from repurchased agreements (repos) and includes them in the financial statements. The cash received is recognised as an asset and the obligation to pay it back is recognised as a payable amount.

(h) Foreign currency
The scheme's functional and presentation currency is pounds sterling.

Foreign currency investments and related assets and liabilities are translated into sterling at the rate ruling on the date of the transaction and subsequently at the rates of exchange at the year end. Exchange differences arising from translation are included in the fund account within the change in market value of investments. Foreign currency income and expenditure is translated at exchange rates prevailing on the appropriate dates, which are usually the transaction dates.

Notes to the financial statements for the year ended 31 March 2018

4. Contributions receivable

	2018 £m	2017 £m
Employer contributions		
Employer contributions – defined benefit section	1,290	1,289
Employer contributions – defined contribution section	92	44
Employer salary sacrifice contributions	547	522
S75 debt	(1)	4
Augmentation	1	1
	1,929	1,860
Employee contributions		
Members' basic contributions- defined benefit section	70	73
Members' basic contributions- defined contribution section	7	3
Main section AVCs	127	74
Money purchase AVCs	9	36
Supplementary section	25	25
	238	211
	2,167	2,071

The scheme offers the following additional contributions facilities:

- Main section AVCs referred to above, represent contributions made to purchase additional benefits under the rules of the scheme.
- A money purchase AVC facility was administered throughout the current and prior years by the Prudential Assurance Company Limited (the Prudential) (MPAVCs). Individual members' contributions are deducted from their salaries and paid direct to the Prudential by the employers. The contributions are invested through the Prudential on behalf of the individuals concerned to provide additional benefits within the overall limits laid down by HM Revenue and Customs (HMRC).
- From October 2016, new additional contributions received (i.e. excluding those received in respect of legacy MPAVCs or other legacy additional contribution arrangements) are invested into the new defined contribution section of the scheme, the USS Investment Builder.
- Contributions towards the past service deficit are included within employer contributions above. For the period 1 April 2016 to 30 September 2016 this amounted to 2.5% of total salaries, and for the period 1 October 2016 to 31 March 2017 this amounted to 2.1% of total salaries, under the current funding plan, the 2.1% payable will continue until March 2031.

5. Transfers in

	2018 £m	2017 £m
Individual transfers in from other schemes	43	43

Notes to the financial statements for the year ended 31 March 2018

6. Benefits paid or payable

	2018 £m	2017 £m
Main section		
Pensions	1,423	1,374
Lump sums on or after retirement	320	288
Lump sums on death in service	16	17
Taxation where lifetime and annual allowance exceeded	5	9
	1,764	1,688
Supplementary section		
Pensions	15	14
Lump sums on death in service	1	1
	16	15
MPAVCs		
Pensions	39	52
Lump sums on death in service	1	1
Transferred to Universities Superannuation Scheme	(40)	(54)
	-	(1)
	1,780	1,702

MPAVCs transferred to Universities Superannuation Scheme represent amounts transferred from the Prudential to Universities Superannuation Scheme on members' retirement for inclusion within Universities Superannuation Scheme benefits.

Taxation arising on benefits paid is in respect of members whose benefits have exceeded the lifetime or annual allowance and who elected to take lower benefits from the scheme in exchange for the scheme settling their tax liability.

7. Payments to and on account of leavers

	2018 £m	2017 £m
Individual transfers out to other schemes	98	61
Refunds of contributions in respect of non-vested leavers	27	13
	125	74

8. Administration expenses

	Note	2018 £m	2017 £m
Personnel costs (administrative and management staff)	12	24	27
Pension Protection Fund levies		3	3
Premises costs		4	4
Professional fees		9	8
Computer and information services costs		7	6
Other costs		7	6
		54	54

Administrative costs are incurred by the trustee company and, in accordance with the trust deed, the costs of managing and administering the scheme, are chargeable to Universities Superannuation Scheme.

Notes to the financial statements for the year ended 31 March 2018

9. Investment income

	2018 £m	2017 £m
Dividends from equities	654	680
Net property income	101	101
Income from pooled investment vehicles	199	283
Income from bonds	499	436
Interest on cash deposits	13	7
Other income	(34)	2
	1,432	1,509

Income from property is net of property related expenses of £4m (2017: £9m).

Investment income from overseas investments may be subject to deduction of local withholding taxes under local domestic law. Where double taxation treaties exist between the UK and the country in which the income arises, the tax withheld may be reduced to a lesser rate or to zero by the operation of the relevant treaty. Final withholding taxes suffered, after applying any beneficial treaty rates are shown as irrecoverable tax.

Notes to the financial statements for the year ended 31 March 2018

10. Investments reconciliation

The changes in the market value of investments are shown below

	Note	Market value 2017 £m	Purchases and derivative payments during the year at cost £m	Proceeds of sales and derivative receipts during the year £m	Changes in value during the year £m	Market value 2018 £m
Equities		23,925	9,336	(9,715)	542	24,088
Bonds		19,563	15,436	(13,237)	(692)	21,070
Pooled investment vehicles	13	13,129	4,963	(4,073)	205	14,224
Derivatives	14	206	3,875	(5,915)	1,913	79
Property	15	2,052	24	(4)	154	2,226
Defined contribution investments		543	447	(240)	27	777
		59,418	34,081	(33,184)	2,149	62,464
Cash and cash equivalents		1,960			342	2,747
Other investment balances (net)	16	(860)			(165)	(777)
	17	60,518			2,326	64,434

Changes in the value of investments comprise both realised gains and (losses) on investments sold during the year and unrealised gains and (losses) on investments held at the year end.

Included in the amount for derivatives are realised and unrealised gains of £1,025m (2017: losses £1,720m) from forward currency contracts, which are used to hedge the currency risk relating to overseas investments (see note 14, Derivatives). These are offset by gains in the values of the corresponding overseas assets. Turnover in derivatives primarily represents the rolling of these forward currency contracts. Defined contribution investments comprise of £293m (2017: £444m) legacy MPAVC investments and £484m (2017: £99m) USS Investment Builder.

At the year end, within other investment balances, amounts payable under repurchase agreements amounted to £1,650m (2017: £1,729m). At the year end £1,650m (2017: £1,730m) of bonds reported in scheme assets are held by counterparties under repurchase agreements.

Notes to the financial statements for the year ended 31 March 2018

Transaction costs

Transaction costs are included in the cost of purchases and deducted from sale proceeds. Direct transaction costs include costs charged to the scheme such as advisory fees, commissions and stamp duty.

Transaction costs analysed by main asset class and type of cost are as follows:

	Fees & Taxes £m	Commission £m	2018 £m	2017 £m
Equities	10	9	19	18
Bonds	-	-	-	1
Private equity	12	-	12	3
Property	1	-	1	1
	23	9	32	23

In addition to the transaction costs disclosed above, indirect costs are incurred through the bid-offer spread on investments.

11. Investment management expenses

	Note	2018 £m	2017 £m
Investment costs			
Securities research costs		9	10
External manager base fees		11	10
Professional fees		2	2
		22	22
Property management			
External manager fees		2	2
Rent review and letting fees		1	1
Other		–	1
		3	4
Legal and professional fees		1	1
Custodial services		2	2
		3	3
		28	29
Other costs			
Personnel costs (investment and investment support staff)	12	36	34
Sundry costs		9	8
		45	42
		73	71

Investment management costs comprise all costs directly attributable to the scheme's investment activities, including the operating costs of USS Investment Management Limited and the costs of management and agency services rendered by third parties.

Notes to the financial statements for the year ended 31 March 2018

12. Supplementary information in respect of personnel costs

	Note	2018 £m	2017 £m
Personnel costs			
Included in administration expenses	8	24	27
Included in investment management expenses	11	36	34
		60	61
Analysed as:			
Wages and salaries		48	46
Pension costs		4	4
Social security costs		3	3
Other		5	8
		60	61

Included in the above are the emoluments of Mr Galvin, Group Chief Executive, comprising salary and benefits amounting to £635,000 (2017: £566,000). Mr Galvin is also a member of the career revalued benefits section of the scheme and at 31 March 2018 his accrued pension was £15,996 (2017: £17,240) and accrued lump sum of £47,990 (2017: £51,720). This accrued pension relates to amounts earned in respect of services to the scheme and excludes transfers in from other schemes. Mr Galvin is eligible to participate in an individual three year LTIP (which vests after 3, 4 or 5 years), and will comprise of an annual maximum amount of £200,000 that will be entirely related to performance and the achievement of set objectives.

The aggregate amount of compensation payable for loss of office to employees during the year was £0.7m (2017: £0.7m) of which £0.6m (2017: £0.2m) was payable to employees whose remuneration exceeded £100,000 during the year.

Notes to the financial statements for the year ended 31 March 2018

13. Pooled investment vehicles

The scheme's pooled investment vehicles at the year end comprised:

	Note	2018 £m	2017 £m
Equities		2,550	1,879
Hedge funds		1,862	2,200
Private equity		8,630	7,998
Property		1,182	1,052
	10, 17, 18	14,224	13,129

14. Derivatives

At the year end, the scheme recognised the following derivatives:

	Note	2018 £m	2017 £m
Assets			
Options	14 (a)	7	–
Futures contracts	14 (b)	184	42
Swaps	14 (c)	100	95
Forward foreign exchange contracts	14 (d)	235	373
		526	510
Liabilities			
Options	14 (a)	(8)	–
Futures contracts	14 (b)	(186)	(70)
Swaps	14 (c)	(125)	(160)
Forward foreign exchange contracts	14 (d)	(128)	(74)
		(447)	(304)
Net asset		79	206

Objectives and policies

The trustee has authorised the use of derivatives by the investment managers in accordance with the investment guidelines for each mandate. Investment in derivative instruments is only permitted for the purposes of:

(a) Contributing to a reduction of risks;

(b) Facilitating efficient portfolio management (including the reduction of cost or the generation of additional capital or income with an acceptable level of risk).

Processes and controls are in place to ensure risk exposures to a single counterparty and to other derivative operations are maintained within acceptable levels.

The main objectives for the use of derivatives are summarised as follows:

(i) Protection
Derivatives may be used as part of the permitted instrument types available to managers to protect (or enhance) active returns relative to the specified strategic benchmarks, for example, through the use of options and credit default swaps.

(ii) Modify exposure to asset classes
Derivatives are bought or sold to allow the scheme to change its exposure to a particular market or asset class more quickly than by holding the underlying physical assets. They may also be easier to trade than conventional stocks, particularly in large amounts.

(iii) Hedging
Forward currency contracts are used to partially hedge the currency risk relating to overseas investments. This aims to achieve a better match between the fund's assets and the base currency of its future liabilities. Derivatives may also be used for the purpose of hedging risk exposures affecting future scheme liabilities, for example, through the use of inflation and interest rate swaps.

(iv) Replication
Derivatives are used where liquidity or funding for generating a relevant investment exposure is perceived to be more efficient in derivatives, rather than the underlying physical assets.

Notes to the financial statements for the year ended 31 March 2018

14. Derivatives (continued)

Derivative contracts outstanding at year end

A summary of the scheme's outstanding derivative contracts at the year end is set out below. The valuations are based on the unrealised fair values of the various investments as at 31 March 2018.

a) Options (exchange traded)

	Expires within	Notional principal £m	Asset £m	Liability £m
Type of option				
Equities	1 year	1	-	-
Currency	1 year	21	7	(8)
			7	(8)

b) Futures (exchange traded)

	Expires within	Economic exposure £m	Asset £m	Liability £m
Type of future				
Equities	4 years	7,401	57	(125)
Bonds	1 year	10,686	85	(54)
Commodity	1 year	445	41	(7)
Currency	1 year	243	1	-
			184	(186)

The economic exposure represents the notional value of stock purchased under the futures contract on an absolute basis and is therefore subject to market movements.

c) Swaps (OTC)

	Expires within	Nature of Swap	Notional principal £m	Asset £m	Liability £m
Interest Rate	0-28 years	Fixed vs floating	4,178	44	(68)
Bond Total Return	0-13 years	Fixed income	475	18	(7)
Credit Default	0-5 years	Index	758	23	(30)
	0-5 years	Single	700	15	(12)
Dividend Swap	0-1 year	S&P 500 Index	1	-	(8)
			6,112	100	(125)

14. Derivatives (continued)

d) Forward foreign exchange (OTC)

Currency bought	Currency sold	Notional principal £m	Asset £m	Liability £m
AUD	USD	1,688	-	-
CHF	GBP	388	-	(8)
CHF	JPY	157	-	(6)
CHF	USD	4	-	-
EUR	GBP	114	-	-
EUR	OTHER	42	-	-
EUR	USD	369	-	(2)
GBP	CHF	789	7	-
GBP	AUD	1,238	25	-
GBP	EUR	4,717	39	(2)
GBP	JPY	227	-	-
GBP	OTHER	412	8	-
GBP	USD	13,493	73	(17)
JPY	EUR	522	13	-
JPY	GBP	57	-	-
JPY	USD	672	26	-
OTHER	EUR	72	1	-
OTHER	GBP	538	3	(7)
OTHER	USD	3,627	12	(27)
USD	AUD	1,032	6	-
USD	CHF	195	3	-
USD	EUR	1,241	8	-
USD	GBP	2,225	1	(40)
USD	JPY	542	-	(11)
USD	OTHER	2,116	10	(8)
		36,477	235	(128)

Other currency relates to a number of smaller contracts in denominations not disclosed above. All of the above contracts settle within one year.

At the end of the year the scheme held collateral of £329m (2017: £290m) in the form of cash and government bonds in respect of OTC derivatives.

Notes to the financial statements for the year ended 31 March 2018

15. Property

	2018 £m	2017 £m
UK completed properties	2,226	1,954
UK developments in progress	-	98
	2,226	**2,052**

Properties analysed by type:

	2018 £m	2017 £m
Freehold	1,884	1,654
Leasehold	342	398
	2,226	**2,052**

The completed investment properties and developments have been valued externally by CBRE Limited, Chartered Surveyors, who have broad experience and knowledge of the locations and type of properties held by the scheme.

16. Other investment balances

	2018 £m	2017 £m
Assets		
Amount due from stockbrokers	1,681	112
Dividends and accrued interest	235	501
Margin balances	757	886
Repurchase agreements	65	-
	2,738	**1,499**
Liabilities		
Amount due to stockbrokers	(1,703)	(153)
Margin balances	(152)	(217)
Repurchase agreements	(1,650)	(1,729)
Accrued interest	(10)	(260)
	(3,515)	(2,359)
Net other investment balances	**(777)**	**(860)**

During the normal course of business, the scheme enters into derivative transactions which are reflected in the scheme financial statements. As a consequence of the clearing arrangements in respect of these transactions, certain charges have been granted by Universities Superannuation Scheme Limited. No liability is expected to arise as a result of these charges.

17. Fair value determination

Fair value is the price that would be received to sell an asset or the price paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The fair value of financial instruments has been estimated using the following fair value hierarchy:

Category 1: The unadjusted quoted price in an active market for identical assets or liabilities that the entity can access at the measurement date.

Category 2: Inputs other than quoted prices included within Level 1 that are observable (i.e. developed using market data) for the asset or liability either directly or indirectly.

Category 3: Inputs are unobservable (i.e. for which market data is unavailable) for the asset or liability.

The prior year comparatives have been restated to reflect the change in fair value hierarchy from category (a), (b), and (c) i, ii to category (1), (2) and (3)

		2018 Category			
	Note	(1) £m	(2) £m	(3) £m	Total £m
Equities		22,408	-	1,680	24,088
Bonds		-	19,370	1,700	21,070
Pooled investment vehicles	13	115	963	13,146	14,224
Derivatives	14	(2)	106	(25)	79
Property	15	-	-	2,226	2,226
Cash and cash equivalents		2,747	-	-	2,747
Defined contribution investments		777	-	-	777
Other investment balances	16	(777)	-	-	(777)
		25,268	20,439	18,727	64,434

		2017 Category			
	Note	(1) £m	(2) £m	(3) £m	Total £m
Equities		22,165	-	1,760	23,925
Bonds		-	17,829	1,734	19,563
Pooled investment vehicles	13	76	1,780	11,273	13,129
Derivatives	14	(28)	299	(65)	206
Property	15	-	-	2,052	2,052
Cash and cash equivalents		1,960	-	-	1,960
Defined contribution investments		543	-	-	543
Other investment balances	16	(860)	-	-	(860)
		23,856	19,908	16,754	60,518

Notes to the financial statements for the year ended 31 March 2018

18. Investment risks

Investment risks are set out below as follows:

Credit risk: This is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

Market risk: This comprises currency risk, interest rate risk and other price risk.

- **Currency risk:** This is the risk that the fair value or future cash flows of a financial asset will fluctuate because of changes in foreign exchange rates.
- **Interest rate risk:** This is the risk that the fair value or future cash flows of a financial asset will fluctuate because of changes in market interest rates.
- **Other price risk:** This is the risk that the fair value or future cash flows of a financial asset will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market.

Following a review of our investment risks during the year, the comparative disclosures have been restated to more accurately reflect the scheme's investment risk profile.

The scheme has exposure to these risks because of the investments it makes to implement its investment strategy described in the trustee's Report. The trustee manages investment risks, including credit risk and market risk, within agreed risk limits which are set taking into account the scheme's strategic investment objectives. These investment objectives and risk limits are implemented through the reference portfolio in place with the scheme's internal manager and monitored by the trustee by regular reviews of the activity and performance of the internal manager relative to the reference portfolio.

Further information on the trustee's approach to risk management and the scheme's exposures to credit and market risks are set out below and within the Statement of Investment Principles. This does not include defined contribution investments as these are not considered significant in relation to the overall investments of the scheme.

	Investment grade £m		Non-investment grade £m		Unrated £m		Total £m	
	2018	2017	2018	2017	2018	2017	2018	2017
Direct								
Bonds not repurchase or stock Loan Agreement	14,477	14,071	1,477	1,440	2,479	1,281	18,433	16,792
Bonds lent under repurchase agreements	1,650	1,729	-	-	-	-	1,650	1,729
Bonds lent under Stock Loan agreements	1,086	1,165	-	-	-	-	1,086	1,165
Cash	2,747	1,960	-	-	-	-	2,747	1,960
Unsettled trades	44	95	15	-	44	16	103	111
Sub-total	**20,004**	**19,020**	**1,492**	**1,440**	**2,523**	**1,297**	**24,019**	**21,757**
Collateralised positions								
Equities lent under repurchase agreements	2,899	1,754	-	-	-	-	2,899	1,754
Other repurchase exposures	65	-	-	-	-	-	65	-
OTC Derivatives (Fair Value)	335	468	-	-	-	-	335	468
Sub-total	**3,299**	**2,222**	**-**	**-**	**-**	**-**	**3,299**	**2,222**
Indirect								
Pooled investment vehicles	-	-	-	-	11,236	10,907	11,236	10,907
	23,303	21,242	1,492	1,440	13,759	12,204	38,554	34,886

Notes to the financial statements for the year ended 31 March 2018

Credit risk

The scheme is subject to credit risk because the scheme invests directly in bonds, OTC derivatives, has cash balances and unsettled trades, undertakes stock lending activities, leases properties and enters into repurchase agreements.

Credit risk arising on bonds and private credit is mitigated:

(i) Through investment in developed-market government bonds where the credit risk is minimal; and

(ii) For corporate and emerging-market bonds and private credit, individual investment mandates set out the maximum permissible exposure to non-investment grade issuers, so as to maintain the overall credit quality of the portfolios.

The use of credit default swaps has the effect of mitigating the maximum exposure to credit risk. The exposure to fixed interest credit risk mitigated through credit derivatives was £432m (2017: £445m).

Credit risk arising on derivatives depends on whether the derivative is exchange traded or OTC. OTC derivative contracts, other than those which are centrally cleared, are not guaranteed by any regulated exchange and therefore the scheme is subject to risk of failure of the counterparty. The credit risk for OTCs, including swaps and forward foreign currency contracts, is reduced by collateral arrangements (see Note 14). OTCs are valued daily and counterparty exposures are fully collateralised subject to de-minimis limits.

Cash is held with financial institutions which are at least investment grade credit rated, with the maximum deposit limit for any one counterparty set by reference to its credit rating. Credit default swaps (CDS) spreads and rating notifications are monitored to ensure exposures remain within the approved limits. Money market liquidity funds must have a minimum AAA rating to be eligible for investment and limits are in place on the maximum allowable exposure to any single fund.

Credit risk on repurchase agreements is mitigated through collateral arrangements as disclosed in Note 10.

Credit risk arising from unsettled trades is mitigated through delivery versus payment settlement in the majority of markets.

Credit risk arising from stock lending activities is mitigated by restricting the amount of stock that may be lent, only lending to approved borrowers who are rated investment grade, limiting the amount that can be lent to any one borrower and through collateral arrangements. Loans are fully collateralised, with daily mark to market of all loaned securities to ensure collateral is received or returned to maintain full collateralisation. In addition the scheme's custodians provide indemnity losses arising from stock lending exposure to counterparties.

Credit risk arises from the rents due from tenants of the scheme's investment property portfolio. This is mitigated through credit control procedures, regular review of tenant credit ratings and the use of rent deposits where appropriate.

Direct credit risk arising from pooled investment vehicles is mitigated by the underlying assets of the pooled arrangements being ring-fenced from the pooled manager, provisions to automatically dissolve the funds in the event of insolvency of the pooled manager or general partner, a cap of liability to pooled funds at the level of funds committed, and diversification of investments amongst a number of pooled arrangements. Therefore credit risk arising from pooled investment vehicles is all deemed to be indirect for the purpose of this disclosure. Due diligence checks are carried out on the appointment of new pooled investment managers and on an ongoing basis thereafter.

A summary of pooled investment vehicles by type of arrangement is as follows:

	2018 £m	2017 £m
Unit trusts	1,789	2,180
OEIC's	1,642	99
Partnership Interests	8,931	8,650
Shares of limited liability partnerships	1,862	2,200
	14,224	13,129

Notes to the financial statements for the year ended 31 March 2018

Market risk

The scheme is subject to currency risk because some of the scheme's investments are held in overseas markets, either as segregated investments or via pooled investment vehicles. Currency exposures are monitored and mitigated through a currency hedging policy, through which the reference portfolio includes 50% hedging for developed market equity and 100% for developed market fixed income. Derivative holdings are represented on an economic exposure basis within the table below:

	2018 £m	2017 £m
Direct		
Australian Dollar	1,946	1,035
Brazilian Real	747	773
Euro	3,962	5,557
Hong Kong Dollar	1,454	1,352
Japanese Yen	2,636	1,975
Mexican Peso	635	618
South Korean Won	873	729
Swiss Franc	1,196	1,543
United States Dollar	14,781	15,984
Other	6,038	3,597
	34,268	33,163
Less: Foreign currency hedging	(13,540)	(13,655)
	20,728	19,508
Indirect		
Pooled investment vehicles	7,544	8,958
	7,544	**8,958**

Interest rate risk

The scheme's investments are subject to interest rate risk because they include public and private credit, swaps, liabilities under repurchase agreements and money market instruments, either as segregated investments or through pooled investment vehicles. Also, investments in certain unquoted equities are valued in a way that makes them sensitive to interest rates and are, therefore, directly subject to interest rate risk. Much of this investment-related interest-rate risk provides an offsetting exposure to the interest risk which is inherent to the scheme's liabilities. This serves to mitigate the interest rate risk across the scheme as a whole.

	2018 £m	2017 £m
Direct		
Bonds	20,433	19,131
Equities	1,270	1,052
OTC derivatives (economic exposure)	6,111	5,225
Indirect		
Pooled investment vehicles	11,236	10,905
	39,050	**36,313**

Notes to the financial statements for the year ended 31 March 2018

Other price risk

Other price risk arises principally in relation to the scheme's return-seeking portfolio, which includes directly held equities, equities held in pooled vehicles, bonds, equity futures, loans, hedge funds, private equity and investment properties. Derivative values are based on absolute economic exposure rather than market value.

The scheme manages this exposure to overall price movements by constructing a diverse portfolio of investments across various markets.

	2018 £m	2017 £m
Direct		
Equities	24,088	23,925
Bonds	21,070	19,563
Derivatives (economic exposure)	20,256	17,348
Property	2,226	2,052
Indirect		
Pooled investment vehicles	14,224	13, 129
	81,864	76,017

19. Subsidiaries controlled by Universities Superannuation Scheme

The net assets of subsidiary companies through which the scheme holds investments are summarised in aggregate below.

	2018 £m	2017 £m
Equities	4,310	2,495
Bonds	1,697	1,119
Pooled investment vehicles	1,320	1,753
Derivatives	-	4
Property	531	540
Cash	19	1,588
Other investment balances	-	(1,048)
	7,877	6,451

20. Self investment

The scheme had no Employer Related Investments at year end, as defined by relevant legislation, except equity and loan investments made in the normal course of business to certain investment vehicles. The funding of these investment vehicles, which are held for investment purposes and not operating subsidiaries as explained on page 60, amounts to 2.3% (2017: 1.5%) of the net assets of the scheme.

Notes to the financial statements for the year ended 31 March 2018

21. Current assets

	2018 £m	2017 £m
Contributions receivable;		
- employer contributions	113	104
- members' basic contributions	51	47
- members' additional voluntary contributions	10	10
Other debtors	13	8
Cash at bank and in hand	36	43
	223	212

Contributions due at the year end have been paid to the scheme subsequent to the year end in accordance with the Schedule of Contributions.

22. Current liabilities

	2018 £m	2017 £m
Rents and service charges received in advance	(99)	(92)
Benefits payable	(53)	(56)
Taxation creditor	(4)	(5)
Due to trustee company	(34)	(29)
Other creditors	(10)	(2)
	(200)	(184)

23. Securities on loan

Securities have been lent to the counterparties in return for fee income earned by the scheme. Security for these loans is obtained by holding collateral in the form of cash, equities, government bonds and letters of credit.

	2018 £m	2017 £m
Value of stock on loan at 31 March		
Equities	2,899	1,754
Bonds	1,086	1,165
	3,985	2,919
Collateral held	4,257	3,121

24. Financial commitments

	2018 £m	2017 £m
Direct Property		
Contracts placed but not provided for	-	4
Pooled investment vehicles		
Outstanding commitments to private equity partnerships	5,197	5,032

These represent amounts subscribed and committed to private equity partnerships that had not been drawndown at the year end.

25. Related party transactions

Related party transactions are defined as either employer-related transactions or trustee-related transactions.

There were no transactions with employers in either the current or preceding years, other than those identified as employer-related investments disclosed in Note 20. Such transactions are performed in the normal course of business and at an arm's length.

The only trustee-related transactions in either the current or prior years relate to the day-to-day administration of the scheme by the trustee company and its subsidiary, and the membership of the scheme of certain trustee board members or key management personnel. The membership of those trustee board directors is through past or present employment with the institutions and accordingly is in the normal course of business on an arm's length basis. Similarly, membership of key management personnel which arises on account of their employment by the trustee company, is based on the same conditions as all members and is therefore considered to be on an arm's length basis and in the normal course of business.

Administrative and investment management expenses incurred by the trustee company are shown in Notes 8 and 11.
All transactions are solely for the purposes of effectively administering the scheme.

Report on actuarial liabilities

Previous actuarial valuation 31 March 2014	Funding update of 2014 valuation at 31 March 2018
Funding ratio 89%	**Funding ratio 84%**

Overview

The actuarial liabilities correspond to the benefits promised to members under the Retirement Income Builder section of the scheme. These are valued on a comprehensive basis every three years in a formal process called the triennial actuarial valuation. Between these actuarial valuations the liabilities are valued using a less comprehensive monitoring approach that involves an update of the preceding valuation.

The triennial actuarial valuation for 31 March 2017 has been an important focus of attention for the trustee, its advisers and stakeholders over the financial year and is still ongoing. An update on progress to date and the work currently underway to finalise this can be found on page 89.

As it appears that by 1 April 2019 there will have been no change in benefits agreed as a result of the 2017 valuation, it is expected that contributions payable to the scheme will have to increase. The trustee is currently in a process of consultation on the level of those contributions in order to complete the 2017 valuation.

In the absence of a new finalised triennial valuation, the trustee is required to continue to monitor the financial progress of the scheme against the Financial Management Plan (FMP) developed following the 2014 valuation. A new FMP and monitoring framework will only be developed once the 2017 valuation has been completed.

Set out in the paragraphs below is an update of the progress of the financial position of the scheme against the 2014 FMP and details of the work that has been undertaken to date on the 2017 valuation.

The USS benefit structure

Currently, members build up benefits on what is called a Career Revalued Basis (CRB) in the Retirement Income Builder section of the scheme in respect of salary up to a threshold (£57,216.50 from 1 April 2018). Contributions in respect of salary above the salary threshold are paid into USS Investment Builder. This salary threshold is revalued each year in line with CPI (subject to certain restrictions and will be reviewed in 2020). For more information on the scheme's benefits please refer to the USS website, at **www.uss.co.uk**

Contributions from sponsoring employers and from scheme members are paid into the scheme and, together with the investment returns earned, are used to pay benefits to members and/or their eligible dependants when they fall due, as well as meeting the costs of operating the scheme.

Report on actuarial liabilities

How is the financial position of the Retirement Income Builder section measured?

The financial position of the Retirement Income Builder section is primarily measured by comparing the current value of its assets with the trustee's estimate of the current value of its liabilities. The current value of the assets is relatively easy to determine at a particular point in time, using their market value at that date. However, there are uncertainties inherent in estimating the current value of the liabilities coming from, for example, uncertainties in the future rate of return on investments, the future level of inflation, the length of time for which a future pension might be paid, and the possibility that a survivor's benefit might be paid. Estimates of all these factors are used to determine the value of the liabilities by calculating the amount of assets that would be required today in order to meet, in full and without additional contributions, the benefits members have already earned up to the date of the valuation.

As noted above, the most recent full review of the funding position, the 2017 actuarial valuation, is being undertaken as at 31 March 2017. In any actuarial valuation, the trustee places a value on the liabilities assuming that the scheme is ongoing, which is known formally as the 'technical provisions'. It is this technical provisions basis that is typically used when referring to the value of the scheme's liabilities. However, in addition to technical provisions, the trustee is also required by law to value the scheme's liabilities assuming those liabilities had to be bought out by an insurance company. This latter measure is known as the buy-out basis and provides a further reference point by which the health of the scheme can be assessed, but members should note that neither the trustee board, nor the scheme's stakeholders, have any plans to buy out the scheme with an insurance company.

At every triennial actuarial valuation the trustee reviews all of the underlying assumptions relating to the Retirement Income Builder section and then consults the employers to obtain their view of the trustee's proposed assumptions. The final set of assumptions adopted by the trustee following consultation with the employers for the 2017 actuarial valuation is shown on page 86.

Each year the scheme actuary produces a valuation report on the financial position of the Retirement Income Builder. As the response to the results of the 2017 valuation is still being considered by the JNC, the funding position as at 31 March 2018 has been reported using the approach adopted for the 2014 valuation suitably updated for changes to market conditions. This is consistent with the approach used by the trustee to monitor the scheme's funding position between actuarial valuations and will be maintained until a new process has been agreed following the completion of the 2017 valuation. Reports and other information on the valuation can be found at
www.uss.co.uk/our-valuations

How has the funding position changed since 31 March 2014 valuation?

The trustee regularly monitors the funding position as part of the overall monitoring of the FMP that was introduced following the 2014 valuation. Until the 2017 actuarial valuation is completed, the monitoring will be based on the assumptions used for the 2014 actuarial valuation (updated for changes in gilt yields and inflation expectations). These update valuations do not involve the same detailed review of all the underlying assumptions that has been undertaken in respect of the 2017 valuation (which is not yet complete). Therefore the value of liabilities as of 31 March 2018 presented here does not fully reflect the assumptions used in the 2017 valuation. Note that the assumptions used in the 2014 valuation are shown on page 86.

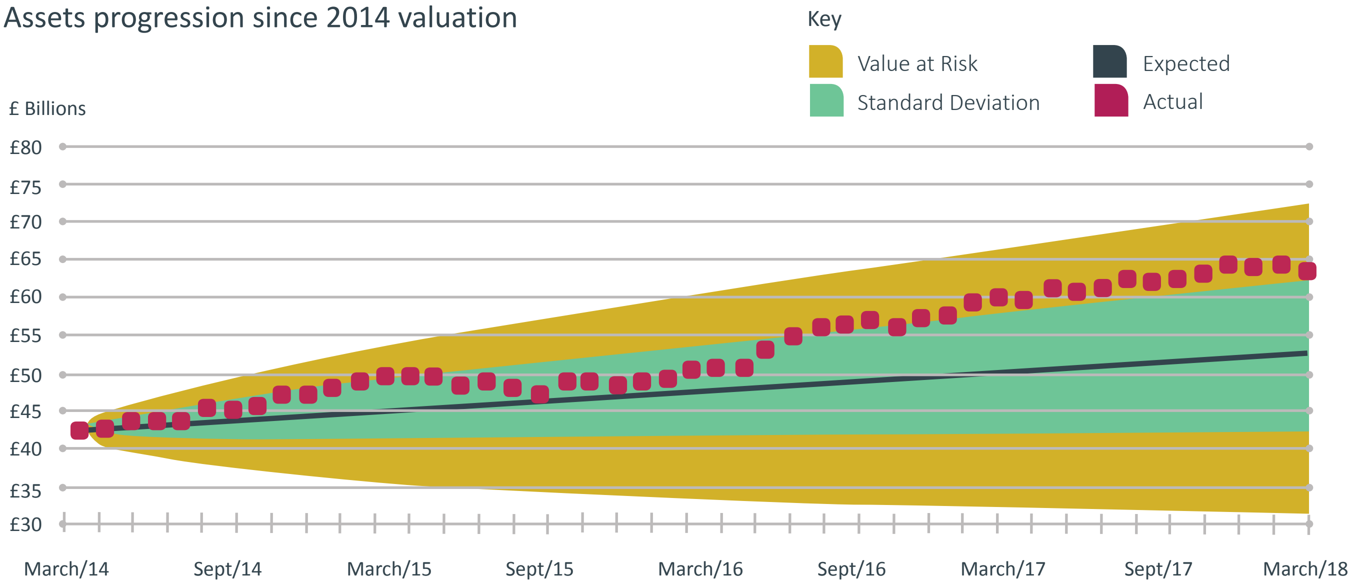
Since 31 March 2014 there has been a great deal of volatility in financial markets, which has been reflected in the volatility of the section's deficit and funding ratio. The real yields on UK government bonds (gilts) at 31 March 2018 are significantly below those at 31 March 2014, but broadly similar to those at 31 March 2017.

The realised investment returns on the assets held in the Retirement Income Builder have been higher than expected (more information is on page 26), but have not been enough to offset the increase in the scheme's liabilities which has also been higher than expected.

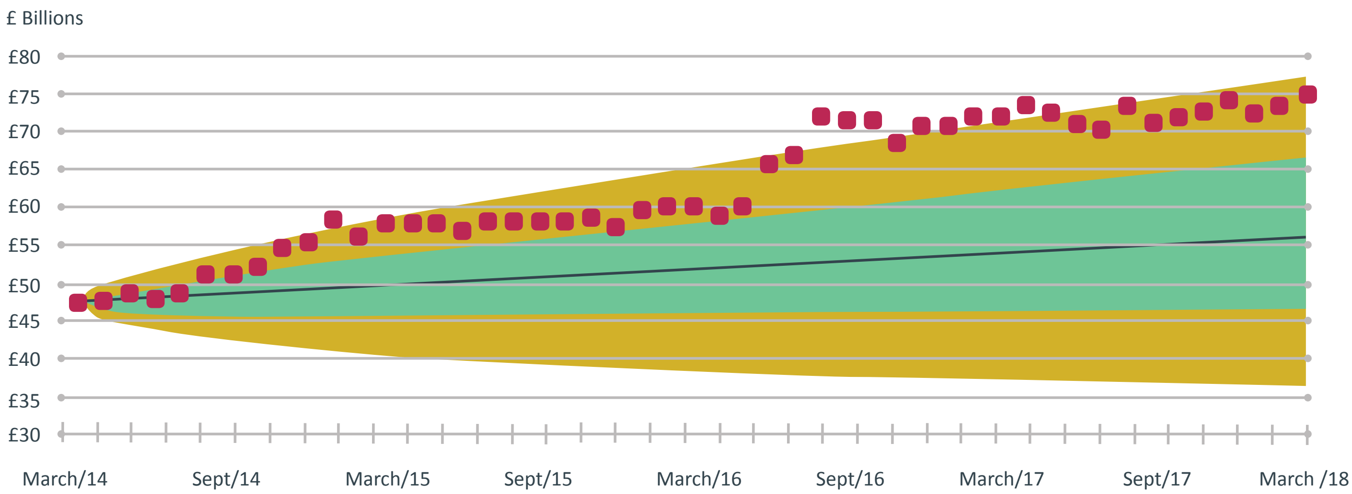
Report on actuarial liabilities

The graphs below show the development of the value of the section's assets and liabilities, based on the monitoring approach, since 31 March 2014. The black line reflects the expected path of assets and liabilities from this date and the green area represents the range of outcomes that might be reasonably expected to materialise over the intervening period (shown here as the expected path plus or minus one standard deviation). Each of the dots corresponds to an estimate of the actual scheme assets and liabilities at the end of every month since the 2014 valuation. The outer boundaries of the amber area reflect outcomes that in 2014 were considered extreme and associated with a probability of occurrence of 1% (as implied by normal market volatility).

Assets progression since 2014 valuation



Liabilities progression since 2014 valuation



During the current financial year (to 31 March 2018), the assets of the Retirement Income Builder section increased by £3.6bn from £60.0bn to £63.6bn, whilst the liabilities increased by £3.1bn from £72.6bn to £75.7bn, leading to a small decrease in the deficit using this monitoring approach. The results are summarised in the table overleaf.

Report on actuarial liabilities

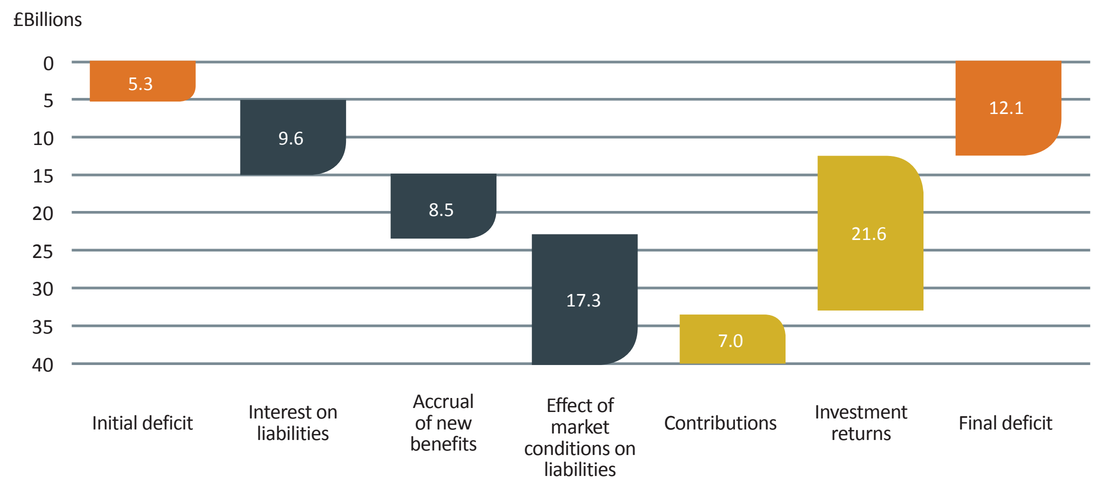
Funding position based on the 2014 monitoring approach

The table below summaries the funding position of the scheme each 31 March since 2014 on the monitoring basis.

As at 31 March in £billions	Actuarial valuation 2014	Funding update 2015	Funding update 2016	Funding update 2017	Funding update 2018
Value of assets	41.6	49.1	49.8	60.0	63.6
Value placed on liabilities	46.9	57.3	59.8	72.6	75.7
Deficit	5.3	8.2	10.0	12.6	12.1
Funding ratio	89%	86%	83%	83%	84%

The above table indicates that the deficit on the monitoring approach has grown from £5.3bn at 31 March 2014 to £12.1bn at 31 March 2018, which is a reduction of £0.5bn relative to the previous year end. The chart below details the underlying drivers of the change in the deficit using this monitoring approach.

Change in deficit since 2014 valuation (monitoring approach)



The value placed on the scheme's liabilities can be measured from a number of different perspectives, including on a technical provisions basis, a buy-out basis, a best estimate basis, and a self-sufficiency basis. The technical provisions and self-sufficiency bases are monitored regularly. The buy-out and best estimate liabilities are updated at each actuarial valuation.

Report on actuarial liabilities

The table below summarises the scheme's position on a self-sufficiency basis. The self-sufficiency liability reflects the amount of assets required to meet with a high probability all accrued benefits using a low risk investment strategy and without any further contributions. Up until the 31 March 2017 valuation, self-sufficiency had been assessed using a discount rate equal to gilts plus 50bps however following a review by the trustee as part of the actuarial valuation, the discount rate for self-sufficiency was increased to gilts plus 75bps. The effect of this change in discount rate at 31 March 2017 (including updates to demographic assumption) was to reduce the self-sufficiency liability by around £5bn.

As at 31 March in £billions	Self-sufficiency 2014	Self-sufficiency 2015	Self-sufficiency 2016	Self-sufficiency 2017	Self-sufficiency 2018
Value of assets	41.6	49.1	49.8	60.0	63.6
Self-sufficiency liabilities	56.1	68.6	71.9	82.4	84.9
Deficit	14.5	19.5	22.1	22.4	21.3
Funding ratio	74%	72%	69%	73%	75%

As at 31 March 2017, the scheme actuary estimated the cost on a buy-out basis, i.e. the cost to transfer the liabilities to an insurance company, as £123.9bn therefore giving rise to a deficit on this basis of £63.9bn. The corresponding buy-out figure for 31 March 2014 was £77.3bn, implying a deficit of £35.7bn at that time. A buy-out basis often gives the worst view of the liabilities. However, on a best estimate basis, liabilities at 31 March 2014 were estimated to be £38.1bn, therefore implying a surplus on this basis of £3.5bn.

The trustee is currently in the process of working with the JNC to complete the 2017 valuation. This is likely to result in increased contribution rates from 1 April 2019.

Report on actuarial liabilities

What is the trustee board's funding plan?

The trustee's overarching funding principle, supported by the employers, is that the amount of funding and solvency risk within the scheme should be proportionate to the amount of financial support available from the scheme's sponsoring employers. Specifically the reliance being placed on the employers should not be greater than what they can support. The trustee is therefore of the view that, with the right economic conditions, and following appropriate dialogue, opportunities should be taken over the years ahead to reduce the amount of risk within the scheme, and specifically reduce the amount of investment risk. At the 2014 actuarial valuation the trustee incorporated a long-term, gradual de-risking into its funding approach, with the intention of slowly reducing the amount of investment risk within the scheme over a 20-year period. Details of the trustee's investment approach can be found in the Statement of Investment Principles which is available online.

The recovery plan in the 2014 actuarial valuation requires employers to contribute 2.1% of salaries towards repairing the deficit over a period of 17 years. The trustee had extended the period of the recovery plan (from 10 years in 2011) following an extensive piece of work undertaken by its adviser on the ability of the scheme's sponsoring employers to financially support the scheme (which is generally referred to as the employers' 'covenant'). The conclusion from that work was that there is good visibility of the ongoing strength of the covenant over the next 20 years, thereafter it becomes less visible. Covenant analysis undertaken for the 2017 valuation confirmed the conclusions of the earlier review and extended the period of covenant visibility to 30 years.

In calculating the contributions required for the recovery plan, allowance for additional investment return was made, over and above the discount rate which the trustee uses to determine the technical provisions. The additional allowance was half the difference between the discount rate used to calculate the technical provisions and the best estimate of the expected return on assets.

As part of the 2017 valuation a new recovery plan is still being determined.

Pension Protection Fund

The government established the Pension Protection Fund (PPF) in 2005 to provide benefits in the event that a scheme's sponsoring employer (or employers) becomes insolvent without there being sufficient funds available in the scheme.

USS is recognised by the PPF as a multi-employer scheme with a joint or shared liability. This joint liability is based on the 'last-man standing' concept, which means that it would only become eligible to enter the PPF in the extremely unlikely event that the vast majority (if not all) of the scheme's employers were to become insolvent.

If such circumstances were ever to occur, the PPF would take over the payment of pension benefits to members, but the benefits received might be less than the full benefits earned within USS. The precise amount that the PPF would pay to each member would depend on the member's age, the period over which the benefits were earned and the total value of benefits.

Further information about the PPF is available on its website at **www.pensionprotectionfund.org** or you can write to Pension Protection Fund, Renaissance, 12 Dingwall Road, Croydon, Surrey, CR0 2NA.

Principal actuarial assumptions

The table opposite shows the assumptions used in the 2014 and 2017 technical provisions actuarial valuations, noting that the 2017 valuation is incomplete. The funding updates based on the 2014 valuation, shown in the 'Funding position based on the 2014 monitoring approach' section above, reflect broad changes in expected investment return and inflation only, based on changes in index-linked gilt yields. The contributions payable to the scheme are determined based on the full actuarial valuations only, with the funding updates used for monitoring purposes.

The 2017 valuation uses full yield curves in the assumptions, where the 2014 valuation uses single equivalent values.
The year-on-year figures in the 2017 valuation assumptions are available in the documents shown on the website here:
www.uss.co.uk/2017-valuation

Report on actuarial liabilities

Principal actuarial assumptions	31 March 2014 valuation	31 March 2017 valuation
Market derived price inflation	3.6% p.a. *	In line with the difference between the Fixed Interest and Index Linked yield curves
Inflation risk premium	0.2% in year 1, decreasing linearly to 0.1% p.a. over 20 years from 2014	0.3% p.a.
Price inflation – Retail Prices Index	Market derived price inflation less inflation risk premium	Market derived price inflation less Inflation risk premium
RPI / CPI gap	0.8% p.a.	1.0% p.a.
Price inflation – Consumer Prices Index	RPI assumption less RPI / CPI gap	RPI assumption less RPI / CPI gap
Investment return	5.2% in year 1, decreasing linearly to 4.7% p.a. over 20 years *	Years 1-10: CPI – 0.53% reducing linearly to CPI – 1.32% Years 11-20: CPI + 2.56% reducing linearly to CPI + 1.7% by year 21 Years 21 +: CPI + 1.7%
Salary increases **		
1) General pay growth	CPI in year 1, CPI +1% in year 2 and RPI + 1.0% p.a. thereafter	CPI +2%***
2) Salary scale for past service	Scale adopted (in first two years) reflecting recent experience	
Pension increases in payment	CPI assumption (for both pre and post 2011 benefits)	
Mortality base table	98% of SAPS S1NA 'light' YOB unadjusted for males and 99% of SAPS S1NA 'light' YOB with a 1 year adjustment for females	Pre-retirement: 71% of AMC00 (duration 0) for males and 112% of AFC00 (duration 0) for females Post retirement: 96.5% of SAPS S1NMA 'light' for males and 101.3% of RFV00 for females
Future improvements to mortality	CMI 2014 with a long term rate of 1.5% p.a.	CMI 2016 with a smoothing parameter of 8.5 and a long term improvement rate of 1.8% pa for males and 1.6% pa for females

Date	Funding update 2015	Funding update 2016	Funding update 2017	Funding update 2018
Investment return	3.98% in year 1, decreasing linearly to 3.5% p.a. over the next 19 years	3.84% in year 1, decreasing linearly to 3.4% p.a. over the next 18 years	3.26% in year 1, decreasing linearly to 2.83% p.a. over the next 17 years	3.21% in year 1, decreasing linearly to 2.81% p.a. over the next 16 years
Market derived price inflation	3.2% p.a.	3.15% p.a.	3.36% p.a.	3.27% p.a.

* These values have been updated for funding updates in subsequent years in line with the table above.

** This assumption does not affect accrued benefits for periods after 31 March 2016 when the scheme's benefits were changed and no longer provide benefits linked to salary at retirement.

*** This assumption is applied to the scheme's overall payroll and is used to project the development of the scheme over time.

Actuarial certificate of technical provisions

CERTIFICATION OF TECHNICAL PROVISIONS

Name of Scheme	Universities Superannuation Scheme

Calculation of technical provisions

I certify that, in my opinion, the calculation of the scheme's technical provisions as at 31 March 2014 is made in accordance with regulations under section 222 of the Pensions Act 2004. The calculation uses a method and assumptions determined by the Trustee of the scheme and set out in the Statement of Funding Principles dated 24 July 2015.

Signature	
Name	Ali Tayyebi
Qualification	Fellow of the Institute and Faculty of Actuaries
Date of signing	24 July 2015
Name of employer	Mercer Limited
Address	4 Brindley Place Birmingham B1 2JQ United Kingdom

Actuarial certificate of schedule of contributions

MERCER

CERTIFICATION OF SCHEDULE OF CONTRIBUTIONS

Name of Scheme	Universities Superannuation Scheme

Adequacy of rates of contributions

1. I certify that, in my opinion, the rates of contributions shown in this schedule of contributions are such that the statutory funding objective could have been expected on 31 March 2014 to be met by the end of the period specified in the recovery plan dated 24 July 2015.

Adherence to statement of funding principles

2. I hereby certify that, in my opinion, this schedule of contributions is consistent with the statement of funding principles dated 24 July 2015.

The certification of the adequacy of the rates of contributions for the purpose of securing that the statutory funding objective can be expected to be met is not a certification of their adequacy for the purpose of securing the Scheme's liabilities by the purchase of annuities, if the Scheme were to be wound up.

Signature	
Scheme Actuary	A Tayyebi
Qualification	Fellow of the Institute and Faculty of Actuaries
Date of signing	24 July 2015
Name of employer	Mercer Limited
Address	4 Brindley Place Birmingham B1 2JQ

A timeline of the 2017 valuation

Our work on the latest valuation of the scheme began, in earnest, in early 2016.

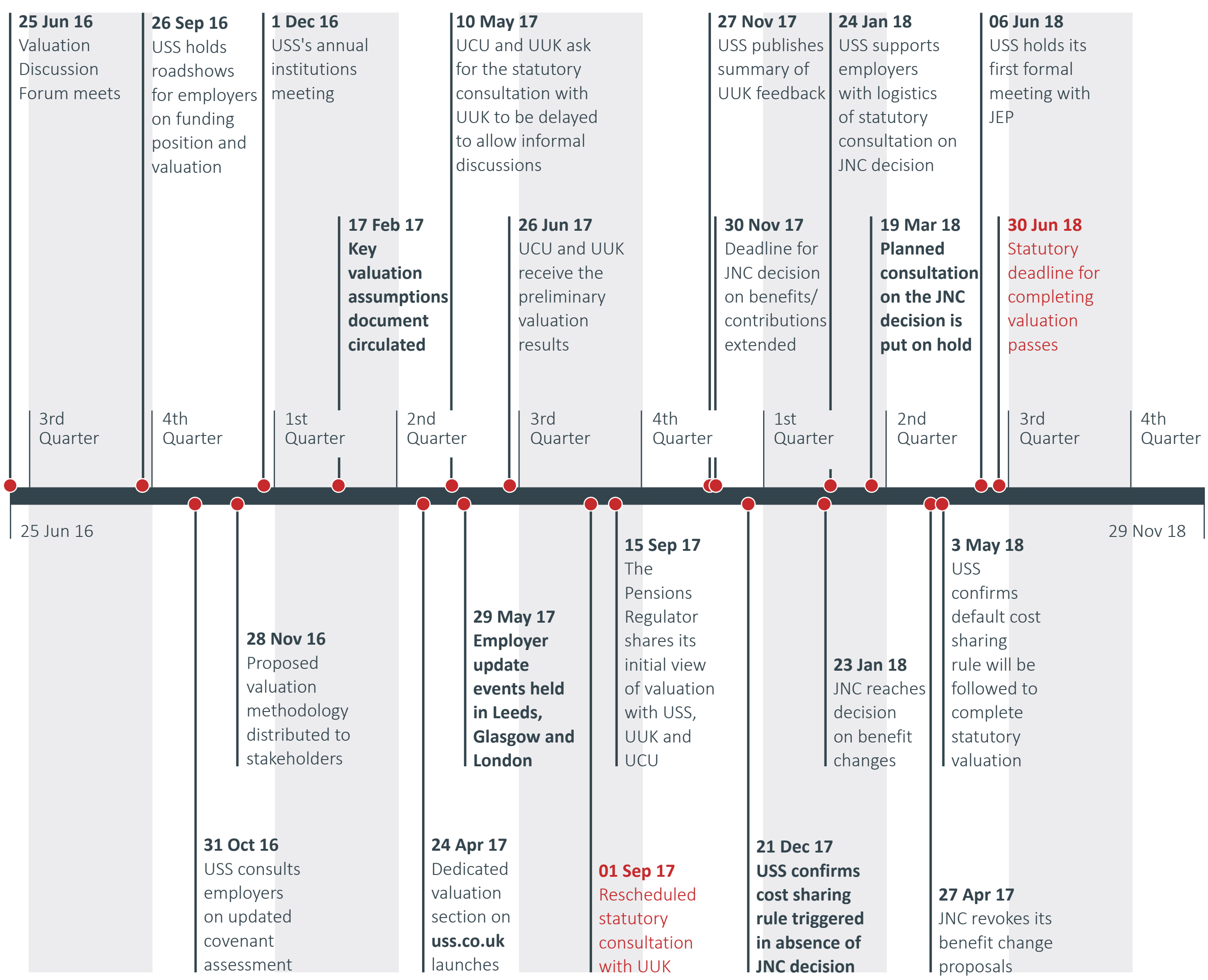
Our only statutory duties in carrying out the valuation are to consult with UUK on the technical provisions, the recovery plan and the schedule of contributions, and to submit a completed valuation to the Pensions Regulator within 15 months of the valuation date i.e. by 30 June 2018 (the latter of which has been breached).

However, as the timeline set out below shows, we have endeavoured to conduct one of the most transparent valuations of any UK pension scheme to support a wider understanding of the process, the analysis, and the challenges we face.

Whilst it is not feasible for us to engage with 350-plus employers and around 200,000 active members on all of the technical detail, we have held frequent briefings with employers at institutions across the country on the key issues and our proposed approach and considerations.

Employer and member representatives have received detailed reports on covenant, methodology, valuation assumptions, interest rate reversion, expected investment returns on assets, discount rates, short-term reliance and mortality. We have also provided video guides, Q&As and regular updates for members, and released a library of the key technical documents.

The timeline below outlines the progress of these activities over the last 24 months. More information on the latest position with regard to the 2017 valuation can be found on the USS website at **www.uss.co.uk/how-uss-is-run/valuation**



Our flexible and proactive approach reflects the complexity of the process and the scale of the challenge faced by USS (and every other open, funded, defined benefit scheme) in the current economic climate. We are committed to maintaining this approach as we finalise the 2017 valuation and as we work with our stakeholders, and their Joint Expert Panel, to define the future shape of the scheme.

The registered number of the trustee company (Universities Superannuation Scheme Ltd)
at Companies House is 01167127

The reference number of the scheme (Universities Superannuation Scheme)
at the Pensions Regulator is 10020100

Royal Liver Building
Liverpool
L3 1PY