Universities Superannuation Scheme

# Responsible Investment Report

for the period 2019/2020

# Welcome to the 2019/2020 Responsible Investment (RI) Update Report from the Universities Superannuation Scheme (USS)

***Simon Pilcher***
*CEO of USS Investment Management*

We steward £68 billion in assets under management with high standards of Responsible Investment and a focus on environmental, social and governance (ESG) factors.

We believe that investing responsibly in quality companies reduces the risk associated with investing and improves our ability to meet the pension promises made to members by our sponsors. That is why the concepts of active ownership and engagement, as well as assessing investment risk in all its forms, are fundamental to our Investment Beliefs and Principles.

Since our last update, which covered the 2018 period, available here, there have been some major strides forward in how USS and its principal investment manager and advisor, USS Investment Management address ESG risks in the Scheme's investment portfolio, as well as its approach to future investment.

We believe that climate change and societal pressures will have a profound impact on the value of the Scheme's investment portfolio as time goes on. Recognising the growing importance of these issues, we undertook a number of initiatives during the period.

We concluded detailed scenario analysis to examine the impact of climate change on the Scheme's investment portfolio. We also continued to strengthen our internal processes to embed ESG factors, such as monitoring external managers, and further built on our engagement strategies to encourage better corporate behaviour and to use our influence as a major institutional investor to promote good practice.

At the same time, we also began two longer-term initiatives that will fundamentally change how we invest. In early 2020, we moved a significant proportion of the Scheme's equities from a concentrated portfolio to an interim external manager. This formed the first step in a long-term strategy to change the way in which we invest in equity markets – away from traditional concentrated stock-picking and towards a longer-term thematic approach. For developed markets, this will mean focussing less on individual stocks and more on the impact of ESG issues and other long-term factors as a driver of investment themes and how they should shape the portfolio in the years to come.

In May 2020, USS Investment Management committed to tobacco-free investment within the next two years. We will also exclude – and ultimately divest – of a number of other sensitive sectors.

This report combines both an update more generally on our Responsible Investment work during the period and also our reporting responsibilities under the Taskforce on Climate-related Financial Disclosures (TCFD).

# Update overview

*“We were delighted to be identified by the UN-backed Principles for Responsible Investment (PRI), as one of the signatories in its 2019 inaugural Leaders’ Group. This put the Scheme in the top 10% of asset owners.”*

## Responsible Investment General Update

### Scenario analysis

During the period, USS Investment Management undertook Scheme-wide climate scenario analysis and stress-testing, looking at the impact of global warming based on different temperature increases. In addition to this critical assessment, we also undertook a specific 2°C scenario analysis of the Scheme’s internal Pan-European equities portfolio. This upper limit was particularly chosen as the Paris Agreement, a global government pact signed in 2015, is designed to keep global warming below this figure. Please turn to page 7 for further information.

### Refreshment of external manager RI frameworks

During 2019, USS Investment Management updated its RI due diligence and monitoring processes for external managers and fund managers (for both public and private markets) into standardised questionnaires.

These questionnaires are similar in content, with the due diligence version establishing a baseline set of data which then form the basis for the proposed biennial monitoring programme. We also introduced a scoring system to be better able to benchmark and rank the ESG performance of the external managers it uses, an example of which is available online.[1]

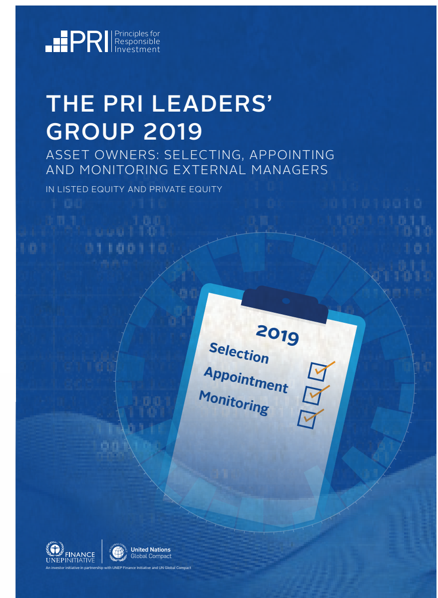
As a result of this work, we were delighted to be identified by the UN-backed Principles for Responsible Investment (PRI), as one of the signatories in its 2019 inaugural Leaders’ Group. This put the Scheme in the top 10% of asset owners.

The PRI, of which USS is a founding signatory, was set up to encourage investors to use responsible investment to enhance returns and better manage risks. The annual assessment is the largest global reporting project on responsible investment and is used as a benchmark for investors against their peers, as well as to evaluate their RI processes and procedures.

The Leaders’ Group consists of firms which have shown breadth in excellence across the Reporting Framework, using scores taken from a variety of modules. The focus will shift from year to year. In 2019, the Leaders’ Group focused on the selection, appointment and monitoring of external managers in listed and private equity.

As well as the PRI, USS was also one of the three founding investors (with large Dutch investors APG and PGGM) of the Global Real Estate Sustainability Benchmark (GRESB). Now supported by a large number of pension funds and other investors, GRESB is an online system enabling the benchmarking of the sustainability activities of property fund managers. There is a significant focus on climate change and energy-related activities within the GRESB survey.

During the period, USS was recognised for ‘a decade of ESG leadership’ at the “IPE Real Estate” Global Awards for its involvement in the development of GRESB.




## Engagement

### Voting policy update

As active, long-term owners of the companies in which we invest, exercising our voting rights is one of the cornerstones of our stewardship activities.

USS had a concentrated active portfolio of companies in 2019, which allowed us to spend more time researching and engaging with them on a variety of issues.

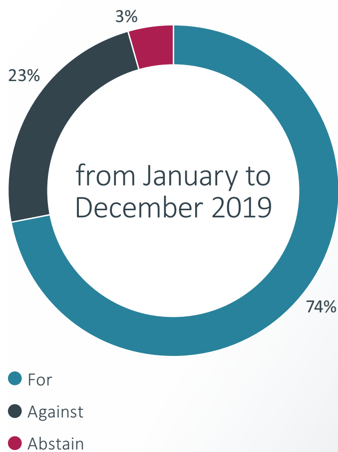
For more than a decade, we have forged an independent voting policy which we review each year to align with our beliefs on best practice and responsible investment.

Indeed, we typically voted against company management – usually on issues such as executive remuneration or board member independence.

Note
1 https://www.peievents.com/en/wp-content/uploads/2020/02/USS-PE-ESG-Assessment-Template-March-2020.pdf

# Update overview *continued*

## Figure 1: USS global votes




In 2020, our review of USS's UK voting policy resulted in two changes:

- **Climate disclosure:** USS already has a process for voting against companies with poor ESG disclosure. We augmented this by voting against those companies with the lowest (zero)[2] scores in the Transition Pathway Initiative's assessment process (see details below).
- **Board diversity:** USS changed its core voting policy from voting against companies where there is not at least one woman on the board (or where there is no strategy to improve board diversity) to one where we expect 33% of board members to be female.

Case study

### IQVIA

IQVIA provides data, technology and advanced analytics to life sciences business, enabling them to innovate in the field of human health, and is listed on the New York Stock Exchange.

The RI team had concerns about the company's corporate governance and financial disclosures pertaining to remuneration and incentives. We wanted to encourage the company to comply with best practice for listed companies. We were also concerned about the ability of the board to challenge senior management. The RI team met the CEO, CFO and non-executive directors to explain our position. The company was responsive to our concerns about disclosure, especially regarding incentives, and committed to review disclosure practices for the next annual report.

Note
2 The TPI ranks companies 0-4 on their policies to achieve alignment with the Paris Agreement. Level 0 represents *Unaware of (or not Acknowledging) Climate Change as a Business Issue* in the company's disclosures.

> *USS Investment Management announced plans to exclude, and where necessary divest from, companies in those sectors that were deemed to be financially unsuitable over the long-term.*

**Longer-term initiatives**

Developed equities

As a move to further align equities and RI, USS Investment Management announced a major evolution in the implementation style for the developed equities portfolios, away from traditional concentrated stock-picking and towards a longer-term thematic approach.

The RI team will work together with a wider set of equity investment professionals to identify long-term investment opportunities that are likely to generate strong returns in order to meet USS's liabilities.

For developed markets, this means less of a focus on individual stocks and more on the impact of ESG issues and other long-term factors. Instead we will be driven by investment themes and how they should shape the portfolio in the years to come.

BlackRock was appointed as a transition manager to oversee three equity mandates (Japan, the US and Pan-Europe) while this change in approach is undertaken. Once this process has been completed, the portfolio will be returned to be managed in this new way.

Selective exclusions

At the end of 2019, USS Investment Management embarked on a detailed review of a selection of sectors in which the Scheme invests, looking for any differences between what industry financial models predict in terms of performance returns, and what it could reasonably expect to happen over the long-term. We concluded from the process, that in several cases, the outcomes predicted by the market as a whole do not appropriately take into account the potential impact of certain specific risks, which could impact financially on these sectors.

These risks include the impact of regulatory or societal changes which may not affect companies in those sectors today, but over the long-term are likely to mean a material deterioration in expected returns.

As a result, USS Investment Management announced plans to exclude, and where necessary divest from, companies in those sectors that were deemed to be financially unsuitable over the long-term. These were:

- tobacco manufacturing;
- thermal coal mining (the mining of coal to be burned for electricity generation), specifically where this makes up more than 25% of revenues;

The burning of coal, in particular, has a significant impact on climate change, it is responsible for 40% of carbon dioxide emissions worldwide and accounts for 70% of total greenhouse gas (GHG) emissions from the electricity sector. With a focus on reductions in emissions and a decrease in the cost of alternatives, it is likely that markets have failed to value adequately the potential risks coal mining companies face, this in turn will lead to pricing pressure. This cannot be mitigated by engagement hence our decision to divest.

- controversial weapons – companies that may have ties to cluster munitions (a form of explosive), white phosphorus-based weapons (a chemical which spontaneously ignites on contact with air) and anti-personnel mines.

Over the next two years, if not earlier, USS Investment Management will cease investing the Scheme's assets in companies in these sectors and begin to fully divest of any such companies where we have investments we can control.

These exclusions will be kept under review and may be changed or added to over time and will be made across the Defined Benefit and Defined Contribution sections.

# Taskforce on Climate-Related Financial Disclosures update

As part of the annual reporting process conducted by the PRI we have commited to report against a number of climate-related questions.

This framework is designed to align with the TCFD, and as a result, much of the information required for a TCFD report is already provided in our UNPRI Climate Report[3].

However, for ease of reading, we have also set out our responses below, which is an update from our first TCFD report in 2018. What follows, therefore, will seek to highlight changes rather than repeat core aspects which do not change from year to year.

The following pages will follow the TCFD recommended layout: Governance, Strategy, Risk Management, and Targets.

Note
3 https://reporting.unpri.org/surveys/PRI-reporting-framework-2020/67562C26-F6DD-449C-9F0D-43E71405AE53/00000000-0000-0000-0000-000000000000/doc/2/%7C%7C*complete*%7C*public*/CC/CC/?type=pdf

# Taskforce on Climate-Related Financial Disclosures update *continued*

*“USS demonstrates and resources its commitment to RI and addresses issues like climate change through its five-strong team of in-house RI experts.”*

**Governance: What are USS’s governance arrangements around climate-related risks and opportunities?**

USS’s Trustee Board has ultimate responsibility for addressing all issues relevant to the Scheme, and this includes the oversight and management of risks and opportunities related to climate change.

The Trustee Board agrees the RI strategy, and formally reviews the RI team’s activities annually, signing off key focus areas and policies. The RI team has supported the Scheme’s activities associated with climate change risk and opportunities since 2001, when the Scheme did its first work assessing the implications of the issue for institutional investors.

Both the USS Investment Committee and the Trustee board held meetings over the period of this report, which included external speakers on responsible investment themes, including climate change.

USS is unlike the majority of UK pension funds, but more similar to large Canadian and Dutch funds, in having an in-house investment manager to manage the implementation of the Scheme’s investment strategy, including the appointment of external managers.

USS demonstrates and resources its commitment to RI and addresses issues like climate change through its five-strong team of in-house RI experts. During 2020 USS Investment Management’s CEO was responsible for the oversight of the RI function and had ultimate responsibility for climate change-related activities. However, RI activities are not limited to just the RI team. For example, USS Investment Management’s Investment Strategy and Advice team dedicated time to embedding climate as a factor in the return expectation process. This ensured that USS Investment Management takes into account RI factors as well as more pure economic factors when it looks at how to create the Scheme’s asset allocation.

Further details of the RI team’s activities, including actions associated with climate change, can be found here: https://www.uss.co.uk/how-uss-invests/responsible-investment. For further governance details, please also refer to our TCFD Report 2018 which can be found here.

**Strategy: What are the material impacts – both actual and potential – of climate-related risks and opportunities on USS?**

USS considers climate change issues over the short, medium, and long term, and whether they are physical, regulatory or reputational:

- Short term – stock price movements resulting from increased regulation to address climate change, or weather-related events (e.g. storm damage, flooding etc.);
- Medium term – regulation and other factors leading to changes in consumer behaviour and therefore purchasing decisions. For example, the significant uptake in electric vehicles or reductions in international travel;
- Long term – physical or adaptation risk, where changes to the climate mean that there are potential major impacts to assets that USS owns. Examples would include increased sea level rise for coastal infrastructure assets or supply chain impacts for companies as a result of severe weather events. The Scheme/investee companies could incur significant costs to protect our interests (if indeed this is possible) if they fail to demonstrate appropriate resilience.

Climate change therefore represents potentially significant risks for the assets in which the Scheme invests. These risks can be:

- Physical – a changing climate may directly impact the viability of some assets or business models (for example, flood risk for real estate, or drought/fire risk for timberland assets);
- Regulatory/transitional – where governments establish polices to reduce emissions or encourage changes in technology in the shift to a lower-carbon future. This could lead to, for example, the stranding of coal assets;
- Reputational – where members and beneficiaries express concerns regarding investments in certain sectors associated with fossil fuels.

# Taskforce on Climate-Related Financial Disclosures update *continued*

## Risk management: How does USS identify, assess and manage climate-related risks?

### Scenario analysis

During the period, USS Investment Management undertook Scheme-wide climate scenario analysis and stress-testing, looking at the impact of global warming based on different temperature increases. The analysis used four climate scenarios: an increase in global temperatures of 1.5°C (both an orderly transition, and also a disorderly transition), a 2°C scenario, and then an increase that is more than 4°C.

An orderly transition is one in which policy and technology changes are gradual and internationally coordinated. The transition can become disorderly if public policy were to change abruptly – for example all coal-fired power production is suddenly closed. The outcomes of the analyses were that, under the scenarios assessed, the Scheme had lower asset returns under more adverse climate scenarios as a result of greater economic disruption.

While we are still working through the repercussions of the results, in 2020 we plan a number of initiatives to determine how we can create a more climate-resilient portfolio going forward.

This includes: assessing how we can better integrate climate risk in the investment decision-making process, how we manage the Scheme's assets and how we create the asset allocation framework; examining how we consider the economic impacts of our investment mandates, and then how these are benchmarked; improving both internal and external climate-related reporting; working to develop "climate aware" models of returns to achieve complete consistency in risk-return modelling; and looking at scenario analysis for the valuation best estimate.

The results of the analysis have been reported to both the Investment Committee and Trustee Board.

In addition to this critical Scheme-wide assessment, we also undertook a specific 2°C scenario analysis of the Scheme's internal Pan-European equities portfolio. This upper limit was particularly chosen as the Paris Agreement, a global government pact signed in 2015, is designed to keep global warming below this figure.

The process analysed the exposure of the portfolio to a range of transition risks (which can be both positive and negative) and physical climate-risk scenarios. The outcome was an estimated climate value at risk of approximately 5%, which appeared to indicate a relatively low level of risk to the portfolio. The portfolio's main downside exposure is largely drawn from the utility, materials, and energy sectors, with one particular utility/energy distributor identified as the stock most at risk in this assessment.

The analysis highlighted the potential deficiency with any evaluation whether top down or bottom up – it is easy to focus only on the negative impacts and not give equal weight to the positive consequences. For example, a diversified mining company was ranked as one of the top companies at risk due to its exposure to ship-borne coal.

However, the process did not recognise the positive benefit this company gained from its exposure to metals and elements that are used in batteries and other low-carbon infrastructure and which will benefit from the shift to a lower-carbon economy.

This demonstrates that whatever the outcome of the modelling or scenario analysis undertaken, understanding the drivers of the results will be at least as important as the headline outcomes.

When equities are held in concentrated active portfolios, bottom-up analysis may be more useful in assessing individual investment portfolios' climate risk exposure rather than total fund level analysis.

### Carbon footprinting

For some time, USS Investment Management has calculated the carbon footprint of our internally-managed public equity investments. In addition to being able to estimate a total footprint for public equities against the benchmark, the footprint has also enabled it to identify and analyse the most carbon-intensive companies in each equity portfolio, helping to inform our engagement and voting activity and allowing carbon risk to be integrated into investment analysis.

We have engaged with companies where there are concerns. The outcomes of this process are published on the USS website as part of its commitment to the Montréal Pledge. Every time that we have undertaken carbon footprinting, the Scheme's public equity portfolio has been 'underweight' (less carbon intensive) than its benchmarks. For details of the overall footprint of the Scheme's public equity portfolios when last assessed, please see USS's disclosures[4] in relation to its commitment to the Montréal Pledge.

We are unusual in that we have undertaken carbon footprinting across a number of assets (including fixed income, property, direct assets and hedge funds). We are working with an external data provider to assess the carbon footprint of the Scheme's private equity fund portfolio. This has proved difficult as the amount of estimated data and the assumptions underpinning theses estimates make the outputs difficult to use.

Note
4 https://www.uss.co.uk/-/media/project/ussmainsite/files/how-we-invest/carbon-footprint-the-uss-public-equity-portfolio-2018.pdf?rev=81ccdf7509634e34b5bc28e0bcdcdea7

# Taskforce on Climate-Related Financial Disclosures update *continued*

*“USS has around £750m in committed financing to UK renewables including on and off-shore wind.”*

## Investing in low-carbon alternatives

Climate change, and the policy response to it, has provided investors such as USS with opportunities to invest in the transition to a low-carbon future. Investing in such opportunities provides the Scheme with some resilience against the impacts of a changing climate.

USS has around £750m in committed financing to UK renewables, including on- and offshore wind. Investments include L1 Renewables which is USS's wholly-owned renewable lending (debt) platform established by USS in 2014, and which supports onshore wind projects and project finance loans to operational wind farms. See http://l1renewables.co.uk/. Additionally, the Scheme also owns direct equity interests in a number of offshore wind farms of the Green Investment Bank sold by the UK government. https://www.responsible-investor.com/articles/uss-partners-with-macquarie-gib

## Voting and engagement

USS is an active owner of the assets in which the Scheme invests, regularly meeting with corporate executives and boards of companies. This not only includes using our voting power at company AGMs but also means that we regularly engage with company boards in order to encourage positive behaviours.

### Voting

As previously noted, during the period the UK voting policy was updated to integrate data from the Transition Pathway Initiative (TPI) into voting decisions.

USS Investment Management helped develop and launch (in January 2017) the TPI. Partnering with other global pension funds, FTSE and the Grantham Institute (part of London School of Economics), this project tracks companies' implementation of policies and practices that manage a shift to a low-carbon world. It enables the Scheme's fund managers to have an understanding as to where companies are in their transition.

From the 2020 AGM season, USS may vote against or abstain on the resolution to receive the report and accounts where we have concerns about a company's management quality score, as assessed by the TPI (score = Level 0). Level 0 represents *Unaware of (or not Acknowledging) Climate Change as a Business Issue* in the company's disclosures. We also reserve the right to escalate the vote against the Chairman of the board, and/or the Chair of any appropriate committees, in case there is no resolution to receive the accounts.

We used TPI analysis within our voting and engagement activities during the year. For example, a Chinese cement company score on TPI was a factor in our decision to request additional up-to-date environmental and social reporting from the company in our voting and engagement letter. The company operates in emerging markets and TPI analysis helped us assess the extent of the gap in disclosure between the company and its developed market peers.

### Engagement

USS joined more than 200 global investors with over US$22 trillion in assets under management as participants in the Climate Action (CA) 100+. This five-year project will see investors engage with the world's largest emitting companies to encourage them to act on climate change. As a result, we will continue to engage with companies in collaboration with other investors (to share the workload) to ensure that they do more to reduce emissions, strengthen climate-related financial disclosures and improve their governance of climate change issues as they affect their business: the outcome will be better communication with investors on how companies are managing the transition risk.

# Taskforce on Climate-Related Financial Disclosures update *continued*

Case study

## Engagement with Royal Dutch Shell

USS has been participating in a collaborative engagement with Royal Dutch Shell as part of the Climate Action 100+ initiative. This engagement was led by the Church of England Pension and Dutch asset manager Robeco, and included active participation from USS, APG and the Environment Agency Pension Plan. This engagement included meeting with senior representatives of the company (including the CEO and Chair) to negotiate the content of joint investor/company statements on climate change.

The outcomes of these engagements have been ground-breaking: in 2018 Shell committed to reducing its carbon emissions by 50% by 2050[5]. The critical point was that this also covered Shell's so-called Scope 3 emissions, i.e. those associated with the end use of its products (oil and gas) rather than the more traditional Scope 1 and 2 emissions, which focus on its own generation of emissions. This helps align Shell with the Paris Agreement and provides some confidence in the long-term sustainability of the business. The targets gain additional credibility as executive remuneration will be linked to their achievement.

Subsequently early in 2020, Shell committed to taking significant additional action on climate change, including a commitment to achieving net zero emissions by 2050 or sooner (covering Scope 1, 2 and 3 emissions).

The importance of these commitments should not be understated: by taking a lead and demonstrating what can be done, other companies in the oil and gas sector (and other sectors) are now under pressure to articulate their approach to achieving the Paris Agreement (including Scope 3 emissions). We (and other investors) believe that this has already led to other oil companies stating that they will better align their strategies with the Paris Agreement and net zero.

**Private market assets**

As well as voting and engagement with the Scheme's public market assets, we also carry out careful due diligence and ongoing monitoring for private assets, which comprise around 25% of the Scheme's assets under management. Please refer to our previous Responsible Investment Report for further information about how we do this.

In 2019, the USS Private Markets Group (PMG) undertook a thematic project focused on identifying the key risks of climate change across the major sectors and geographies in which they invest, as well as identifying investment opportunities driven by the transition into a net zero-carbon world.

The team developed a framework to assess the impact of policy steps to mitigate climate change on asset costs and revenues. It took into account sector-specific challenges, and also any mitigating actions already undertaken by the management teams of the investee companies in which the Scheme invests.

Note

5 https://www.shell.com/media/news-and-media-releases/2018/joint-statement-between-institutional-investors-on-behalf-of-climate-action-and-shell.html

# Taskforce on Climate-Related Financial Disclosures update *continued*

**Commitment to continued learning**
In order to contribute to our internal learning and work on the transition to a low-carbon future, during the period we arranged for three speakers from Imperial College and Grantham Institute – Climate Change and the Environment to come in and discuss the technology and implications associated with the adoption of carbon capture and storage and hydrogen-related technologies. The speakers covered details of the technology and the implications of the use of these technologies. This training was provided to the public equities, RI and the private markets teams.

Similarly, we invited climate specialists from PWC to talk to managers regarding the implications of climate change with a particular focus on private markets.

In addition, both the Investment Committee and the Trustee Board hosted external speakers at their respective offsite meetings to discuss long-term themes and expectations on pension funds. Climate change was a core subject of these discussions.

**Other initiatives during the period**
In order for the Scheme to manage the risks associated with the changing climate, USS uses a number of different tools and participates in a number of different collaborations.

USS sponsored the Institutional Investors Group on Climate Change (IIGCC) development of new guidance for investors, Understanding physical climate risks and opportunities – a guide for investors setting out how they can integrate the risks and opportunities presented by the physical impacts of climate change into their investment processes[6]. This built on work that USS, with other investors, published in 2008/2009 entitled *Managing the Unavoidable*[7], a series of guides for pension funds about how they should be assessing the corporate response to adapting to climate change.

The guidance helps investors to:

- Understand better the investment implications – both risks and opportunities – resulting from the physical impacts of climate change;
- Take practical steps to identify, assess and manage climate-related physical risks across their portfolios, through the approaches covered in the guidance;
- Identify ways to invest in solutions that support greater resilience to climate change as well as protecting investments from physical climate-related risks. Both approaches are key to strengthening broader societal adaptation to climate change; and
- Draw on additional available tools and data sources in identifying and assessing specific risks, and opportunities across different asset classes.

**Potential impacts of climate change on liabilities**
The Institute and Faculty of Actuaries (IFoA) released a formal risk alert on Climate-Related Risks[8], a major focus of which was on the implications of a changing climate, and the policy response to it, on pension funds liabilities. This was unusual as most of the focus to date has been the impacts of climate change on the assets held by pension funds and other investors.

USS held discussions with the Scheme Actuary on climate change in 2019 to understand his views on the impact of climate change on the Scheme's liabilities. The impacts are varied and include potential changes to GDP, changes to mortality rates, and longevity and population patterns (both positive and negative), all of which could have implications for the Scheme's liabilities and covenant strength of the employers who support the Scheme. Whilst we will continue to monitor the work being done in this area, at the moment there is no firm conclusion and analysis is generic rather than Scheme specific. The IFoA is continuing to work on this issue and we will keep this under review.

Notes
6 https://www.iigcc.org/resource/understanding-physical-climate-risks-and-opportunities-a-guide-for-investors
7 http://www.acclimatise.uk.com/wp-content/uploads/2018/01/Managing_the_Unavoidable_FINAL_Nov2009.pdf
8 https://www.actuaries.org.uk/system/files/field/document/Risk%20Alert%20-%20Climate%20Change%20FINAL.pdf

# Metrics and targets

### What metrics and targets does USS apply in assessing and managing material climate-related risks and opportunities?

As noted above, USS uses a number of tools and metrics to identify and manage climate change-related risks to the Scheme.

**Targets**

As already set out in the pages above, USS Investment Management has committed to withdrawing investment from certain sectors within the next two years. This is clearly a key target that will dominate our investment management decisions for the next period.

Aside from that, USS publishes the targets we set for environmental and social issues (including energy consumption – and therefore carbon emissions) associated with management of its real estate assets. These have been available on the fund's internet site for a number of years.

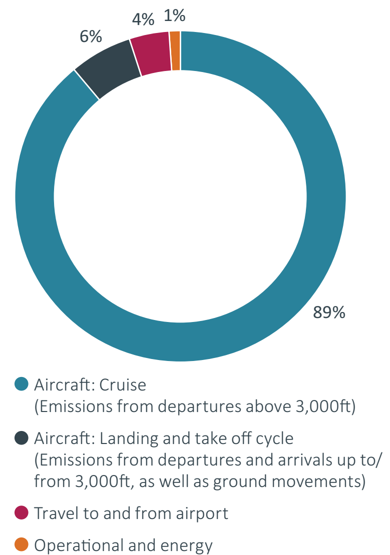
In addition, a number of the directly held assets in the Private Markets portfolio also set targets for energy reduction and other climate change-related factors.

For example, Heathrow Airport set a target of being net carbon neutral by 2020 for its infrastructure (not for the flights), offsetting those areas of its direct operations which still generate $CO_2$. More significantly, Heathrow has also set a target of being a carbon neutral airport by 2050 for the total operation of the airport[9]. As the majority of emissions associated with operating the airport are not directly caused by Heathrow itself (see Figure 2), the airport is working with airlines and others to achieve this goal. Earlier this year the company announced ambitions to be operating zero carbon infrastructure by mid-2030s.

In addition, in April 2019, Thames Water set itself the goal to become zero net carbon[10] by 2030 for its operational activities, underlining the company's commitment to mitigate climate change. This is some 20 years ahead of the UK Government target.

Whilst we do actively engage with the Scheme's assets (across asset classes) regarding their management of carbon risk, USS does not currently set targets for carbon emissions reductions in other asset classes.

### Figure 2: Source of Heathrow emissions




- Aircraft: Cruise (Emissions from departures above 3,000ft)
- Aircraft: Landing and take off cycle (Emissions from departures and arrivals up to/from 3,000ft, as well as ground movements)
- Travel to and from airport
- Operational and energy

Note
9 https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/heathrow-2-0-sustainability/futher-reading/Carbon-Neutral-Growth-Roadmap.pdf
10 https://corporate.thameswater.co.uk/about-us/corporate-responsibility-and-sustainability/report/addressing-climate-chang