Universities Superannuation Scheme

Risk Management Supplement

for the year ended 31 March 2020

USS

Risk Management Supplement

Within this supplement we set out descriptions of USS risk framework, risk appetite and risk culture and outline USS current risk landscape.

1 Understanding our risk landscape

In conducting our business, we must manage a wide range of risks that could impede the execution of our primary duty to ensure that the benefits promised to members are delivered in full on a timely basis. Our risk management framework seeks to ensure that, through the operation of various controls and actions, our residual exposure to those risks is kept within manageable limits known as our "risk appetite".

What is risk?

Risk is defined as the possibility that objectives will not be achieved. For example this includes the possibility that target funding levels are not met, that expected investment returns do not materialise and that members are not paid the pension amounts they are due on time. These undesirable outcomes can be the result of many different sources of risk that make up our risk landscape.

The USS risk taxonomy

The trustee board of USS maintains a register of the risks it faces and must manage in the course of carrying out its business. These are classified into four broad categories: strategic risks, defined benefit funding risks, investment risks and operational risks; collectively the risk taxonomy.

These four categories are subdivided into a number of more specific risks. For example, the strategic risks include risks associated with the engagement with, and alignment to, our key stakeholders, the appropriateness of the pension products we provide, the soundness of our governance processes and our reputation.

Defined benefit (DB) funding risks, include risks associated with the employers' covenant (i.e.,the ability and willingness of employers to support the DB pensions they have promised to members), risks relating to the assumptions used in the valuation of the DB liability and risks connected with the contributions that are required to meet both past and future benefit accrual.

The exposure to all these risks originates not through choice, but in the very nature of the USS pension business.

By contrast the investment risk category includes many risks that USS actively seeks out in order to generate returns on its investments and thereby grow the size of its portfolios of assets. Amongst these are financial market risks, such as equity, property and interest rate risks, as well as others such as credit and liquidity risks.

Collectively these "rewarded" investment risks are viewed from two perspectives. The first relates to their direct impact on the size of the investment portfolios, and hence the ability to meet the DB pension liability, as well as the growth requirements of members' defined contribution (DC) pots. The second perspective relates to the relative impact of these risks, in particular, the performance of the investment portfolios relative to their respective reference portfolio targets.

The final category, operational risks, is very broad and encompasses the risks associated with business processes, people, systems and external events. These risks arise as a result of the normal conduct of business and USS seeks to manage them in a cost-effective way.

USS risk taxonomy

1. Strategic risk	2. DB Funding risk	3. Investment risk	4. Operational risk
1.1. Strategic Vision	2.1. Covenant	3.1. Liquidity	4.1. Financial Control
1.2. Institutional Stakeholder	2.2. Funding Risk Appetite	3.2. Counterparty Default	4.2. Financial Reporting
1.3. Member Stakeholder	2.3. Assumptions	3.3.Reference Portfolio Performance	4.3. Supplier
1.4. Product	2.4. Funding Liability	3.3.1. Market risks	4.4. People
1.5. Mutuality	2.5. Contributions	3.4. Investment Performance	4.5. Financial Crime
1.6. Collectiveness		3.4.1. Market risks	4.6. Regulatory Compliance
1.7. Fair Treatment		3.5. Structuring	4.7. Regulatory Engagement
1.8. Governance		3.6. Asset Valuation	4.8. Legal
1.9.Reputational			4.9. Model
			4.10. Business Continuity
			4.11. Technology and Premises
			4.12. Data
			4.13. Service Delivery
			4.14. Investment Operations
			4.15.Change Delivery

2 USS's risk framework

USS has a comprehensive framework for managing the risks it faces. This framework includes policies, processes and governance arrangements, which are designed to ensure that risks are effectively identified, measured, managed and monitored across the business. This framework is coordinated by a dedicated Group Risk team, which is independent of USS front-line businesses and its head, the Chief Risk Officer, reports directly to USS Group Chief Executive Officer. The team's remit is to coordinate and oversee all risk management activities across USS, in particular to:

- Assist the business lines to manage their risks by providing risk information, tools, analysis and insights.
- Provide assurance to stakeholders through independent oversight, challenge and monitoring.

Three lines of defence

The risk team operates as part of a "three lines of defence" approach to risk management, whereby the business divisions (the first line of defence) own and manage their risks, with oversight and challenge from the second line, and provision of assurance by the third line.

The USS three lines of defence model

This approach to risk management is embedded throughout USS via three key elements:

- Risk appetite
- Risk management processes
- Risk governance.

Risk appetite

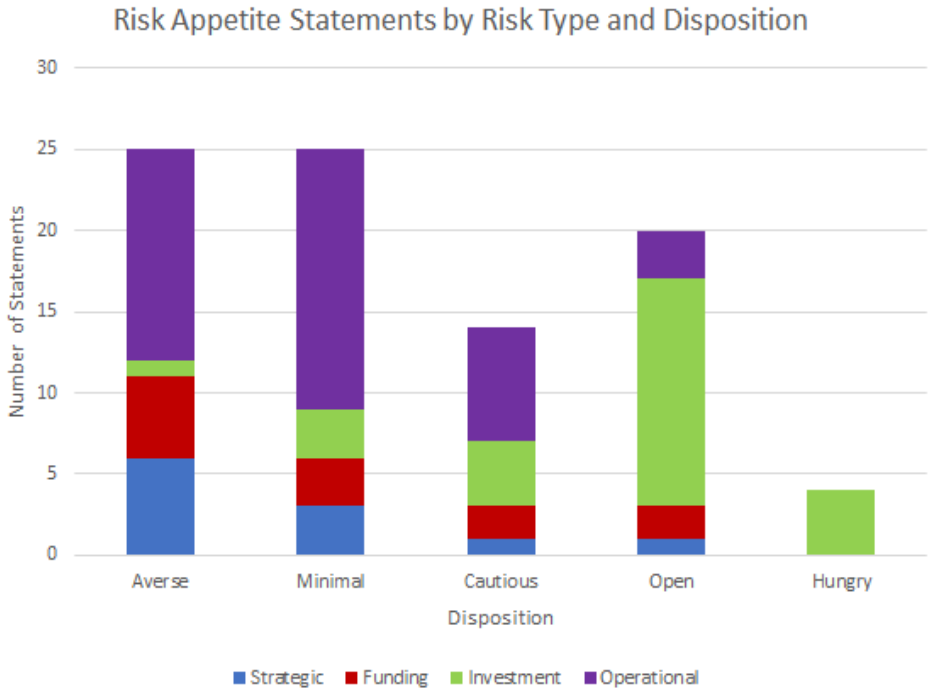
Taking on too much or too little risk could result in a failure to deliver strategic objectives. At the core of our approach to risk management is our risk appetite. Our risk appetite statements articulate the types and levels of risk that we are prepared to accept; they set risk-taking boundaries and enable consistent risk-aware decision making.

Risk appetite is set by the trustee board and is expressed in a series of risk appetite statements. A five-category scale (averse, minimal, cautious, open and hungry) is used to express the board's appetite to each risk. An "averse" disposition reflects a very low tolerance for a particular risk and a need to develop a significant suite of controls (even if they are costly) to reduce the likelihood and/or impact of this risk. At the other end of the scale, a "hungry" disposition reflects broad acceptance of a particular risk because of the associated potential for significant reward (in the form of income, asset

Implied within the definition of risk appetite is the notion that our risks present both opportunities and threats, and that by taking a balanced amount of risk into the organisation, USS has the best chance of achieving its objectives. The assessment of individual risks through the use of key risk indicators (KRIs) helps the business evaluate whether its risk-taking is within appetite.

USS formally updates its risk appetite statements for approval by the trustee board, every two years. They have been designed to cascade throughout USS to guide decision making and business planning; as such they help ensure that USS operates in such a way that the efficient functioning of the business and the achievement of strategic objectives is not overly threatened.

USS has 88 individual risk appetite statements, represented below:



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Risk management processes

The image to the right represents the risk management lifecycle used at USS. USS has implemented risk management processes to identify, measure, manage and monitor risks across the business.

Risks are identified on an ongoing basis through business change programmes, business-as-usual activity and from consideration of emerging risks. Risks are measured regularly using prospective and retrospective indicators, which are reviewed by the first and second lines of defence before being reported to the relevant risk governance and oversight committees.

Risks are managed using mitigating actions which include controls, as well as actions to transfer or avoid risk.

Risk monitoring and reporting is implemented through several tools including "risk registers", "risk event logs" and "assurance maps", which combine metrics from all three lines of defence to assess the health of key processes. Assurance maps are supplemented by a risk-based "assurance programme" undertaken by the Compliance and Internal Audit functions.

USS risk management approach

Risk governance

Effective risk governance starts with clear roles, responsibilities and delegations, combined with policies, standards and risk committees. The trustee board of directors has primary responsibility for the group's risk management framework, but delegates the day-to-day activities associated with this.

For example, the board delegates (within well-defined parameters) the responsibility for risk management in respect of the Scheme's investment activity to USS's subsidiary, USS Investment Management Ltd.

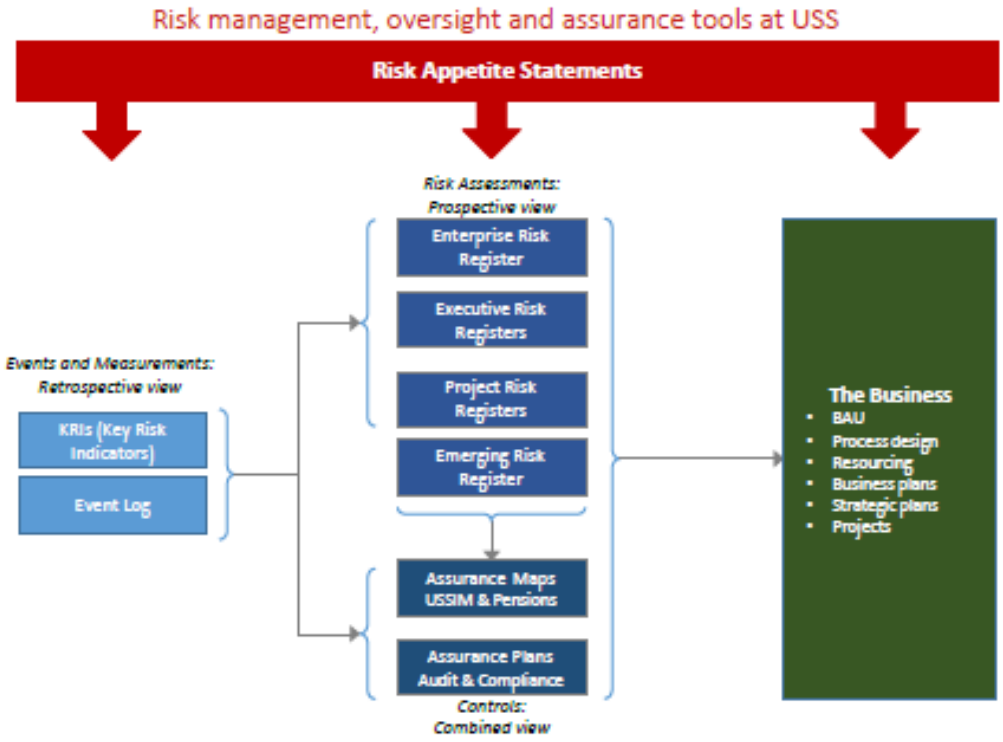
Both the Group CEO of USS Ltd and the CEO of USS Investment Management are responsible for risk management within their legal entities and have established executive risk committees to review and monitor the effectiveness of internal control and risk management systems.

The Group Risk Committee was established by the Group CEO to oversee risk management across the Group. The USS Investment Management Risk Committee is responsible for overseeing the risks associated with investment strategy and investment processes.

In addition, there are two non-executive committees chaired by independent external experts that are charged with risk oversight across USS.

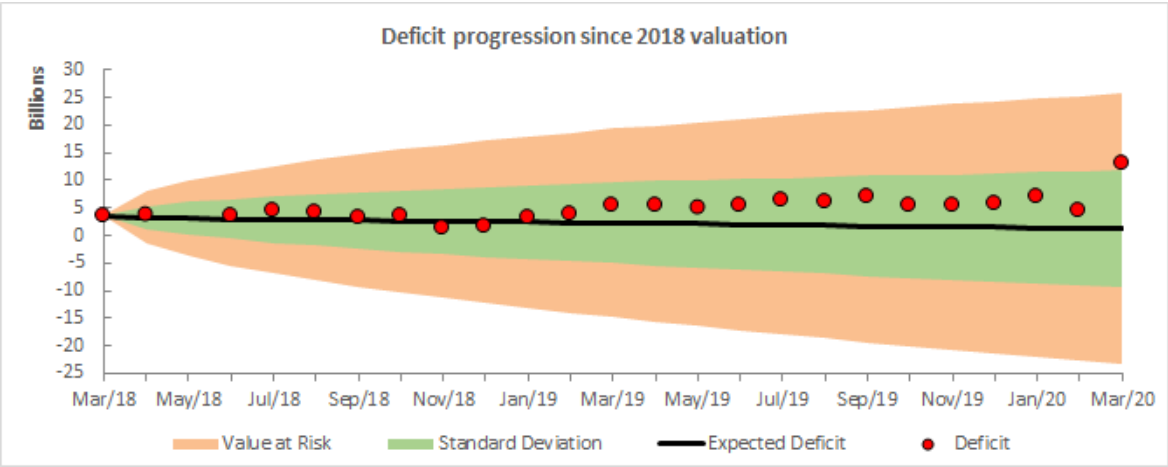
These are the Audit Committee and the USS Investment Management Audit, Risk and Compliance Committee.

Risk owners in the business are responsible for identifying and managing risks, enforcing risk management policies in their areas of responsibility and escalating risk issues promptly to senior management and the appropriate risk oversight functions.



3 Monitoring of key risk indicators

Key risk indicators (KRIs) are used to monitor risk levels relative to the board's risk appetite. Some of the most important KRIs include DB deficit measurement and projection indicators, investment risk indicators and risk event monitoring indicators. Examples of some of these are shown in this section.



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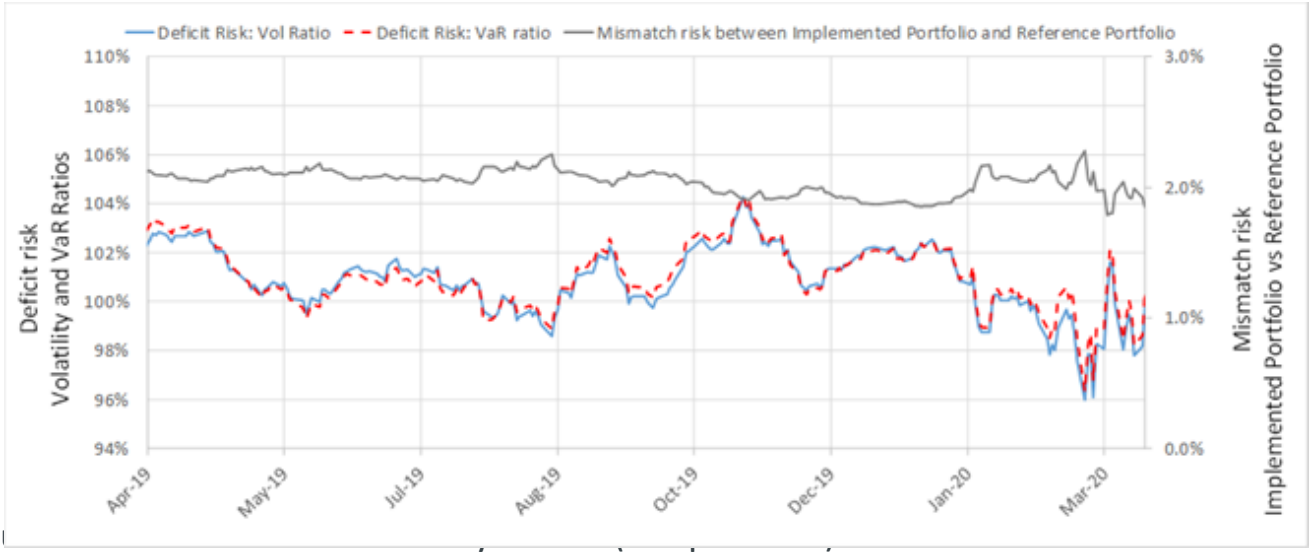
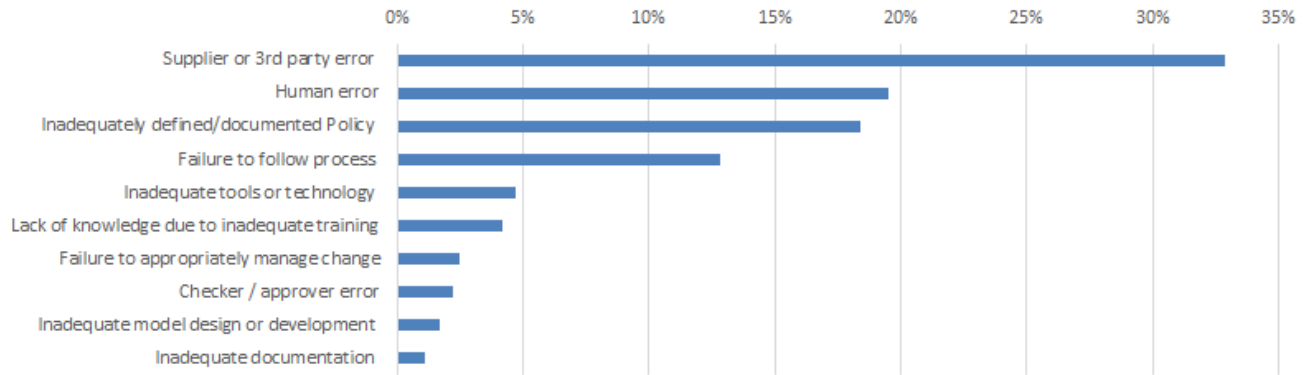
KRIs for DB investment risk relative to the DB reference portfolio

Investment risk is measured in three complementary ways (see the chart below). The first measure of investment risk reflects the mismatch between the implemented portfolio and the reference portfolio (the tracking error). This is a risk that should not be too small, because the mismatch between these two portfolios is essential to having the potential for outperformance, but it should also not be too large, because that would be outside risk appetite. Over the course of the year, this mismatch averaged 2.04% which is near the middle of the target range. This compares with an average of 2.16% in the previous year.

The second and third measures relate to the relative size of the risk to the deficit between the implemented portfolio and reference portfolio. These two measures showed that the deficit risk associated with the implemented portfolio was on average higher than the deficit risk associated with the reference portfolio and reflecting a slightly higher risk position than the previous year.

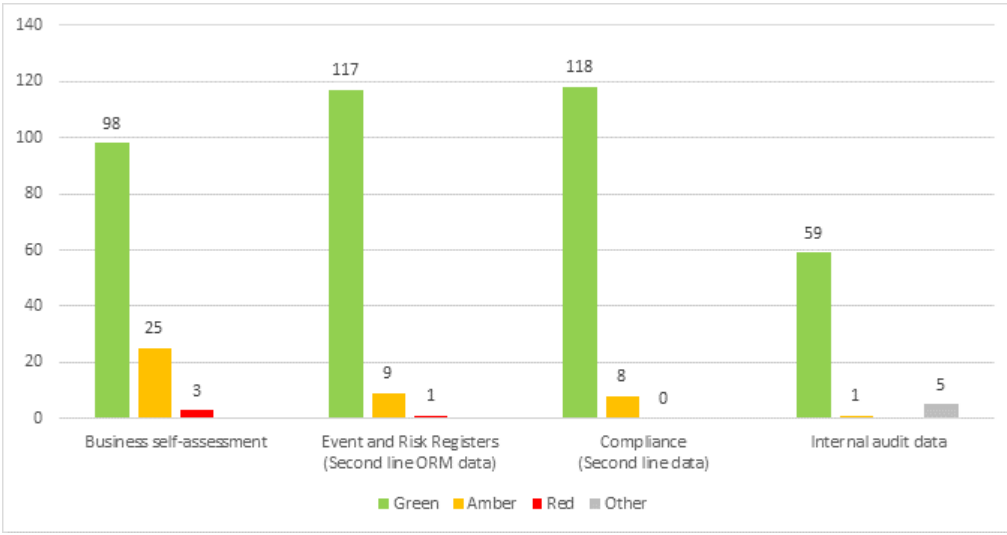


All risk events are assigned to a root cause category in our event management system. Results are aggregated by root cause in order to identify trends and any necessary corrective actions. The graph below shows the percentage split of events raised during the year across the top ten root cause categories.



Assurance map KRIs

The graph to the right is compiled from the Q1 2020 USSIM assurance map. Of the 126 processes identified in the USSIM business, each stakeholder group (first line of defence, operational risk, compliance and internal audit) have provided data on how many processes requires action (red) , require monitoring (amber) or do not require any action (green). For example internal audit have data on 65 of the 126 processes, of which they have rated 59 green , 1 amber and have highlighted 5 further processes where a view was pending the completion of planned audit activity. Comparatively, the first line of defence had data on all 126 of the processes, and rated 98 of these as green, 25 as amber and 3 as red.



4 USS Risk Culture Statement

USS enables its people to take or manage risks in conformance with its risk appetite and in support of its strategic objectives. It directs its people to conduct its business with regard to the risks arising from its legal and regulatory environment, ethical considerations, the needs of its stakeholders and other internal and external factors arising from its business environment that could jeopardise the achievement of its business objectives.

USS' people are expected to:

- Conduct themselves with integrity and sound business judgment;
- Take individual and collective responsibility for their risk-taking behaviour;
- Take a forward-looking and comprehensive view of risks;
- Identify, report, escalate and remedy risk events, losses, breaches and near misses rapidly; and
- Act to help promote USS' reputation with its stakeholders.

USS encourages a diversity of perspectives, values and beliefs in respect of risk management to ensure the status quo is challenged where necessary. USS views the reporting of risk events and near-misses as an opportunity to learn and improve business activities going forward.

USS encourages and values the acquisition of risk management skills and knowledge across all three lines of defence and provides sufficient resources to ensure its:

- People are adequately supported in their risk management responsibilities;
- People are clear about the risks they are taking or avoiding; and
- Risks are managed within risk appetite.

This includes providing appropriate resourcing for its risk management and oversight functions that is proportionate to the risks USS takes or avoids.

USS promotes a work environment based on Responsibility Accountability and Fairness (RAF). Our commitment to high standards of conduct and self- and collective-improvement includes learning from errors or near-misses and taking action to prevent recurrence.

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
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