

## Principal risks and uncertainties

### We identify and manage risks using our risk management framework

As a business our strategy is to deliver value by providing the best service to customers, at the lowest sustainable cost and in a responsible manner. In doing so the group is exposed to a range of internal and external risks of varying types which can impact upon these objectives. We therefore maintain a risk management framework to continually identify, assess and manage risks.

All parts of the group use the same risk management framework ensuring consistency of approach and supporting risk management and monitoring. The framework includes: an embedded governance and reporting process (see figure 1); an assessment and management process which is aligned to ISO 31000: 2009 (see figure 2); and a central database, tools and guidance to further support consistency, embedment and continuous improvement.

Leaders within the group’s individual business areas and functions are responsible for the assessment and management of risk including the identification and escalation of new/emerging circumstances and the monitoring and reporting on risk and control effectiveness. All event types (strategic, financial, operational, compliance and hazard) are considered in the context of their potential impact on the delivery of our business objectives. The assessment is based on the likelihood of an event occurring and the financial and reputational impact should the event occur. The assessment takes into account a gross position (without controls or assuming that all controls fail), a current position benefitting from existing controls and a targeted position where further mitigation is required to meet objectives or obligations.

The resulting risk profile is reported to the group board twice a year. The report covers four areas: the 10 highest ranked risks (based on likelihood x impact); a further five risks included due to the potential severity of their impact; risks that fall outside these categories but are included due to potential reputational impact or new/emerging circumstances; and a summary of all of the event-based risks within the profile relative to 10 principal risks (see pages 48 and 49) that could seriously affect the performance, future prospects or reputation of the business.

This approach is in line with the principles of the UK Corporate Governance Code and involves reporting to the group board for each full and half year statutory accounting period allowing the board to:

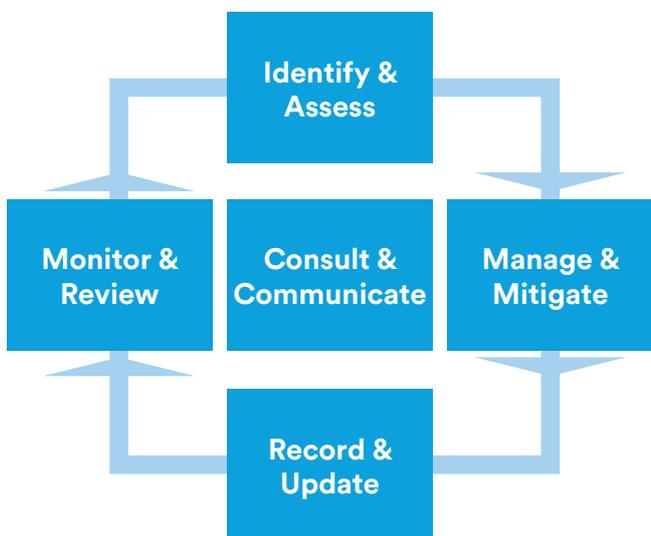
- determine the nature and extent of the principal risks it is willing to take in achieving its strategic objectives;
- oversee the management of those risks and provide challenge to executive management where appropriate;
- express an informed opinion on the long-term viability of the company (see page 71); and
- monitor risk management and internal control systems and review their effectiveness.

**Figure 1: United Utilities’ governance and reporting structure for risk management and internal control**

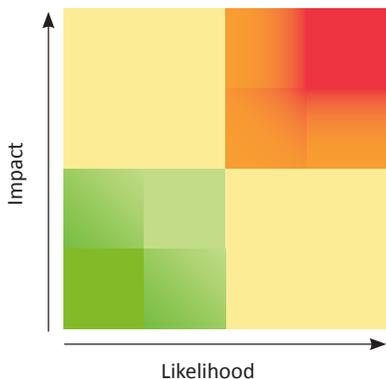


 Read our **Long-term viability statement** on page 71

**Figure 2: United Utilities' risk management process (adapted from ISO 31000: 2009)**



Our risk profile currently consists of around 200 event-based risks. By their nature, these will include all combinations of high to low likelihood and high to low impact. Heat maps (see figure 3) are typically used in various managerial and group reports either as a method to collectively evaluate the extent of multiple risks within a certain profile or to evaluate the effectiveness of mitigation for a single risk relative to the initial gross position.



**Figure 3: Indicative heat maps are used to evaluate and report risk**

**Key features and developments**

Regulatory, operational, compliance and delivery risks remain key features of the group's risk profile. The introduction of outcome delivery incentives by Ofwat after PR14 creates a regime of potential penalties and rewards based on meeting targets for the delivery of operational and capital programmes. In the context of customer service and operational performance, the Lancashire water quality incident in the summer of 2015 reinforced the requirement to consistently deliver clean, safe drinking water and to further mitigate risks to a continuous service through implementing greater resilience in the asset base.

Market Reform and the introduction of non-household retail competition in April 2017 requires significant preparation so that the group's retail and wholesale functions are in a position to compete successfully while continuing to operate compliantly and in accordance with the 'level playing field'.

Looking further ahead, the expected introduction of competition in sludge and water resource activities and the further promotion of the existing inset regime and the UK Government's consideration (announced November 2015) of legislation to enable household retail activities to become competitive at some future date all place risk on the group.

Climate change is also recognised as one of the sector's biggest challenges with significant and permanent implications on the water cycle and the long-term sustainability of the water and wastewater service including: water abstraction; supply and treatment capability; drainage and sewer capacity; and wastewater treatment and discharge efficiency and effectiveness.

**Principal risks**

The principal risks (aggregated clusters of event-based risks), which have been set out in the table on pages 48 and 49 reflect the categories of risks that define business activity or contributing factors where value can be lost or gained and could have a material impact on the business model, future performance, solvency or liquidity of the group. In each case the magnitude of the potential effect is highlighted together with the extent of management/mitigation. To ensure relevance with the current environment, issues or areas of uncertainty are also illustrated.

There continue to be two ongoing pieces of material litigation worthy of note, as outlined below. However, based on the facts currently known to us and the provisions in our statement of financial position, our directors remain of the opinion that the likelihood of these having a material adverse impact on the group's financial position is remote.

- In February 2009, United Utilities International Limited (UUIL) was served with notice of a multiparty 'class action' in Argentina related to the issuance and payment default of a US\$230 million bond by Inversora Eléctrica de Buenos Aires S.A. (IEBA), an Argentine project company set up to purchase one of the Argentine electricity distribution networks which was privatised in 1997. UUIL had a 45 per cent shareholding in IEBA which it sold in 2005. The claim is for a non-quantified amount of unspecified damages and purports to be pursued on behalf of unidentified consumer bondholders in IEBA. UUIL has filed a defence to the action and will vigorously resist the proceedings given the robust defences that UUIL has been advised that it has on procedural and substantive grounds.
- In March 2010, Manchester Ship Canal Company (MSCC) issued proceedings seeking, amongst other relief, damages alleging trespass against United Utilities Water Limited (Uuw) in respect of Uuw's discharges of water and treated effluent into the canal. Whilst the matter has not reached a final conclusion, the Supreme Court has found substantively in Uuw's favour on a significant element of the claim and the High Court has upheld UU's position on the remainder of the proceedings. We await to see whether MSCC pursue a further claim to introduce additional matters for determination.

## Principal risks and uncertainties

Risk description	Main business objective	Potential impact
<p><b>Regulatory environment and framework</b> The potential change in the regulatory environment and/or frameworks</p>	Lowest sustainable cost	Changes to regulation and the regulatory regime (either through political or regulatory events) may increase costs of administration, reduce income and margin and lead to greater variability of returns.
<p><b>Corporate governance and legal compliance</b> The failure to meet all legal and regulatory obligations and responsibilities</p>	Responsible manner	Non-compliance with existing or future laws/regulations (principally relating to the regulated business, but also including non-regulated activity/commitment) can result in additional workload, financial penalties, additional capital/operating expenditure (from enforcement orders or legal defence) and compensation following litigation. In more remote but extreme circumstances, penalties of up to 10 per cent of relevant turnover and ultimately revocation of our licence or the appointment of a special administrator are possible.
<p><b>Water service</b> The inability to provide a secure and resilient supply of clean, safe drinking water</p>	Best service to customers	Operational performance problems or service or asset failures can lead to additional operating or capital expenditure and/or increased regulatory scrutiny and regulatory penalties. In more extreme situations the group could also be fined for breaches of statutory obligations, be subject to enforcement action, be held liable to third parties and sustain reputational damage.
<p><b>Wastewater service</b> The inability to remove, treat and return wastewater to the environment in an effective, resilient and compliant manner</p>	Best service to customers	
<p><b>Security</b> The inability to protect people, information and assets from malicious or accidental activity</p>	Best service to customers	Our resources, assets and infrastructure are exposed to various threats (malicious or accidental) which could impact the provision of vital services and/or harm people or commercial businesses.
<p><b>Human, technological and physical resource</b> The inability to support/deliver effective and efficient business activity</p>	Responsible manner	The capacity or capability associated with human, technological and physical resource (including information, operational technology, skill sets, systems and telephony) can impact the efficiency and effectiveness of business activity, the ability to make appropriate decisions and ultimately meet targets. This can also affect the ability to recruit and retain knowledge/expertise or to recover effectively following an incident. In remote but extreme circumstances there is also the potential for higher levels of regulatory scrutiny, financial penalties, reputational damage and missed commercial opportunities.
<p><b>Financial risk</b> The inability to appropriately finance the business due to capital, credit, market, funding, liquidity or tax-related risk</p>	Lowest sustainable cost	The failure of financial counterparties could result in additional financing cost, an adverse impact on the income statement and potential reputational damage. Variability in inflation (as measured by the UK Retail Prices Index) and changes in interest rates, funding costs and other market risks could adversely impact the economic return on the regulatory capital value (RCV) and affect our pension schemes with a requirement for the group to make additional contributions. In extreme but remote cases adverse market conditions could affect our access to debt capital markets and subsequently available liquidity and credit ratings.
<p><b>Programme delivery</b> The ineffective or inefficient delivery of capital, operational and change programmes</p>	Lowest sustainable cost	Failure to deliver capital or change programmes against relevant time, cost or quality measures could result in a failure to secure competitive advantage or operating performance efficiency and cost benefits. There is also the risk of increased delivery costs or a failure to meet our obligations and customer outcomes which, depending on the nature and extent of failure, could result in an impact at future price reviews, regulatory or statutory penalties and negative reputational impact with customers and regulators.
<p><b>Revenues</b> The inability to maintain revenues and margin due to customer service provision</p>	Lowest sustainable cost	Poor service to customers can result in financial penalties issued by the regulator through components of the service incentive mechanism for household customers and loss of revenue associated with commercial churn for non-household customers using five megalitres and above per annum. The proposed opening of the market for retail services to all non-household customers in England from 2017 generates both opportunities and risk associated with market share, scale and margin erosion. There is also much uncertainty surrounding the form of upstream reform which is now anticipated to materialise after 2019.
<p><b>Health, safety and environmental</b> The potential harm to employees, contractors, the public or the environment</p>	Responsible manner	Working with and around water, sewage, construction and excavation sites, plant and equipment exposes people and the environment to various man-made and naturally occurring hazards. The nature and extent of exposure could result in harm to people, wildlife and natural habitats. Depending on the circumstances, the group could be fined for breaches of statutory obligations, be held liable to third parties and sustain reputational damage.

## Risk exposure

An indication of each category's current exposure relative to the previous year is shown by the arrow in the risk exposure column.



Current key risks, issues or areas of uncertainty include:	Risk exposure	Management and mitigation
<ul style="list-style-type: none"> <li>Market reform including non-household and upstream competition and, further ahead, the potential for the introduction of household competition</li> <li>A possible change from using the retail prices index to the consumer prices index for regulatory indexation</li> </ul>	↑	We engage in relevant government and regulatory consultations which may affect policy and regulation in the sectors where we operate. We also consult with customers to understand their requirements and proactively consider all the opportunities and threats associated with any potential change, exploiting opportunities and mitigating risks where appropriate.
<ul style="list-style-type: none"> <li>Competition law and regulatory compliance whilst preparing for and operating within a changing competitive market</li> <li>Current material litigation</li> <li>New higher fine levels for environmental offences</li> </ul>	↑	Legislative and regulatory developments are continually monitored. Risk-based training of employees is undertaken and we participate in consultations to influence legislative and regulatory developments. Funding for any material additional compliance costs in the regulated business is sought as part of the price determination process. The group also robustly defends litigation where appropriate and seeks to minimise its exposure by establishing provisions and seeking recovery wherever possible.
<ul style="list-style-type: none"> <li>Population growth</li> <li>Climate change</li> <li>Meeting infrastructure investment requirements</li> <li>Expected change to the abstraction licensing regime</li> <li>Catchment management</li> <li>Raw water quality</li> <li>Drinking water safety and security</li> </ul>	↔	Mitigation is provided through core business processes, including forecasting, quality assurance procedures, risk assessments and rigorous sampling/testing regimes. Ongoing system and network integration improves service provision and measures of success have been developed to monitor performance. Following the Lancashire water quality incident in 2015 we are further enhancing our approach to operational risk and resilience.
<ul style="list-style-type: none"> <li>Cybercrime</li> <li>Terrorism</li> <li>Other criminality relating to assets or operations</li> </ul>	↔	Physical and technological security measures combined with strong governance and inspection regimes aim to protect infrastructure, assets and operational capability. Recent initiatives include awareness training across the business relating to seven key areas of security and the implementation of a security governance model to oversee all aspects of security and security strategy. Ongoing system and network integration improves operational resilience and we maintain robust incident response, business continuity and disaster recovery procedures. We also maintain insurance cover for loss and liability and the licence of the regulated business also contains a 'shipwreck' clause that, if applicable, may offer a degree of recourse to Ofwat/customers in the event of a catastrophic incident.
<ul style="list-style-type: none"> <li>Delivering required employee engagement</li> <li>Personal development and talent management</li> <li>Technological innovation</li> <li>Asset management</li> </ul>	↔	Developing our people with the right skills and knowledge, combined with delivering effective technology are important enablers to support the business to meet its objectives. Employees are kept informed regarding business strategy and progress through various communication channels. Training and personal development programmes exist for all employees in addition to talent management programmes and apprentice and graduate schemes. We focus on change programmes and innovative ways of working to deliver better, faster and more cost-effective operations.
<ul style="list-style-type: none"> <li>Stability of financial institutions and the world economy</li> <li>Economic uncertainty</li> <li>Inflation/deflation</li> <li>Financial market conditions, interest rates and funding costs</li> <li>Brexit</li> </ul>	↑	Refinancing is long-term with staggered maturity dates to minimise the effect of short-term downturns. Counterparty credit, exposure and settlement limits exist to reduce any potential future impacts. These are based on a number of factors, including the credit rating and the size of the asset base of the individual counterparty. The group also employs hedging strategies to stabilise market fluctuation for inflation, interest rates and commodities (notably energy prices). Sensitivity analysis is carried out as part of the business planning process, influencing the various financial limits employed. Continuous monitoring of the markets takes place including movements in credit default swap prices and movements in equity levels.
<ul style="list-style-type: none"> <li>Security of supply</li> <li>Delivery of solutions</li> <li>Quality and innovation</li> <li>New contract delivery partnerships for the 2015–2020 period with a new approach to construction and design</li> <li>Price volatility</li> </ul>	↔	We have a developed and clear view of our investment priorities which are built into our programmes, projects and integrated business and asset plans. We have created better alignment and integration between our capital delivery partners and engineering service provider including alignment with our operating model. Our programme and project management capabilities are well established with strong governance and embedded processes to support delivery, manage risks and achieve business benefits. We utilise a time, cost and quality index (TCQI) as a key performance indicator and enhance our performance through a dedicated programme change office to deliver change in a structured and consistent way. Supply chain management is utilised to deliver end-to-end contract management which includes contract strategy and tendering, category management, security of supply, price and price volatility and financial and operational service level performance.
<ul style="list-style-type: none"> <li>Socio-economic deprivation in the North West</li> <li>Welfare reform and the impact on domestic bad debt</li> <li>Competition in the water and wastewater market and competitor positioning</li> <li>Brexit</li> <li>Market Reform and the ability to treat other participants equally</li> </ul>	↑	For Domestic Retail there is a transformation plan in place covering a wide range of initiatives and activities to improve customer service, with a number of controls in place to monitor achievement against the plan. Similarly, within Business Retail we look to retain existing and acquire new commercial customers by striving to meet their needs more effectively. We monitor competitor activity and target a reduction in operating costs. Within our wholesale department processes, systems, data and organisational capacity and capability to deal with market participants and the central market operator are being prepared. The new market requirements will require all market participants to treat other participants equally ('on a level playing field') whilst maintaining compliance with existing regulations.
<ul style="list-style-type: none"> <li>Excavation, tunnelling and construction work</li> <li>Working with water and wastewater</li> <li>Chemicals</li> <li>All weather conditions</li> <li>Driving, vehicle movement</li> </ul>	↔	We have developed a strong health, safety and environmental culture where 'nothing we do at United Utilities is worth getting hurt for'. This is supported by strong governance and management systems which include policies and procedures which are certified to OHSAS 18001 and ISO 14001.