



Reporting on risks, uncertainties, opportunities and scenarios

Closing the gap



September 2021



Financial Reporting Council

Contents

Quick read	3
What information do investors want to understand?	5
Governance and processes	7
Nature	10
Approach	22
Scenarios and stress testing	30
Appendices	35
Appendix 1: Regulatory glossary	36
Appendix 2: Process and participants	37

Examples used

Our report highlights examples of current practice that were identified by the Financial Reporting Lab (Lab) team and investors.

Not all of the examples are relevant for all companies, and all circumstances, but each provides an example of a company that demonstrates an approach to useful disclosures. Highlighting aspects of reporting by a particular company should not be considered an evaluation of that company's annual report as a whole.

Investors have contributed to this project at a conceptual level. The examples used are selected to illustrate the principles that investors have highlighted and, in many cases, have been tested with investors. However, they are not necessarily examples chosen by investors, and should not be taken as confirmation of acceptance of the company's reporting more generally.

If you have any feedback, or would like to get in touch with the Lab, please email us at: financialreportinglab@frc.org.uk.

Quick read

A need for disclosure

Companies seek to seize and deliver on opportunities that create long-term value that are aligned to their purpose. But every opportunity and every action (or inaction) has an associated risk. Investing is as much about assessing the risk as the related opportunity. This means that all organisations have a story to tell on these topics to investors, regulators and other stakeholders. But is this story clear, is it connected and does it reflect the organisation's processes?

Connected reporting

This is not the first time that the Lab has specifically looked at the connected areas of risk, uncertainty, opportunity and viability, and in fact many of our projects indirectly cover these areas. We find that there remains a gap between the information users want and the disclosures that organisations provide. This disclosure gap looks set to widen with climate-related uncertainty and an increased demand for enhanced Environmental, Social and Governance (ESG) reporting*.

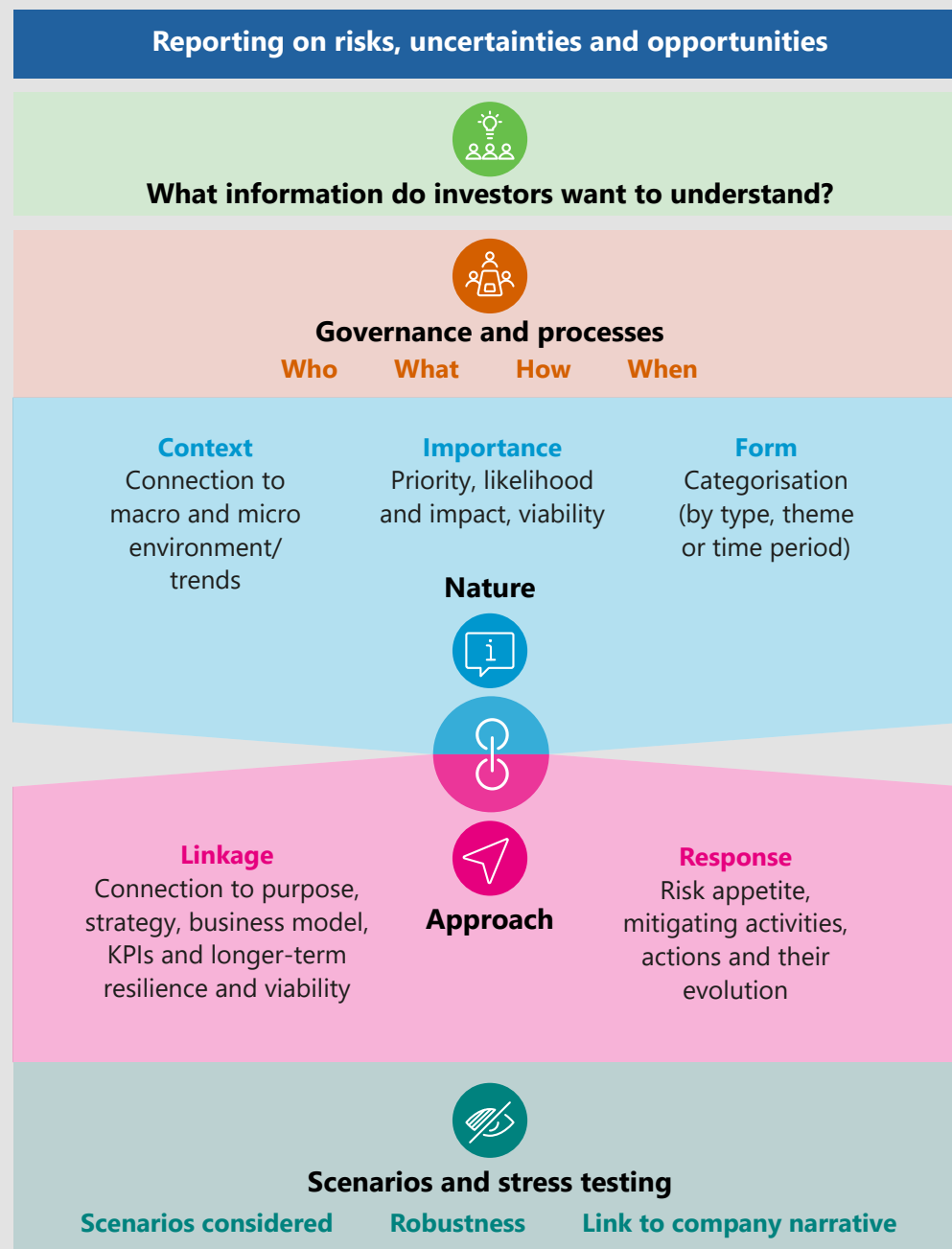
Time to close the gap

Our discussions with companies have shown that the COVID-19 pandemic has, for many companies, led to a more interconnected approach to navigating risks and opportunities. This new approach is supported by dynamic consideration of uncertainty and longer-term scenario and stress testing. Whilst many companies are beginning to change and improve the way they manage risk, uncertainty and opportunities, this is not always translating into useful disclosure. Investors commented that companies generally communicate opportunities well. However, it is the integration of opportunities and risks and in providing a comprehensive understanding of the risks where company disclosures are not meeting their needs. The focus of this report, therefore, is on the components of information that investors want to see. It provides examples of company disclosure elements that have more closely addressed these needs.

Investor needs

The graphic summarises the key areas identified about which investors seek information relating to risks, uncertainties and opportunities.

* The FRC published its [statement of intent on ESG challenges](#) in July 2021.



Investors seek information relating to risks, uncertainties and opportunities that contributes to their understanding of a company's business model, longer-term strategy, resilience and viability. There is an interrelationship between risks, uncertainties and opportunities and this may change due to internal and external factors. These factors should be identified and considered for appropriate responses to be taken.

Investors want information that builds their understanding of:

- **Governance and processes** – Before understanding the nature of the risks, uncertainties and opportunities, investors want to understand how the board and management identifies, monitors and manages these areas and responds in an agile way. This is useful to build a picture of a company (especially when investors might be new to a company) and helps to build confidence in management.
- **Nature** – Investors want to build their knowledge of the risks, uncertainties and opportunities through disclosure addressing:
 - Context: what is the company's market position and how does it view macro and micro trends and themes?
 - Importance: how does it fit within the company's plans, how big is it, what is the likelihood and what priority attaches to it?
 - Form: how does the company identify and classify the risks, how do the risks align or connect with the opportunities and the wider company narrative and reporting?
- **Approach** – Investors want to understand how management are responding to the risks, uncertainties and opportunities. This requires information about:
 - Linkage: to the wider strategy, business models and metrics that allow the monitoring of risks and opportunities.
 - Response: what is management tangibly doing to mitigate the risk (where relevant) and take forward the opportunity, what have they already done, what will they do in the short, medium and long term and how does this affect wider viability and resilience?

- **Scenarios and stress-testing** – Investors want to understand more fully what is on the company's horizon and how this is integrated into the risk and opportunity process. They seek to understand how uncertainty impacts the risks and opportunities and how scenarios provide insight into the range of possible futures. Scenarios are only truly useful if they are company-specific and incorporate information consistent with that provided elsewhere. Investors want to know that such exercises are conducted by the company and whether and how they influence its strategic decisions and, ultimately, its business model.

Challenge

Many companies have evolved their internal processes and conversations around risks, uncertainties and opportunities, and these are becoming more integral to strategy and operations. However, our conversations with investors have highlighted that external reporting does not, at present, adequately report this.

This is, and will continue to be, a challenge for companies, specifically their risk functions. This report highlights examples of where more consistent reporting of risks and related uncertainties and opportunities is beginning to emerge. We challenge companies to reflect this progress in their disclosures and make risk and opportunity reporting a key part of their strategic narrative.

Regulatory context

Recent corporate failures have driven a range of conversations on the regulatory framework. To this end, the Department for Business, Energy and Industrial Strategy (BEIS) recently concluded a [consultation](#) on 'Restoring trust in audit and corporate governance'. The reform programme aims to strengthen trust in company reporting, and many of the considerations covered in this report are key to that aim.

This report was written before the finalisation of the reform process and therefore reflects the regulatory environment as at release (see Appendix 1). That being said, our conversations with investors and preparers were far-reaching. Where we received investor and company views on topics related to resilience and other topics mentioned in the BEIS consultation, we have included these within this report.



What information do investors want to understand?

Companies seek to seize and deliver on opportunities that create long-term value that are aligned to their purpose. But every opportunity and every action (or inaction) has an associated risk. Investing is as much about assessing the risk as the related opportunity. Investors have always been interested in the risks that companies face and the impact of those risks on longer-term viability and business models. This interest was brought into sharp focus with the 2008-09 financial crisis where the management and assessment of risk and viability were shown to be lacking. Regulators responded by enhancing risk and viability reporting requirements. The COVID-19 pandemic has created an opportunity to reassess how risks are considered and reported. Through our outreach, investors commented that companies generally communicate opportunities well. However, it is the integration of opportunities and risks and in providing a comprehensive understanding of the risks where company disclosures are not meeting their needs.

Investors look for principal risk and uncertainty reporting that is specific to the company and that avoids boilerplate disclosure and jargon. Investors seek to understand both the principal risks and uncertainties identified by the company and how these are being managed. They gain confidence in management when such reporting is linked to the business model, shows any changes in risk year-on-year and gives some indication of potential impact. They want to understand how the risk management framework and mitigation tool kit have adapted and changed in the face of the COVID-19 pandemic and how those changes more effectively equip the company for an uncertain future. They also need to understand how and where these uncertainties might impact the company and the opportunities and the risks relevant to the company's future.

Uncertainty

Uncertainty is key in any discussion of risks and opportunities. It is relevant in two ways – firstly, in the consideration of the principal 'uncertainties' the company faces, which form part of the principal risks and uncertainties reporting requirement ([see Appendix 1](#)); and secondly, there may be specific types of uncertainty, such as an estimation, event or timing and action uncertainty that are inherent in the risks and opportunities themselves.

“Without downside, there is no upside” Investor

Better disclosure would help investors to understand the most relevant uncertainties the company faces, for example through a consideration of these uncertainties in a scenario analysis context, and how the company's risks and opportunities are affected by inherent uncertainties.

The following types of uncertainty were specifically identified in our discussions with companies:

- **Estimation uncertainty** – Many companies use models and estimates to help value assets and liabilities, identify potential impacts and provide some directional guide to management. Estimates and models by their nature are subject to uncertainty and this is especially the case where a range of assumptions would have been acceptable. Where such uncertainty exists, investors want to understand what the key assumptions are, what process management has to monitor the appropriateness of the assumptions and how changes might impact the outcome.
- **Event uncertainty (*sometimes referred to as Black Swan events*)** – This is the uncertainty of large and divisive events that could not be predicted (or were deemed highly unlikely to emerge). Examples range from the COVID-19 pandemic, to a sudden emergence of a new, disruptive technology. Where such uncertainty exists, investors want to understand a company's process for identifying such events and how that connects with the ability to respond in the short term, and the company's resilience over the longer term.
- **Timing and action uncertainty** – This is the uncertainty that results from an inability to control all actions or the timing of such actions (and reactions). Examples include the negotiations around the UK's exit from the EU, or changes to the competitive landscape. Where such uncertainty exists, investors want to understand the company's key actions and how these flow through to strategy.

Whilst companies are often uncomfortable disclosing the uncertainty they face, it should be considered as part of the whole annual report. Disclosures around uncertainty are not standalone as they connect elements of strategy, risk, viability and resilience.

The graphic summarises the key information that investors told the Lab they want to understand, and which companies should consider reporting. It builds on the work conducted in the Lab's 2017 [Risk and Viability](#) report and introduces some 'new' areas raised by investors. However, it is clear that issues identified in 2017 remain relevant.

This report is divided into four broad areas, reflecting what information investors want to understand about risks, uncertainties and opportunities:

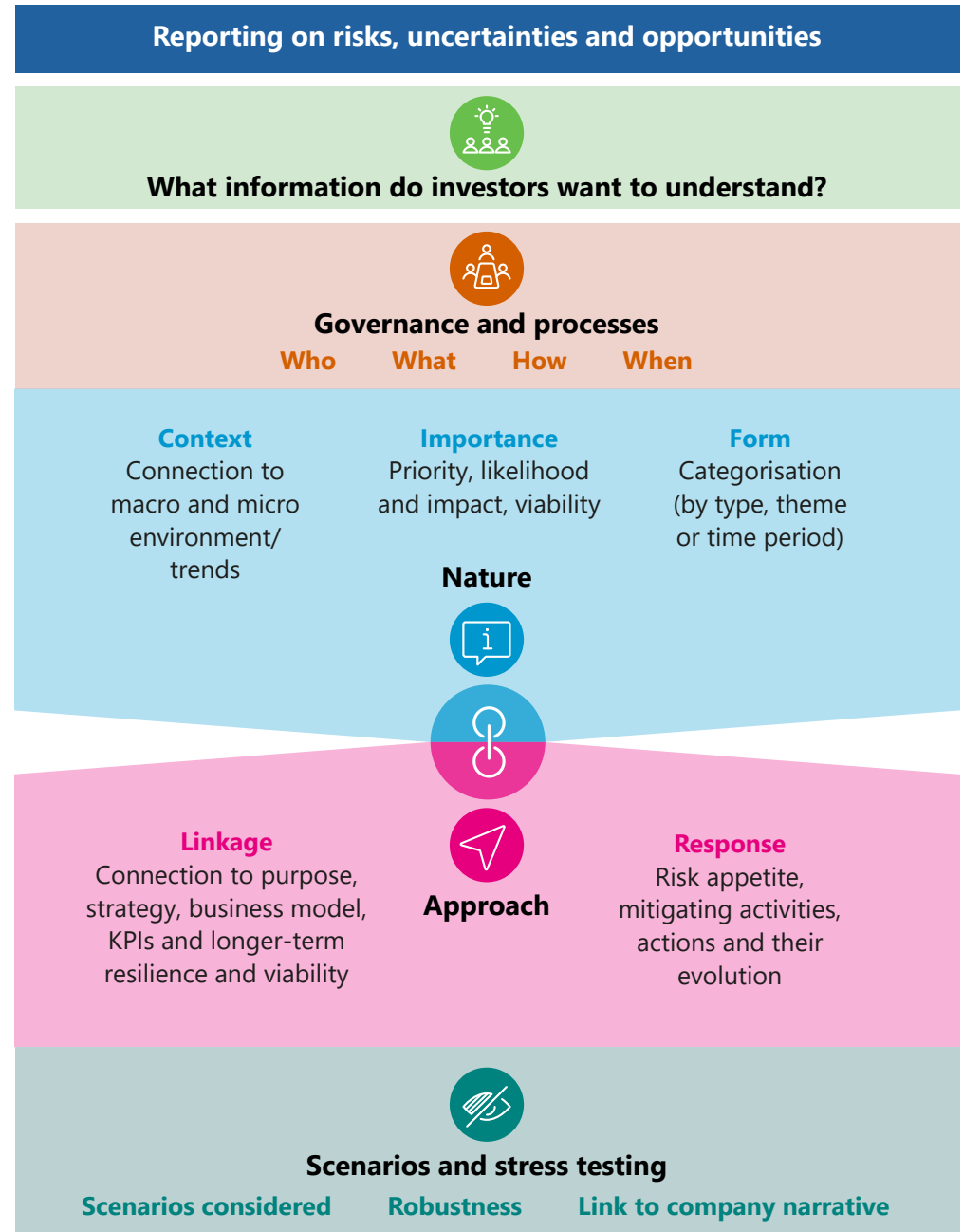
- **Governance and processes:** which provides an overview of the risk management structures and processes that investors value;
- **Nature:** which looks at the characteristics of the information investors want to see;
- **Approach:** which highlights the information needs associated with the actions taken to address risks, uncertainties and opportunities and how these impact on other areas of a company's reporting; and
- **Scenarios and stress testing:** which looks at how risks, uncertainties and opportunities are reflected in the various scenarios and stress tests conducted by a company.

Risk, opportunity and the code

The UK's [Corporate Governance Code](#) recognises that the board is central in identifying, monitoring and managing risks and opportunities. The Code (and guidance) identifies a number of elements that a company can consider to manage risk and opportunities, including:

- the identification of emerging risks;
- the integration of risks and prospects over the longer-term into consideration of organisational viability; and
- the need for risk management frameworks and controls, including a regular assessment of both.

Investors value disclosures that support their assessment of these key elements of governance.





Governance and processes

Investors want to understand:

- What relevant governance structures and processes are in place.
- How effectively these have functioned.
- How quickly a company can modify these to react to external factors.

Risk management is only as effective as the processes that underpin it and the governance structures in place to oversee it. Investor participants want certainty that appropriate and effective processes and structures are in place. They also seek clarity regarding the agility and dynamic nature of these to respond quickly to internal and external factors, such as the effects of the COVID-19 pandemic.

‘Who’ and ‘What’

Reporting ‘who’ is responsible for ‘what’ in the context of risk management is useful to illustrate accountability for, and management of, different risks within a company. This can be linked to the role of the board and its committees to illustrate how the entire structure is intended to function.

Providing insight into what the board (or delegated entity) has been presented with shows the areas of focus for the different divisions of the company and how these have been considered by senior management. For example, a number of companies discuss bottom-up and top-down approaches to risk management. Better examples provide detail regarding the functions involved in both and their oversight responsibilities.

‘How’ and ‘When’

Understanding who and what is being monitored is only truly useful in the context of how the process is undertaken.

This may include information about the responsibilities of different groups within the structure, for example the board being responsible for setting and applying the company’s risk appetite and the Risk Committee examining the outcome of the work of internal risk management teams and reporting this to the board and others.

“When it comes to risk processes (most companies) have the paints, they are just not painting the picture” Investor

From mitigation to agility

The COVID-19 pandemic illustrated the need for agility in the way companies responded to the difficulties they faced. In many interviews we conducted, companies explained how their risk management process had changed in response to the COVID-19 pandemic. Changes included more frequent meetings, additional ‘board time’ and focus and, in some instances, a shortening of the decision-making chain. Reporting these changes externally allows investors to gauge how responsive and agile a company can be when facing difficult situations in the future. This reporting should include whether and how such changes influence existing practice or are likely to be incorporated on a longer-term basis (if at all).

Helping investors to understand

Extract

What relevant governance structures and processes are in place.

[Croda International plc](#)

How effectively these have functioned.

[International Airlines Group plc](#)
[Coca-Cola European Partners plc](#)

How quickly a company can modify these to react to external factors.

[International Airlines Group plc](#)
[Coca-Cola European Partners plc](#)



What is useful?

Croda clearly identifies what is being monitored including current risks (differentiated by category) and emerging risks. The frequency of the meetings of the various groups and the actions taken is also specified, as is the link between the risk structure, risks assessment and the risks themselves.

Our risk framework

What we monitor

Executive Risk Register

Summary of the key risks facing us prepared by combining key risks identified through the local bottom-up registers with Group-level risks identified and owned by the Executive Committee

Our risk landscape

Current risks
Risks we are managing now that could stop us achieving our strategic objectives

Emerging risks
Risks with a future impact from external or internal opportunities or threats. These can be slow moving, as well as rapid velocity

What we assess

- **Risk ownership:** each risk has a named owner
- **Likelihood and impact:** globally applied 6x6 scoring scale
- **Gross risk:** before mitigating controls
- **Mitigating controls:** subject to internal audit review and monitoring
- **Net risk:** after mitigating controls are applied
- **Risk appetite:** defined at generic risk and subcategory level and transparent through our risk dashboard
- **Actions:** for further mitigation if required

Our identified risks

- Six categories, 17 subcategories, over 50 generic risks, one framework:
- Strategic
 - People and culture
 - Process
 - External environment
 - Business systems and security
 - Financial

Our bottom-up registers

The core of our risk assessment. Owned by market sectors, regions, manufacturing sites and functions, they identify local risks and mitigating controls arising from day-to-day operations in over 30 risk registers globally

How we monitor

Board p68

Responsible for the risk framework and definition of risk appetite. Reviews key risks with an opportunity for in-depth discussion of specific key risks and mitigating controls annually. Approves the Viability Statement.

Audit Committee p70

Reviews the effectiveness of the Group risk management process. Reviews assurance over mitigating controls, directing internal audit to undertake assurance reviews for selected key risks. Reviews viability scenario assessments.

Risk Management Committee p63

Meets quarterly to monitor and review risks other than SHEQ and Ethics. Standing agenda item to monitor business IT systems and cyber risks and currently Brexit and COVID-19 risk. Covers proactive risk management, risk monitoring and mitigation and internal and external emerging risks including consideration of the significance of climate-related risks and emerging regulatory requirements. Receives an in-depth presentation of specific key risks and mitigating controls from risk owners at each meeting. Considers the results of internal audit work for all risks.

Group SHEQ Steering Committee p63

Meets quarterly to review Safety, Health, Environmental and Quality (SHEQ) risks. Monitors against stretching targets and agreed KPIs. Considers the results of assurance audits over SHEQ controls.

Group Ethics Committee p63

Meets quarterly to review ethics and compliance risks. Monitors against agreed KPIs. Considers the results of assurance audits over Ethics controls.

International Airlines Group

Annual Report and Accounts 2020 page 78



What is useful?

IAG details the board and its delegates' responsibility in the management of risks. In addition to discussing the risk structure in place, it also identifies the specific changes made in response to the pandemic, their effectiveness and the speed with which such modifications can be made and related benefits of these identified to date.

Coca-Cola European Partners plc

2020 Integrated Report and Form 20-F page 51



What is useful?

CCEP uses a case study to illustrate its approach to managing the risks associated with the COVID-19 pandemic. It identifies new teams created and adjustments made to established teams and their processes, in addition to the actions taken by the company.

The Board of Directors has overall responsibility for ensuring that IAG has an appropriate risk management framework, including the determination of the nature and extent of risk it is willing to take to achieve its strategic objectives. The Board has oversight of the Group's operations to ensure that internal controls are in place and operate effectively. Management is responsible for the effective operation of the internal controls and execution of the agreed risk mitigation plans.

The Group has an Enterprise Risk Management (ERM) policy which has been approved by the Board. This policy sets the framework for a comprehensive risk management process and methodology, ensuring a robust identification and assessment of the risks facing the Group, including emerging risks. Enterprise risks are assessed and plotted on an Enterprise risk map (with individual risk maps produced for each operating company and relevant function, such as IAG Tech and IAG Group Business Services, and for the overall Group). This process is led by the Management Committee and best practices are shared across the Group.

This year, in response to the pandemic crisis, the risk management framework has further evolved to: develop the Group's assessment of the interdependencies of risks; built on scenario planning to quantify risk impact under different assumptions; and consider the risks within the Group's risk map that have increased either as a result of the external environment or as a result of decisions made by the business in response to the external environment. The process adopted this year has helped the Board and management to respond quickly to the new and rapidly changing risk landscape, enabling clear understanding and identification of emerging risks arising from the impact of the pandemic and of how the pandemic has affected existing risks included within the Group's existing risk maps.

CASE STUDY

Business continuity and our response to COVID-19

When the COVID-19 pandemic struck in Western Europe, we immediately instigated our business continuity and resilience processes. One of the first steps was to establish the TCCC and CCEP wide incident and crisis management response teams, which worked seamlessly throughout the first wave. This was a complex process as national data and new government legislation was analysed to create one aligned response across our territories. At the height of the pandemic, the teams met on a daily basis and our open lines of communication with senior management meant that decisions were made quickly and effectively.

We were also able to learn from other Coca-Cola system teams in Asia, which helped us in the early stages to develop key processes and procedures. In January 2020, we held a simulation test at our Wakefield production facility in GB, which helped us to establish new procedures such as shift

patterns, social distancing measures and cleaning regimes. We also developed guidelines for the appropriate use of PPE for our sales force to support their visits to our customers. In addition, we helped our people working from home with cyber training and guidelines on data privacy, as well as ensuring they had the correct equipment to work safely, including the provision of monitors and other IT equipment.

As a result, we have developed a CCEP wide pandemic handbook, a state of the art document, with hot links, which contains all the relevant processes, procedures and communications guidelines to assist our corporate functions and local business leaders. We continue to monitor the situation and brief senior managers on a regular basis.

The BCR team was awarded European Resilience Team of the Year 2020 by the Business Continuity Institute and the Director of BCR won Global Business Continuity Manager of the Year 2020 from the Continuity Insurance and Risk professional body. Both institutions are world renowned and represent resilience professionals across the globe.



Nature

Context

Investors want to understand:

- The company’s view of the macroeconomic, microeconomic and geopolitical environment and the industry-wide risks and uncertainties faced.
- How the company monitors external factors and how they are incorporated into scenario analysis and planning for the future.

External factors

A significant component of risk management involves monitoring factors, many of which are external to the company, that may impact the company and its operations.

Investors are interested in the company’s view of macroeconomic, geopolitical and industry-wide risks as this provides insight into its view of the economic and political landscape. Using these views, in conjunction with their own insights, investors are able to formulate a more complete picture of the environment in which the company operates and how it is responding. Where relevant, a discussion of the opportunities and connected risks identified and whether and how the company plans to exploit, manage and mitigate these adds to investors’ understanding of the company.

Link to horizon scanning and scenario planning

Scenario reporting should provide insight into a company’s horizon scanning process and the effectiveness of its risk identification approach. Reporting of **scenarios** is further discussed later in this report. Investors are interested in how companies determine when emerging risks and uncertainties are ‘escalated to’ principal risks and whether any potential opportunities are identified and exploited.

Investors want to understand how the external environment has been considered in the various scenarios reported by companies. Of particular importance is information that allows them to understand the potential downsides associated with external factors considered in the scenarios.

Responding to the COVID-19 pandemic

The COVID-19 pandemic brought with it significant business disruption, both domestically and internationally. Governments responded with increased business support measures. The business landscape and working conditions changed overnight and many companies had to adapt quickly to unprecedented levels of disruption.

Changes to the environment exposed companies to different and sometimes unexpected risks (for example, not many companies foresaw having to consider the risks associated with the majority of their workforce working from home).

In 2020, the Lab produced a **series of reports** that identified what information investors sought from companies responding to the COVID-19 pandemic. These focused on the key areas investors sought information on, specifically related to resources, action and the future and how companies could enhance their reporting on going concern, risk and viability.

Helping investors to understand

Extract

The company’s view of the macroeconomic and geopolitical environment and the industry-wide risks and uncertainties faced.

[Rolls-Royce Holdings plc](#)

How the company monitors external factors and how they are incorporated into scenario analysis and planning for the future.

[Taylor Wimpey plc](#)



What is useful?

Rolls-Royce not only provides its view of the trends evident in its industry, but also illustrates how such general circumstances have specific impacts on its divisions.

Further detail is provided regarding the market environment for each of its divisions, which is linked to the respective risks and opportunities.

BUSINESS ENVIRONMENT

GROUP TRENDS

COVID-19

In 2020, the Group's performance was significantly impacted by COVID-19. This was most strongly felt in our widebody business in Civil Aerospace, but also in business aviation and Power Systems. Conditions in Defence proved resilient despite the challenging global macroeconomic environment.

Market recovery

The Group expects its key markets to recover over time. Power Systems is expected to recover relatively quickly as economic conditions improve, while a more gradual improvement is expected in Civil Aerospace. Longer term, the outlook remains strong across the Group; global economic growth is expected to increase demand across Civil Aerospace, ITP Aero and Power Systems, while political tensions are expected to preserve the need for Defence products and services.

Our positioning

The Group expects to outperform many of its markets through this recovery period. In Civil Aerospace and ITP Aero, this is driven by our young installed base and strong product positions on new aircraft programmes. In Power Systems, this is due to growing market share in key markets and expanding our sales in low carbon products as our end markets transition to more sustainable power.

Low carbon power solutions

The Group sees common trends across all of its businesses towards electrification and lower carbon power solutions. This shift provides significant opportunities due to our strong technology positions in hybrid and electric power solutions in Power Systems and Civil Aerospace, as well as in small modular reactors and microgrid solutions.

CIVIL AEROSPACE

Market dynamics

- The civil aviation industry has been severely affected by the COVID-19 pandemic, with a particular impact on the widebody market.
- As a result, airlines have postponed investment in new aircraft, leading to a reduction in aircraft production from both Airbus and Boeing.
- Business aviation has also seen a reduction in activity as a result of the COVID-19 pandemic, however the impact was less severe than in the large commercial market.
- In the longer term, the business expects to return to growth, driven by the same market trends witnessed prior to COVID-19:
 - economic growth in both the developed and the developing world;
 - growth in business jet travel supported by further increases in the number of high-net-worth individuals; and
 - the need for newer, more efficient aircraft with reduced greenhouse gas emissions.

Opportunities

- The business has the potential for market share gains during COVID-19, as our relatively young installed base should be less impacted by retirements and recover more quickly than our competitors.
- The strong positions we hold on current in-production widebody aircraft should drive a return to growth in our installed base post-COVID-19.
- In business jets, we hold a strong position in the market by value. This market has been less impacted by COVID-19 and has good long-term fundamental drivers.
- We have the potential to disrupt new markets with sustainable power solutions in general aviation, commuter aircraft and urban air mobility.

Risk

- A slower than expected recovery of the civil aerospace market from the COVID-19 pandemic could significantly impact our financial performance.
- If our products do not achieve their required technical attributes, then our financial performance and reputation could be impacted.
- If a major product failure in service is experienced, then this could result in loss of life and significant financial and reputational damage.
- If there is disruption to the business' internal or external supply chain then our financial performance and reputation could be impacted.
- If there are significant changes to the regulatory environment for the airline industry, the business' market position could be impacted.



What is useful?

Taylor Wimpey identifies specific aspects of the market environment and why they are important to the company with the '2020 backdrop' illustrating current conditions.

The company describes the expected impact over the short and long term (and links to principal risks), providing an indication of longer-term planning.

Our market environment continued

Key drivers	2020 backdrop	Short term implications	Long term implications	Links to Principal Risks
<p>Interest rates and mortgage availability</p> <p>Interest rates and mortgage availability determine housing affordability and accessibility for our customers. Interest rates are at an historic low and for customers able to access the housing market currently, servicing mortgage payments is, on average, cheaper than renting (source: Bank of England, Nationwide). At 7.7 times median income for England and Wales in 2019 (source: ONS), the house prices to earnings multiple remains high. Stricter rules on mortgage lending were introduced in 2014, aimed at ensuring customers will be able to meet their mortgage payments if interest rates increase. The average age of a first time buyer is 34 (source: Money.co.uk), suggesting there remains considerable unmet demand.</p>	<ul style="list-style-type: none"> The bank rate was reduced to an historic low of 0.1% on the 19 March Initially as the pandemic hit, some mortgage products were withdrawn, particularly high loan to value (LTV) Whilst widespread lending has returned, there is still a reduction in the higher LTV products 	<ul style="list-style-type: none"> Expect interest rates to remain low and mortgage payments to continue to be affordable and generally lower than rental payments May take time for high LTV mortgage products to return, which could foster increased demand for new homes where Help to Buy is available for first time buyers 	<ul style="list-style-type: none"> Interest rates expected to remain low and mortgage payments to remain affordable We expect to see higher LTV mortgage products return to market 	<p>Impact of the market environment on mortgage availability and housing demand</p> <p>Key stakeholder concerns</p>
<p>Employment</p> <p>The UK employment rate has implications on the number of customers able and willing to buy new houses.</p> <p>A healthy employment outlook is important for general consumer confidence in the housing market and the wider economy.</p> <p>In previous cycles, higher unemployment has been a contributory factor to a weaker housing market.</p>	<ul style="list-style-type: none"> UK unemployment rose to 5.0% in November 2020 (1.2% higher than the prior year (source: ONS)), with the Coronavirus Job Retention Scheme (CJRS) preventing a larger rise The CJRS is due to end in April 2021, which may lead to a further rise in unemployment 	<ul style="list-style-type: none"> The Office of Budgetary Responsibility estimates that UK unemployment will increase to 7.75% in mid 2021 High unemployment can impact housing market sentiment Unlike other periods of high unemployment, this is most concentrated amongst specific sectors such as leisure 	<ul style="list-style-type: none"> A long term healthy employment outlook is important for housing as well as the rest of the economy If unemployment rebounds quickly and remains concentrated in certain industries, it seems likely that the housing market will remain robust, but if this results in longer term unemployment of a more structural nature this could pose a threat to our sector and the wider economy 	<p>Impact of the market environment on mortgage availability and housing demand</p> <p>Key stakeholder concerns</p>
<p>Help to Buy</p> <p>Help to Buy has been popular with our customers, supporting them to get onto the housing ladder and in moving up the housing ladder. Under the current scheme the Government will lend up to 20% of the value of a new build home (40% within Greater London) via an equity loan (interest free for five years) to homebuyers able to meet certain criteria, including raising a 5% deposit. From April 2021, the scheme moves into its next phase, limited to first time buyers and has introduced regional maximum price caps with the scheme due to end 31 March 2023. We believe that the changes announced are appropriate and are in the best long term interests of the housing market and homebuyers.</p>	<ul style="list-style-type: none"> In 2020, a technical build extension of two months for the first scheme of Help to Buy was granted to compensate for delays caused by COVID-19 	<ul style="list-style-type: none"> Scheme changes from April 2021 which will restrict Help to Buy to first time buyers and there will be maximum regional price caps Changes have been well flagged giving us the opportunity to prepare for the change 	<ul style="list-style-type: none"> The Government has made housing a continued priority, and expressed the desire for some form of private sector mechanism to support first time buyers after Help to Buy ends in 2023 	<p>Government policy and planning regulations</p> <p>Key stakeholder concerns</p>
<p>Climate change / regulation</p> <p>The Future Homes Standard outlines new regulations aimed at making new homes more energy-efficient. Part L relates to the conservation of fuel and power, and Part F covers ventilation. These measures were originally planned for 2020 but were delayed due to the COVID-19 pandemic and will now come into force in June 2022 and will allow for a one year transitional period. The new rules have cost implications for our sector. Where possible we are factoring the potential costs into our land purchases.</p> <p>We are also awaiting the outcome of the Government's EV (electric vehicle) charging regulations consultation expected in April 2021, which could have important implications in relation to charging points on developments, which may raise potential issues regarding the overall capacity of the grid to serve future developments.</p>	<ul style="list-style-type: none"> In 2020, there were delays to the implementation of new regulation including the Future Homes Standard This has given us additional time to prepare and to purchase land that factors in these new costs 	<ul style="list-style-type: none"> Adjustment in implementing the Future Homes Standard Opportunity to produce more energy-efficient homes We plan to increase natural habitats on new sites from 2023 Introduction of red diesel and plastic taxes 	<ul style="list-style-type: none"> The pending Environment Act will accelerate the environmental agenda nationally The Government has committed to net zero UK emissions by 2050. This will ultimately necessitate an overhaul of the UK's energy infrastructure to move away from our reliance on gas Housing remains high on the political agenda, with the shortage of housing recognised as a priority by the Government and we expect there to remain strong political support 	<p>Government policy and planning regulations</p> <p>Key stakeholder concerns</p>
<p>Land and planning</p> <p>COVID-19 has also led to some delays in the planning system this year, impacting the timing of our outlet openings and the level of conversions from the long term landbank. We also await the final outcomes of consultations on the Government's land and planning proposals. The Government is assessing the planning system, with the aim of streamlining processes and ensuring each area has a local plan.</p>	<ul style="list-style-type: none"> White Paper on wide ranging planning reform Revisions to the Standard Housing Methodology 	<ul style="list-style-type: none"> Building our land position increases our range of options moving into a planning environment undergoing change 	<ul style="list-style-type: none"> Improved speed in planning could lead to further efficiencies in our process and speed of build once land is acquired More readily available land could, in some instances, lead to greater competition 	<p>Government policy and planning regulations</p> <p>Key stakeholder concerns</p>

Read more about key issues for our stakeholders on pages 26 to 41
 Read more about our Principal Risks and material issues on pages 26 to 27 and 49 to 53

Importance

Investors want to understand:

- The company's assessment of the importance of the risks, uncertainties and opportunities faced, and why it has changed.
- The likelihood and impact of the risk, uncertainty or opportunity.
- Whether the risk or uncertainty has been considered as part of the company's viability assessment.

Assessment and changes

A company's assessment of the risks, uncertainties and opportunities it faces provides invaluable insight to investors regarding how the board is considering these. It is vital that risk reporting is company-specific, as this will assist investors to make informed decisions regarding the potential impacts on the company's business model.

Investors are only interested in issues that are material to the company. 'Laundry lists' that indicate all risks and uncertainties faced by the company are not useful. Instead, an explanation of why the risks identified are material and some explanation of the threshold (or thresholds) applied for items to move into or out of the principal risks and uncertainties is helpful – these could be qualitative or quantitative factors. Understanding this movement is also key. Companies that include generic risks in their reports obscure the information that is most valuable to investors.

Indicating the priority or ranking of risks, and the likelihood and impact of risks and uncertainties, provides additional insight into the environment in which the company operates. Some investors said that they value the ranking of principal risks and uncertainties, as this allows them an understanding of the areas of focus and potential concern for management and the board. Others stated that an explicit ranking was not necessary, but it should be clear what areas have been a particular focus for the board. For clarity, it is important for companies to indicate whether the order in which risks are presented is relevant i.e., whether they are presented in order of significance. If nothing is said otherwise, investors presume this to be the case.

Where companies do rank risks, some present their rankings numerically in the risk table and others use risk matrices. Ranking changes should be consistent with any changes to, or trends in, the risks reported.

Likelihood and impact

Discussion of the likelihood and impact of risks is of particular interest to investors. They want to understand the potential downsides associated with the risks and uncertainties, but also any opportunities that have been identified during the process.

Some investors would like to see quantification of principal risks (where possible) and more granular detail regarding what part of the company or group is likely to be impacted, for example, by specifying the segment or business unit likely to be impacted and its relative size.

Investors expressed no preference between reporting of risks gross or net of mitigations, but companies should be clear which is being reported.

Viability

There is scope for additional linkage between likelihood and impact disclosure and other reporting. Potential impact on the company's business model, viability and resilience is of interest to investors, especially in terms of the effectiveness of mitigating activities and other measures put in place to cope with events that may not be 'mitigatable' or are considered to be low likelihood but high impact (for instance the COVID-19 pandemic).

Where principal risks are included in scenario and stress testing for the purposes of the viability statement, clearly indicating this (through use of a symbol, for example) and the assessed impact of the individual or group of risks is useful.

Helping investors to understand	Extract
The company's assessment of the importance of the risks, uncertainties and opportunities faced, and why it has changed.	TUI AG Spirax-Sarco Engineering plc
The likelihood and impact of the risk, uncertainty or opportunity.	TUI AG Croda International plc
Whether the risk or uncertainty has been considered as part of the company's viability assessment.	Croda International plc

A step ahead: reporting using time horizons



As many companies prepare to report in line with the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations under new listing rule requirements, the reporting of information over multiple time horizons is becoming more prevalent. This provides an opportunity for companies to integrate 'risk reporting' with longer-term viability and business model resilience reporting to provide investors with a more holistic view of management and the board's understanding of and planning for the longer term.

We expect that this move towards a more time-focused reporting framework will lead to companies experimenting with different and more innovative ways of reporting. [Next](#) provides an interactive spreadsheet model to project key aspects and assumptions out to 15 years. This interactive approach allows users to understand the cumulative impact of trends over the longer-term. This type of reporting may become a crucial tool in communicating the long-term prospects and business cases for a company.

Common reporting techniques

Given the vast amount of information to be reported, companies have sought the most effective and efficient reporting formats for risks. The two that are used most commonly (either one or both) are risk tables and 'heat maps'.

- **Risk tables:** Risks and uncertainties are most commonly presented in a tabular format. This format is useful as it allows for other information to be presented clearly alongside the risk information itself.
- **'Heat maps':** Many companies make use of a graph that primarily depicts the likelihood and impact of their principal risks. In addition to mapping the current year estimated impact and likelihood of risks and uncertainties, movements from the previous year can be depicted and the relative significance of the items can be identified.

Both have advantages and disadvantages from an investor perspective and both could be more useful in meeting investor needs. To be truly effective, companies should provide explanatory narrative (as information is not always precisely depicted) and quantify information provided within both of these reporting forms.

A step ahead: Opportunities for digital



The Lab's recent work on [Video](#) and [Virtual and Augmented Reality](#) has shown that modern communication technologies are increasingly providing investors and other stakeholders with an opportunity to engage differently with company reporting. Whilst often such tools are used to communicate strategy or wider ESG topics, there is also an opportunity to communicate risks and mitigating activities. Digital visualisation tools allow users to gain insight into a risk that might be difficult to communicate using more traditional two-dimensional charts, graphs and heat maps.

Beazley plc

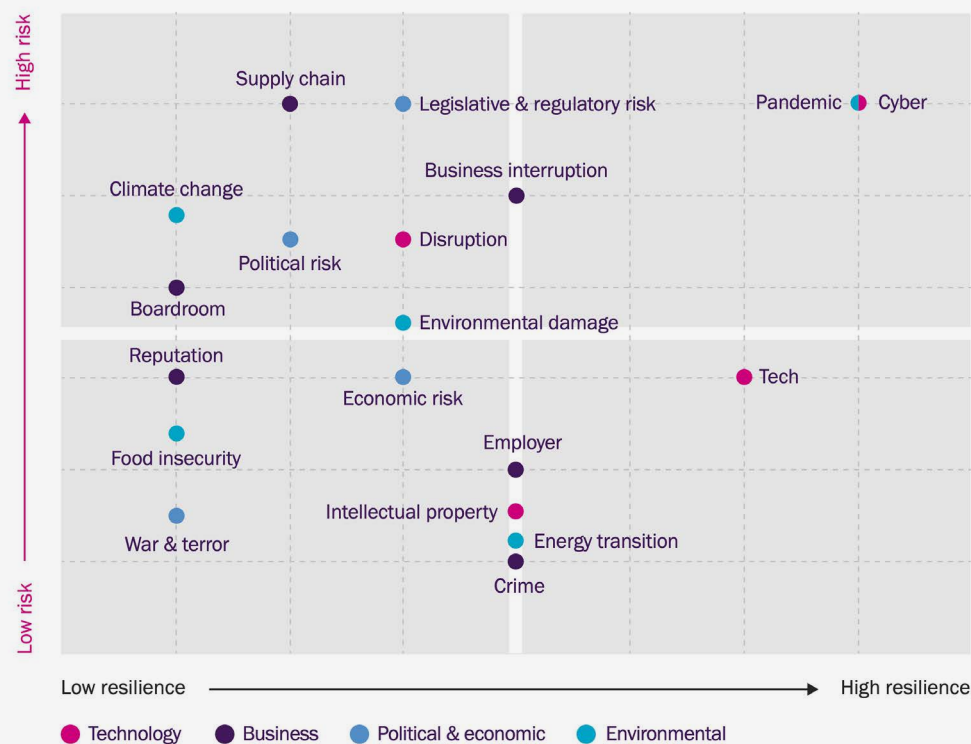
New world, new risks: How are businesses' attitudes to risk & resilience changing? page 2



What is useful?

Whilst not used in an annual report context, this risk matrix provides an example of how the relationship between risk and resilience can be depicted.

Risk-resilience matrix 2021





What is useful?

TUI shows not just the current principal risks but also how they compare to wider macro risk. The company also shows its target for the risk, which includes mitigations and other actions.

Principal Risk Heat Map



ACTIVE RISKS

- **CURRENT RISK POSITION**
 - **TARGET RISK POSITION**
- 1 *IT Development & Strategy*
 - 2 *Integration & Restructuring Opportunities*
 - 3 *Corporate & Social Responsibility*
 - 4 *Information Security*
 - 5 *Impact of Brexit*

MONITORED RISKS

- **CURRENT RISK POSITION**
- A *Destination Disruptions*
 - B *Talent & Leadership Development*
 - C *Customer Demand*
 - D *Input Cost Volatility*
 - E *Cash Flow Profile*
 - F *Legal & Regulatory Compliance*
 - G *Health & Safety*
 - H *Supplier Reliance*
 - I *Joint Venture Partnerships*

CURRENT RISK POSITION

This shows the current level of risk faced today after taking in to account the controls that are in place and which are operating as intended.

TARGET RISK POSITION

This shows the target level of risk deemed to be an acceptable, tolerable and justifiable risk position after further actions have been implemented to mitigate the risk.



What is useful?

Spirax-Sarco has used its 'risk table' to identify individual risk appetites and the company's rationale for such ratings.

Spirax-Sarco provides a description of the reasons for any changes (emphasised) to the significance of the risk. The identification of the risk sponsors highlights accountability within the company's risk management framework.

Principal risks

The following table sets out the Group's principal risks and describes the links to strategy, the mitigation measures and the appetite for each risk. The trend column sets out the direction of change from 2019.

The table includes those risks that we have identified as currently most relevant to the Group.

Key Trend

- Increased risk
- No change to risk
- Decreased risk

Link to strategy

- Direct link
- Indirect link
- No link

Risk appetite ratings defined:

- Very low** Following a marginal-risk, marginal-reward approach that represents the safest strategic route available.
- Low** Seeking to integrate sufficient control and mitigation methods in order to accommodate a low level of risk, though this will also limit reward potential.
- Balanced** An approach which brings a high chance for success, considering the risks, along with reasonable rewards, economic and otherwise.
- High** Willing to consider bolder opportunities with higher levels of risk in exchange for increased business payoffs.
- Very high** Pursuing high-risk, unproven options that carry with them the potential for high-level rewards.

Principal risk and why it is relevant	Trend	Key mitigation, sponsor and explanation of change	Risk appetite rating	Rationale for rating
---------------------------------------	-------	---	----------------------	----------------------

1. Economic and political instability

The Group operates worldwide and maintains operations in territories that have historically experienced economic or political instability. This type of instability, which includes the uncertainties of regime change, creates risks for our locally based direct sales operations and broader risks to credit, liquidity and currency.



- Strong internal controls, including internal audit and appropriate insurance.
- Operating in accordance with the Group Treasury Policy, including currency exchange hedging and cashpooling arrangements.
- Externally-facilitated scenario planning.
- Resilient business model.
- Well spread business by geography and sector.
- Increased liquidity through more headroom on Group debt facilities.

Executive sponsor: Nicholas Anderson

Change: This risk has increased due to various factors including the impact of the COVID-19 pandemic on world trade and markets and continued trade friction between the USA and a number of other nations in 2020 including China and Iran.

- Very high
- High
- Balanced
- Low
- Very low

We have the background and know-how to successfully manage the unique challenges in economically and politically volatile territories. We are willing to accept these challenges where opportunities for growth exceeded the impact of this risk.

Link to strategy: 1 2 3 4 5 6

Key

Link to our strategy (p22)

- Growth: consistent top and bottom line growth
- Innovation: increase the proportion of NPP that we sell
- Sustainability: align our business with our Purpose and accelerate our customers' transition to sustainable ingredients

Risk movement


- Risk increase
- No change
- Risk decrease
- Included in viability statement (see page 49)

Link to our business model (p12)

- Engage
- Create
- Make
- Sell

Croda International plc

Annual report and Accounts 2020 page 47



What is useful?
 Croda links risks to its business model and strategy while explaining the importance of this link. It also sets out the responses to the risk, including examples of actions taken during the period and whether there was any impact of COVID-19.

Key risk

People and culture

5. Our people – culture, wellbeing, talent development and retention
Tracy Sheedy
 Group HR Director



Process fundamentals

6. Product quality/liability claims
Tom Brophy
 Group General Counsel



7. Loss of significant manufacturing site (major safety or environmental incident)
Mark Robinson
 President Global Operations



8. Suppliers and raw material security
Mark Robinson
 President Global Operations



Strategic report

Why this matters to us

Retaining and developing the experience and motivation of all our knowledgeable and diverse employees is critical to maintaining our ability to deliver our strategic priorities. Failing to maintain our distinctive Croda culture within which people thrive and which attracts new and diverse talent to join the Company would significantly damage our ability to innovate and grow.

How we respond

A clear Purpose, strong development culture, excellent learning opportunities and competitive reward programmes support the retention, engagement and career development of the high-quality teams we need. Global graduate and management development programmes include stretching and high-profile assignments and provide a pipeline of internal talent.

Our bi-annual global talent review process considers resources and succession plans for critical roles, with actions monitored by the Executive Committee and the Board.

We sell into a number of highly regulated applications. Non-compliance with our customers' stringent product quality requirements, global and local regulation could expose us to liability claims, significant reputational damage and compromise our ability to grow, especially in light of our commitment to expand to grow Life Sciences.

Monitored by our Group SHEQ Steering Committee (p63), our sites and products are certified to demanding external quality standards highly valued by our customers (including ISO 9001, GMP and Excipact). Our global network of quality professionals enforce compliance with the Group Quality manual, assured through internal audits delivered by our specialist Group Quality audit team and external certification audits. We work proactively with relevant trade associations to shape future regulation.

We rely on the continued sustainable operation of our manufacturing sites around the world.

Climate change directly impacting the location of a site or availability of utilities used, or a major event causing loss of production and violating safety, health or environmental regulations, could limit our operations. This could also expose the Group to liability, cost and reputation damage, especially in light of our commitment to sustainability and customer service.

Monitored by our Group SHEQ Steering Committee (p63), our global network of site-based safety professionals enforce compliance with global policies and procedures defined in the Group SHE manual. Assurance is provided by the specialist Group SHE internal audit team, whilst external auditors certify our compliance with international safety standards. Our sites are certified to ISO14001 standards.

Risks specific to each site are identified in 'bottom-up' risk registers and local business continuity plans are in place which are regularly tested.

Sourcing from suppliers who do not share our ethical stance could lead to reputation damage, especially in the light of our sustainability commitment.

Any interruption in the supply of key raw materials would affect our operations and financial position. Such a disruption could arise from market shortages, climate change impacting the locations where bio-based raw materials grow or

What we have done in 2020

- Implemented a global mentoring programme, upgraded our leadership programmes and increased our online training courses to support the development of our employees
- Articulated and rolled out 'Our Difference', a summary of our cultural aspirations and supporting our Purpose, including updated values
- Addressed increased risks to employee wellbeing and mental health through provision of tailored training sessions and increased communications
- Regular and focused pulse surveys enabled employee concerns to be quickly identified and addressed. Employee response rates to these were high c.70%
- Launched our 'right first time' initiative to help us reach our ambitious target of 99.5% by 2030, creating the position of Business Process Director to co-ordinate efforts globally
- Reviewed and updated our product quality policy, template agreements, guidance and employee training using industry best practices. We use these agreements to formalise our quality commitments to our customers
- Undertook a detailed risk assessment of the implications of supplying novel excipients into vaccines
- Established a cross-functional team to commence a detailed risk assessment of our Health Care business, with particular focus on the growth of this business in the area of patient health
- See more on page 37 and in our 2020 Sustainability Report
- Rapid investment in new manufacturing capability to serve the high growth patient health market increased the risk of major site incidents. Operational teams demonstrated flexibility and focus and we sustained our good process safety performance despite the increased risks, with no serious incidents with major accident potential
- Launched our revised SHE Behaviour standard to help mitigate the increased risk of loss of focus resulting from COVID-19
- The North American biosurfactant plant, which came online in early 2020, was unable to operate from September 2020 after air permit limit deficiencies were identified (p36). It is expected to be operational again in the first half of 2021
- Appointed a new Head of Procurement to provide global leadership. She will enhance and refresh our global procurement framework and processes in 2021
- Communicated a comprehensively reviewed and updated supplier code of conduct to all suppliers
- Employed a third party to undertake a strategic analysis of our raw material supply chain for critical products
- Assessed suppliers of around 50% of our total spend against the EcoVadis platform and worked closely with them to drive improved processes
- See more on pages 18 and 36 and in our 2020 Sustainability Report

Impact of COVID-19

Almost all our employees have been able to work effectively, either on-site or from home. We have not furloughed employees or reduced pay.

Our quality standards continued to operate at all sites, with strict social distancing measures in place to protect our people.

All but two of our manufacturing sites have continued to operate without interruption, with strict social distancing measures in place to protect our people.

Global supply chain and procurement teams worked together to mitigate the impact on customer delivery, including relating to short term raw material shortages.

Form

Investors want to understand:

- What category of risk or uncertainty the company faces, for example, internal, external, strategic, operational or financial.
- How a company's classification of risks links to other areas of the report.

Categorisation

Grouping risks by themes or categories provides investors with insights into how management and the board consider and manage risks. This allows for external evaluation of the risks and how these are considered within the context of a company's business model and strategy.

Groupings could include: strategic, operational, financial, internal or external risks. Investors value categorisation of company-specific and general (industry-wide) risks as this allows them to compare companies more easily.

Linking to other areas of the report

Categorisation has many potential benefits in terms of linking of information through a company's annual report.

Effective grouping and categorisation may lead to better and more consistent reporting of:

- The impact on a company's business model, strategy and, longer-term viability: This impact can be presented in a more connected way across the report.
- Mitigating actions and strategies: These often apply to several risks rather than to single risks. Collective explanations are more succinct and provide greater insight into how risks are being mitigated on a collective basis.

Risk cascade

One event or sequence of events can have an impact on a number of areas of a company and its operations and, therefore, the risks that it faces. This is something that multi-factor scenarios within the viability statement consider to an extent. However, information about such 'risk cascades' is often missing from the disclosures on the risks themselves even though there is a direct link to the company's risk appetite, mitigations and the likelihood and impact of the interrelated risks.

Helping investors to understand

What category of risk or uncertainty the company faces, for example, internal, external, strategic, operational or financial.

Extract

[Henkel AG](#)
[Essentra plc](#)

How a company's classification of risks links to other areas of the report.

[PageGroup plc](#)

PageGroup plc

Annual Report and Accounts 2020 page 42



What is useful?

PageGroup shows how principal risks are considered in the context of the company's strategy, providing the link between risks and strategy.

RISK CATEGORIES

STRATEGIC	Shift in business model	Transformation and change	PageGroup brands and services	Global event
PEOPLE	People attraction, development and retention			
OPERATIONAL	Information systems	Cyber security	Fiscal and legal compliance	Financial management and control Data protection regulations
FINANCIAL	Macro-economic exposure	Foreign exchange – translation risk		

Major risk categories

Risks are presented from a net perspective, i.e. with their respective mitigation measures taken into account.

Overview of major risk categories

Risk category	Probability	Potential financial impact
Operating risks		
Procurement market risks	Moderate	Major
Production risks	Moderate	Major
Macroeconomic and sector-specific risks	High	Major
Functional risks		
Financial risks		
Credit risk	Low	Major
Liquidity risk	Low	Minor
Currency risk	High	Major
Interest rate risk	Moderate	Minor
Risks from pension obligations	Moderate	Minor
Risks from pension obligations (impact on equity)	High	Major
Political environment risks	Low	Major
Legal risks	Low	Major
IT and cyber risks	Low	Major
Personnel risks	Moderate	Minor
Risks in connection with the company's reputation and its brands	Low	Major
Environmental, safety and health risks	Moderate	Major
Business strategy risks	Moderate	Moderate

Major opportunity categories

Entrepreneurial opportunities are identified and evaluated at Group level and in the individual business units, and duly incorporated into the strategy and planning processes. We understand the opportunities presented in the following as potential future developments or events that could lead to a positive deviation from our guidance. We also assess the probabilities of price-related procurement market and financial opportunities.

Procurement market opportunities

Description of opportunities: Countervailing the procurement market risks listed on page 155, opportunities may also arise in which the influencing factors described in this section develop in a direction that is advantageous to Henkel.

Impact: Low probability rating, possible major impact on our earnings guidance.

Macroeconomic and sector-specific opportunities

Description of opportunities: Additional business opportunities would arise if the uncertain geopolitical and macroeconomic situation in some regions, or the economic conditions in individual sectors, develop substantially better than expected – in connection with the COVID-19 pandemic, for example.

Impact: The opportunities described could have a major impact on our sales and earnings guidance.

Financial opportunities

Description of opportunities: Countervailing the currency and interest rate risks indicated under financial risks, and the risks arising from pension obligations as described on pages 158 and 159, opportunities may also arise in which the influencing factors described in this section develop in a direction that is advantageous to Henkel.

Impact: We classify financial opportunities as follows:

- Currency opportunities with a moderate probability of a major impact on our earnings guidance
- Interest rate opportunities with a moderate probability of a minor impact on our earnings guidance
- Opportunities arising from our pension obligations with a low probability of a minor impact on our earnings guidance, and with a high probability of a major impact on our equity

Acquisition opportunities

Description of opportunities: Acquisitions are a key component of our strategy.

Impact: Large acquisitions could have a major impact on our earnings guidance.

Research and development opportunities

Description of opportunities: Opportunities arising from our extensively continuous innovation process are a key component of our strategy and are already accounted for in our guidance. There are additional opportunities in the event of product introductions that exceed our expectations of market acceptance, and in the development of exceptional innovations that have not yet been taken into account.

Impact: Innovations arising from future research and development could have a major impact on our sales and earnings guidance.

Henkel AG

Annual Report 2020 pages 154 and 155 and page 164



What is useful?

Henkel uses its risk categorisation to illustrate the assessment of the likelihood and impact of the risks.

Using these categories, it also identifies opportunities and provides further detail such as the estimated impact for the company.

Risk categories

The Company has considered the risks it is facing under the following four risk category headings and has identified 12 Principal Risks.

External

Risks relating to the macroeconomic climate, political events, competitive pressures or regulatory issues.

Strategic

Internal risks that may impede achievement of strategic goals.

Operational

Risks that could impact day-to-day operations and prevent business-as-usual activities.

Disruptive

Risks that could impact the business model or viability of the Company. Although key disruptive risks have been identified and mitigated by the Company, none of them are considered to be Principal Risks currently.



Emerging Risks

Emerging Risk	Owner	Risk description	Controls
Regulatory change	Company Secretary and General Counsel	Essentra is a global company that must comply with regulatory requirements in many countries. Regulation is increasing worldwide and may potentially impact our products, operations, workforce and relationships with suppliers, customers and stakeholders. COVID-19 has significantly impacted supply chains and the working environment, potentially leading to new or additional areas of regulatory scrutiny and subsequent regulatory change.	We remain alert to longer-term regulatory developments including those related to single use plastics and tobacco-related and tobacco-alternative products. The Company's Legal, Risk and Governance team continuously monitors changes in regulations and emerging good practice seeking external support or guidance as necessary. Strengthening of internal divisional resources to identify market and product changes and any potential associated regulatory requirements.
Technology disruptors	Chief Information Officer	The risk that Essentra does not manage its response to evolving technologies effectively. This may include losing competitive advantage as rivals deploy advanced manufacturing technologies, artificial intelligence and robotics to strengthen product development, marketing, production, distribution and support functions.	We continue to monitor and review developments in the external market through our networks. This includes innovation and futures sessions with existing suppliers. We are also involved in a range of external technical focus groups.
Evolving conditions of the Debt Market	Chief Financial Officer	The debt market is evolving, and the lending condition and appetite can be impacted by key events, we have recently observed the effect from the COVID pandemic. Essentra continues to have strong liquidity and we will stay alert to the change of investors' appetite and respond optimally to it and maintain our profile in the debt market.	We remain alert to the change in investors' appetite and we continue to respond to this and maintain our profile in the debt market. The treasury team monitors changes in the debt markets and is in regular contact with banks inside of the Essentra bank group and other financial institutions to ensure that we have the widest variety of market options that are available.

Strategic Risk

Tobacco Industry Dynamics

Change in risk level	Ownership	Relevance
Unchanged	Filters Division Managing Director	Company specific
Description	COVID-19	Mitigation
The Filters division supplies filter products and packaging solutions to manufacturers in the tobacco industry. Changes in the traditional tobacco market present both opportunities and risks for the division. Whilst the Company has a strong market position the future growth opportunities may be affected by dynamics of the tobacco industry such as the declining combustible markets, shifting towards Next Generation Products (NGP) as well as moving towards other tobacco substitutes. The focus of stakeholders on ESG objectives provides an additional area of challenge for the business.	2020 saw a notable impact of COVID-19 accelerating volume declines in the combustible market, postponement of new product introductions and disruption of the duty free market due to global travel restrictions. These factors have, in turn, placed further cost pressures on both our customers and suppliers. There was considerable disruption in the first half of the year caused by the global pandemic but a strong second half of the year demonstrated that underlying demand remains in place. Greater stability should also be achieved through full year impact of the two significant	Essentra is mitigating the risk associated with changes in the tobacco market dynamics by focusing on activities with longer-term viability and exploiting potential growth opportunities. This includes progressing on our "game changers" and increasing our innovation capabilities especially around NGP and sustainability. Key mitigating actions include: <ul style="list-style-type: none"> establishing the manufacturing facility of our China JV to allow first product shipments in H1 2021 within the world's largest tobacco market implementation of the two outsourcing contracts agreed in 2019, now both in full

Essentra plc

Annual Report 2020
pages 52, 55 and 58



What is useful?

Essentra clearly defines the categorisation of its risks. These categories are used consistently throughout the risk section, including the risk map and in the description of each risk. Emerging risks are clearly provided and contextualised and the specific actions taken as mitigations in the year are indicated.



Implementation of the two outsourcing contracts agreed in 2019, now both in full supply. One additional contract has been agreed with an independent customer in 2020.



Approach

Linkage

Investors want to understand:

- Impacts in the context of a company's business model, strategy and purpose and whether and how key performance indicators (KPIs) and other metrics are tailored accordingly.
- The company's assessment relating to its viability using more company-specific information that relates to longer time periods.

Impacts and context

Consistent reporting is important to investors and the information they are presented with should form part of a coherent package that is easy to digest and supports decision-making. Unfortunately, in many instances, risk reporting is a standalone section of the annual report. There are several areas where investors expect overlap to exist and where disclosure would be useful.

The Lab has considered business models a number of times, including in the [Business model](#) report and [implementation study](#). These reports suggested that the business model or strategy is the base from which to link other parts of the annual report – not the principal risks. Therefore, a company should show how principal risks link to these areas.

In our discussions with companies, it was noted that, as a result of the COVID-19 pandemic, the risk function and risk-related discussions were receiving greater emphasis at several levels, including at the board level.

Investors, too, highlighted a slightly different focus as a result of the COVID-19 pandemic – the principal risks were often the starting point when analysing a number of company reports. In other words, a 'risk report outwards' approach was followed. Reporting should clearly identify and explain how the external and internal environment and the associated risks, uncertainties and opportunities affect the company's business model, strategy and viability. Links to company decisions and KPIs provide a more integrated picture of the company.

Our discussions identified many instances where companies' external reporting did not adequately reflect the extent and quality of their internal processes and activities. Investors reiterated that the annual report is their primary source of information regarding risk reporting. They also noted that, given the challenges faced over the COVID-19 pandemic, they would expect companies to reflect on any changes made to processes or a discussion on how effectively existing processes helped in times of stress.

Viability statements

Through our discussions with companies (for this report as well as the 2017 report), it was clear that the introduction of the viability statement led to enhanced internal processes and discussions relating to 'viability' and the assessment of risks (particularly those that relate to liquidity and solvency).

However, in many instances, these processes and discussions are not reported externally. Investors still consider the information reported in many viability statements to be too generic and short-term in nature to support effective stewardship and decision making.

Unfortunately, the viability period selected is often inconsistent with other time horizons used elsewhere, including strategic and business cycles, debt repayments, lease periods, goodwill impairment, capital investment periods and technology development periods.

Investors want to understand whether the longer term is being considered and any threats are being discussed. They want to understand whether and how such discussions are being incorporated into scenarios developed and whether and how the company's business model is being adapted (or may be adapted) in response to these.

This is most effectively achieved through linking of principal risks (and their related mitigations) to the viability statement, most commonly to the scenarios discussed therein.

In the current environment, investors value a statement confirming that a company is 'viable', but the statement in isolation is not sufficient – information is needed to allow for investors to conduct this evaluation for themselves.

Helping investors to understand

Extract

Impacts in the context of a company's business model, strategy and purpose and whether and how key performance indicators (KPIs) and other metrics are tailored accordingly.

[Croda International plc \(page 18\)](#)

The company's assessment relating to its viability using more company-specific information that relates to longer time periods.

[Next plc](#)

Resilience statement

One of the recommendations made in the [Brydon review](#) was the resilience statement and this recommendation was discussed in further detail in the BEIS [consultation](#) on 'Restoring trust in audit and corporate governance'. The proposal is that this statement incorporate the current going concern requirements, develop further the existing UK [Corporate Governance Code](#)-based viability statement requirements and expand further into discussions regarding the longer term.

While the requirements have yet to be set out in detail, the resilience statement is likely to require companies to set out how they are preparing to be resilient over the short term, medium term and the longer term in the face of principal and emerging risks specific to the company, and other uncertainties.

The aim is for reporting to be more specific to companies and allow for greater consistency in the reporting of risk and resilience. This would necessitate companies to identify and provide specific elements of reporting relating to the material risks that they face.

As the findings of this report have shown, investors value company-specific information and would value such information over longer time horizons. While this may be challenging for companies, such reporting is expected to lead to additional useful information. Further, like the introduction of the viability statement, the introduction of a resilience statement may lead to enhanced internal processes, which will aid companies better to assess their resilience to threats to their business models.



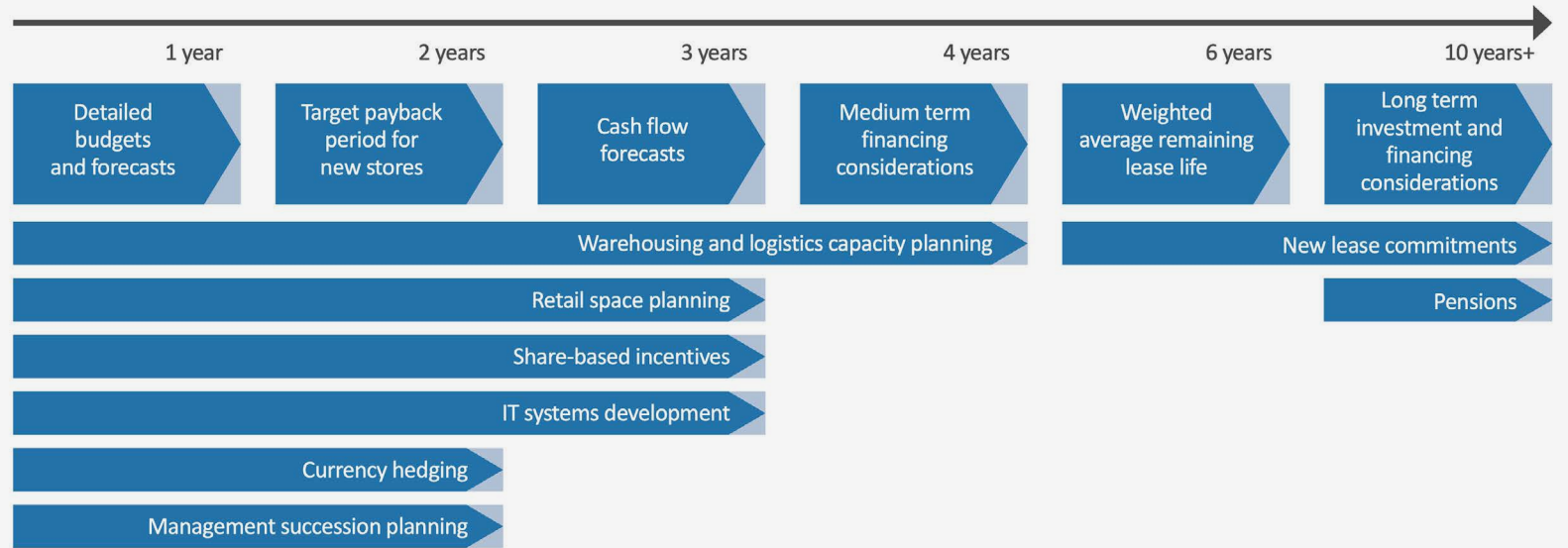
What is useful?

Next maps various aspects of the actions or functions that contribute to the management of the company over the short, medium and longer term. These are useful for a fuller understanding of the time horizons associated with how the company is managed and are used to add context to the selected viability period.

Assessment period

The retail sector is inherently fast paced, competitive and dynamic, particularly in respect of the fashion product cycle. However, as illustrated in the diagram below, a wide variety of other time horizons are also relevant in the management of the business.

The directors have assessed the viability of the Group over a three year period, as they believe this strikes an appropriate balance between the different time horizons which are used in the business and is a reasonable period for a shareholder to expect a fashion retail business to be assessed over.



Response

Investors want to understand:

- Factors a company considers when determining or changing its risk appetite.
- Mitigating actions and strategic activities so as to assess how the company may respond to risks and uncertainties in the future.
- Whether, how, and why risks have evolved over time.

Risk appetite

Where companies have provided disclosure of risk appetite, it is often a high level narrative rather than numerical. The COVID-19 pandemic has shown many companies that, whilst a static or fixed appetite is useful for planning purposes, in reality it needs to be dynamic. This dynamism reflects both the issues and the mitigations which become available, and reflects the reality of some 'black swan*' risks companies face. This is a difficult area for disclosure, therefore something like a case study, or insights gathered through the consideration of a range of scenarios, might provide more insight into how the company has developed its risk appetite.

Some investors suggested that if precise thresholds are not provided, acceptable ranges would be a helpful alternative. For example, many companies would have considered significant home working to be outside the risk appetite of the organisation, but this changed when there was no alternative. Similarly, the amount of government support created options which allowed companies to operate outside of the 'standard' risk appetite.

Investors would also value an explanation of changes to risk appetite over time and whether it varies depending on the 'type' or 'category' of risk and uncertainty (i.e. where multiple risk appetites exist). Such an explanation would provide investors with insight into the company's underlying processes and controls. Ultimately, this would provide a better understanding of the actions a company is likely to take to mitigate risks or to take advantage of opportunities that may arise should a greater level of risk be tolerable.

*A black swan event is one that is highly unlikely to occur but could have severe consequences if it did.

Mitigating activities and actions

Company mitigating activities are often a list of options rather than concrete actions that have been undertaken, will be taken, or might be taken, and as such this type of disclosure is not very useful to investors. Investors want to be able to judge how the actions already taken have impacted the risk and also want to understand how future actions might drive the net risk over the longer term.

Where the company is covering actions that have already been taken investors want specific details with timing and cost (where appropriate), how this has fed through to net risk and how this positions the company versus residual appetite for the risk.

Stakeholders and risk

Most reporting of risk by companies is focused on the internal impact that the risk would have on the company and its operations rather than the risk to those impacted by the company's operations.

In the Lab's [Reporting on stakeholders, decisions and Section 172 report](#), investors indicated that they value an understanding of risks (and related mitigating activities) that could affect key stakeholders and the company's relationship with them and any related opportunities. Further, they want to understand how companies take risks and opportunities into account when making decisions as they strive to meet their purpose and fulfil their strategic objectives.

For planned or possible actions, investors want to understand the timing of these activities and how they will impact the risk over the longer term.

For example, the COVID-19 pandemic crystallised a number of risks for many companies. To mitigate these risks companies quickly adopted a number of shorter-term changes such as full cloud working and emergency capital raising. Investors valued details about these actions, but also wanted to understand what longer term actions the company was putting in place (and the cost and timing of these) to mitigate risks highlighted by the pandemic such as supply chain weakness.

These new 'agile risk toolkits' are likely to become increasingly important in mitigating the impact of short-term risks. Any 'new' mitigating activities deserve disclosure and these are also likely to tie into how a company might consider resilience and viability.

Investors are also interested in how effective previously implemented mitigating actions have been and what changes are being made as a result of learnings from the past. These planned actions and activities illustrate how responsive and agile the process adopted by the company is to external and internal drivers.

Mitigating actions and activities may be applied to a number of the company's principal risks and uncertainties. Therefore, it would be useful to indicate which risks the actions are intended to mitigate. Effective grouping of risks and uncertainties may help to reduce repetition of reporting and better illustrate a company's net risks.

Evolution

Risk reporting is forward-looking in nature, therefore its likelihood and impact and the mitigating actions a company plans to take must be reassessed throughout the period (and reported externally at least twice per period for many companies).

Nevertheless, reflection on decisions and expectations of the past and how these altered companies' decision-making and processes is of use to investors. Investors want to understand companies' assessments of how risks are expected to move. This can be depicted in several ways in the risk table or the risk heat map. Simply stating that a 'risk has increased/decreased/remained the same' in isolation is not useful – investors want to understand the significance of the change (if any), what led to that assessment, whether further changes are expected, and what actions the assessment led to.

When explaining the driver of the change, detailing whether this was an internal or external factor, provides further insight into how effectively management and the board reacted to and managed the situation. Where a change in the assessment of a risk leads to an opportunity, it would be useful to explain this and how the company plans to take advantage of the opportunity.

Company 'risk language'

Risk reporting is an area where there are a number of externally identified terms and concepts (such as principal risks) as well as a company's own risk-related terminology. It is important for a company to define the terms used and the relationship between them to allow users to understand them and to compare across companies and organisations that may use different terms or use a term differently.

Emerging risks

Of particular interest are those risks not yet considered to be 'principal', but which have been identified by companies' horizon scanning and other processes, such as scenario analysis.

Commonly referred to as 'emerging risks', these are risks that may, in time, pose a threat to a company's business model. The term 'emerging risks' may be interpreted differently and companies that define what they mean by 'emerging risk' assist users better to understand the context of this reporting.

The UK's [Corporate Governance Code](#) requires the board to carry out 'a robust assessment of the company's emerging and principal risks' and in 2019 the FRC also called on companies to disclose the potential impact of emerging risks on future business strategy. However, given that these risks are more unpredictable or have a greater level of uncertainty, there may be less relevant data or detailed information available. This places greater importance on ensuring that investors understand the process followed to identify such risks and how the company is considering and preparing for the future.

Investors expect an explanation of these risks and any mitigating activities currently in place (or to be put in place) to address them and who has responsibility for their continued monitoring. They would like to understand the anticipated timeline associated with these risks i.e. when they are anticipated to be significant to the company, why they would be considered to be significant by the company (i.e. considered for reporting as a principal risk) and what would lead them to be considered to be significant.

Industry/regulator perspectives

Whilst detailed emerging risks relevant to a company and its business model should be considered specifically for each entity often industries share some common emerging risk areas. The Joint Forum on Actuarial Risks (JFAR) is a collection of five regulators (with the FRC being one of those regulators) who on an annual basis publish a [Risk Perspective](#) on current and emerging risks for those within the actuarial profession. Such approaches can provide useful tools for companies to triangulate their own emerging risks.

Providing greater insight into the past

Investors expressed interest in companies' assessments of the past risks it faced and how these were mitigated, including how these may affect future actions. These could be included in the form of a case study or 'risk management in action'.

Opportunities - Describing past opportunities upon which the company previously capitalised provides users with 'evidence' that opportunity-identification processes are in place and are effective without compromising the company's commercial advantage.

Risk crystallisation - Reporting on risks that crystallised during the period is encouraged in some jurisdictions other than the UK. Reflection on how well these were managed and lessons learned could be valuable.

Helping investors to understand

Extract

Factors a company considers when determining or changing its risk appetite.

[Foxtons Group plc](#)

Mitigating actions and strategic activities so as to assess how the company may respond to risks and uncertainties in the future.

[Rolls-Royce Holdings plc](#)
[Essentra plc \(page 21\)](#)

Whether, how, and why risks have evolved over time.

[Spirax-Sarco Engineering plc \(page 17\)](#)
[Essentra plc \(page 21\)](#)
[PageGroup plc](#)



What is useful?

Foxtons provides a risk appetite statement and illustrates how this applies to different types of risk, with ratings and explanations. Providing the risk assertion and parameters applied gives insight into the underlying assessment and processes.

RISK APPETITE

The risk appetite statement details the Group's approach to risk and includes a series of risk assertions which are aligned to our strategy, together with the risk parameters within which we expect our people to work. Compliance with the risk appetite statement is monitored through the Group's standard monitoring and reporting mechanisms. The Board reviews the risk appetite statement annually.

Risk type	Risk assertion	Risk parameter	Risk appetite	Risk appetite statement
Strategic	We will not pursue growth at all costs and expect high margins and strong returns on capital.	We will pursue growth strategies to meet our market growth objectives. We aim for industry-leading operating margins and returns on capital whilst protecting the long-term viability of the Group.	High	The Group operates in markets with high growth potential which are subject to volatility, particularly in the residential sales market. We continue to pursue ambitious growth targets and are willing to accept certain levels of risk to increase the likelihood of achieving or exceeding our strategic objectives, subject to the relevant risk parameters.
Financial	We will manage/avoid situations or actions that might adversely impact the integrity of financial reporting.	It is a critical requirement that financial reporting complies with relevant accounting standards and is fair, balanced and understandable.	Low	
Operational	We will manage/avoid situations or actions that might adversely impact the Group's ability to provide a premium service level to our customers and to protect the assets of the Group.	The costs of control systems must be commensurate with the benefits achieved.	Moderate	Risk appetite varies depending on the risk type The Board's appetite for risk varies depending on the risk type. The Group measures risk by estimating the potential for loss of profit, customer service issues, staff turnover and brand/reputational damage. The Board has a low tolerance for compliance-related risk. Conversely, it has a higher tolerance for strategic risk. The Board will adjust the short-term appetite for risk to reflect prevailing conditions as necessary.
Compliance	We will ensure we comply with all legal requirements and manage/avoid situations or actions that could have a negative impact on our reputation or brand.	No tolerance for breaches of: - Legislative/statutory requirements - Delegated authority levels - Group and divisional policies - Health and safety regulations	Low	

Assessment of risk versus Board's appetite for risk

The Board has assessed the risks of the Group and, with the exception of market risk, considers all risks to be within the Board's appetite for risk. The Board recognises the Group operates in markets which are cyclical and subject to volatility. As such, the Board's risk appetite for market risk is high. Although there continues to be heightened market risk due to the depressed sales market the Board considers appropriate actions have been taken to mitigate the impact on the Group including strengthening the balance sheet, investing in high quality lettings books and taking further cost action. The Group expects the sales market to return to more normal levels in the medium term.



What is useful?

Rolls-Royce's explanation is divided into useful components which clearly identify the controls in place, who executes the controls and associated assurance. The subdivision of the controls by 'type' provides richer information.

Change in risk level in 2020 (last 12 months including changes to risk level resulting from COVID-19 and our response):

↑ Increased
↔ Static
↓ Decreased
+ New risk

HOW WE MANAGE PRINCIPAL RISKS

RISK	CONTROLS	ASSURANCE ACTIVITIES AND PROVIDERS	OVERSIGHT FORUM	CHANGE
Safety Failure to: i) meet the expectations of our customers to provide safe products; or ii) create a place to work which minimises the risk of harm to our people, those who work with us, and the environment, would adversely affect our reputation and long-term sustainability.	Product: - Our product safety management system includes activities designed to reduce our safety risks as far as is reasonably practicable and to meet or exceed relevant company, legal, regulatory and industry requirements. - We verify and approve product design. - We test adherence to quality standards during manufacturing. - We validate conformance to specification for our own products and those of our suppliers. - We mandate safety awareness training. - We use engine health monitoring to provide early warning of product issues. - We take out relevant and appropriate insurance.	Product: - Product safety assurance team - Technical product life cycle audits	- Safety, Ethics & Sustainability Committee - Product safety boards	↔
	People: - Our HSE management system includes activities designed to reduce our safety risks as far as is reasonably practicable and to meet or exceed relevant company, legal, regulatory and industry requirements. - We reinforce our journey to Zero Harm. - We use our crisis management framework.	People: - Safety case interventions - HSE audit team	- Safety, Ethics & Sustainability Committee	↑



What is useful?

PageGroup has provided detail and application of the ‘Significant influencing factors’ associated with risks (in this instance cyber security) in a way that is company-specific.

7 CYBER SECURITY

NATURE OF RISK

Loss of data or systems due to the actions of:

- Malicious Outsiders – targeted attack of PageGroup systems.
- Malicious Insiders – assisted or generated attack by a disgruntled employee or contractor.
- Accidental Outsiders – errors caused by our suppliers.
- Accidental Insiders – successful Phishing, Social Engineering, Business Email Compromise.

SIGNIFICANT INFLUENCING FACTORS

- The COVID pandemic has presented opportunities for scammers to prey on staff who are working from home with fake government and HR related emails and links that attempt to extract data or upload malware.
- The most common route into an organisation’s network is via phishing emails (over 90%). As Page relies heavily on the use of email, and it is normal to receive emails from unknown senders, our exposure to phishing remains high.
- Business Email Compromise (BEC), whereby an executive’s email is compromised and used to authorise payments or extract confidential information, have also increased since the pandemic.
- The move to using public Cloud services for business-critical activities, our significant email use, and extensive use of social media have increased the Group’s exposure to external threats.
- Cyber-attacks continue to increase globally.

NET RISK LEVEL STABLE

Cyber, data and digital risk

Like climate change, cyber, digital and data risks are becoming a topic of enhanced focus. The technological acceleration of companies’ business models driven by the COVID-19 pandemic now means that almost every company will face some type of cyber, data and digital risk (collectively or individually).

As part of this project our discussions with companies identified that those at the leading edge are developing new ways to monitor and manage such risks. The Lab is undertaking a deep-dive into this risk area to understand current practice, approaches and disclosures. If you would be interested in taking part in such a project please email us at: financialreportinglab@frc.org.uk



Scenarios and stress testing

Investors want to understand:

- The different scenarios and situations considered, and stress tests performed, and how these tie into other areas of reporting and the company's view of the future.

There are a number of areas of reporting that encourage the consideration of scenarios and stress tests. These include the viability statement, the TCFD recommendations, financial reporting frameworks and the proposed resilience statement.

Investors find disclosures relating to scenarios and stress tests useful given that they provide insight into areas that are highly uncertain and cannot necessarily be calculated precisely. More companies have started providing such information, however, what is provided is often at a high-level and, in many instances, inconsistent with other information provided in the annual report. Instead, scenarios provided within the context of the viability statement should be consistent with the estimates and judgements applied in the financial statements and with narrative around the company's strategy, longer-term outlook and related impacts on its business model. The FRC's [climate thematic](#), for example, found that there was very little evidence of the linkage of the scenarios reported in the front half of the annual report and the information in the financial statements.

Narrative showing how scenarios tie to principal risks is also useful to investors. A number of companies indicate which principal risks have been considered in scenarios in the viability statement. However, few describe why those that have not been included have been omitted. Further insight into risks with material qualitative impacts (i.e. those that may not be quantitatively material) and, where relevant, tying in the likelihood and extent of the mitigating activities to the scenario analysis is also considered to be useful.

Rather than disclosure on numerous scenarios or many iterations of a single scenario, investors want disclosure on those that are deemed to be material by the company. Similarly, investors want to understand that the stress test conducted by a company has identified the singular most significant item that could lead to the company 'failing'.

Scenarios are not expected to be perfect. Instead, investors want to know that the underlying exercises have taken place and that lessons learned from similar exercises in the past have been incorporated into current iterations.

Most company viability statements include information about a 'worst-case scenario' (or equivalent). In addition, some companies provide other scenarios that may focus on less extreme situations.

As with other aspects of the annual report, investors want information to be balanced. In other words, companies should ensure that any scenarios provided are realistic and consider both positive and negative eventualities.

"Forecasts usually tell us more of the forecaster than of the forecast"

Warren Buffett

Helping investors to understand

The different scenarios and situations considered, and stress tests performed, and how these tie into other areas of reporting and the company's view of the future.

Extract

[HSBC Holdings plc](#)
[Rolls-Royce Holdings plc](#)
[Tesco plc](#)
[Next plc](#)

Scenario analysis versus stress tests

Whilst the definitions or interpretations of ‘scenario analysis’ and ‘stress tests’ may differ, the primary differentiating factor is the level of focus and number of variables considered. Scenario analysis usually examines how changes in a number of factors will impact a situation into the future. Stress tests usually examine the impact of a single change to one event or to a situation under extreme circumstances, and may involve analysing choices working back from that situation.

In a [case study relating to stress testing and scenario analysis](#), Barnett Waddingham provides explanations of the terms largely consistent with those used by participants during our discussions.

Scenario selection and time horizons

We are developing our own internal capabilities to define and set parameters for bespoke scenario modelling as part of our scenario analysis framework implementation plan. Our pilot was run on a suite of specific scenarios published by the Network of Central Banks and Supervisors for Greening the Financial System (‘NGFS’). The NGFS scenarios test a broad range of possible outcomes and have been created as a starting point for central banks and supervisors.

The NGFS scenarios reflect a range of potential future scenarios that encompass a complex set of social, political and economic decisions¹. They can be grouped into the following three types:

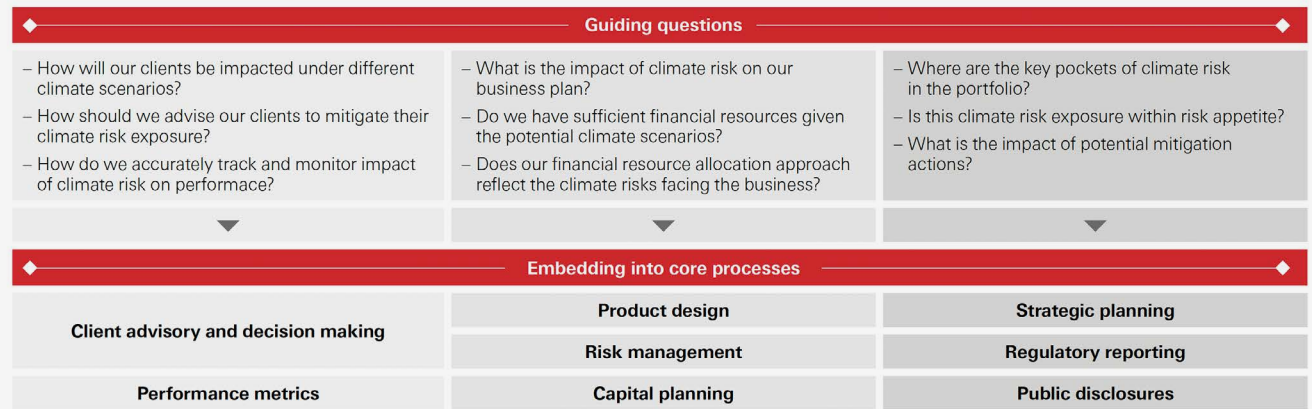
– Orderly transition – this assumes early introduction of climate policies that gradually become more stringent. Net zero CO₂ emissions will be achieved before 2070, giving a 67% chance of limiting global warming to below 2°C and leading to low physical and transition risks.

– Disorderly transition – this assumes climate policies are not introduced until 2030. Late introduction and limited available technologies mean emissions reductions need to be sharper, which will drive increased transition risks.

– Hot house – this assumes currently implemented policies are preserved. Emissions grow until 2080 leading to 3°C or more of global warming and subsequent severe physical risks.

We developed our scenario test over a 30-year time horizon to ensure that it reflected the long-term effects of transition and physical risks on our customers.

Use of climate stress testing and scenario analysis to answer strategic questions



To understand the level of climate risk within our retail mortgage portfolio, we focused our financial risk assessment on the UK and Hong Kong mortgage portfolios, which together account for approximately 65% of our retail mortgage portfolio, as of November 2020.

Key drivers of climate risk for residential real estate

Residential real estate may be affected by changes to climate and extreme weather events, such as floods, subsidence, and wind storms, which could impact both property values and the ability of borrowers to afford their mortgage payments. Potential climate-related regulatory policy changes, such as new minimum energy efficiency performance standards and how they impact the real estate market, could also influence property values. Other economic impacts from the transition to

a low-carbon economy, shifts in GDP and employment levels could also affect borrowers’ ability to repay their loans.

In the medium term, key drivers of risk for mortgage customers include the physical risk of potential regionalised flooding, wild fires and wind storms. Another, is our ability to respond and adapt to new and emerging regulatory requirements across multiple jurisdictions.

In the longer term, sustained climate changes could severely impact mortgages in some geographical regions. Borrower repayments could also face macroeconomic strain from regulatory or market approaches to transition risk.

HSBC Holdings plc

Task Force on Climate-related Financial Disclosures Update 2020 pages 13 and 16



What is useful?

HSBC provides insight into its climate-related scenarios and how these link to the company’s risks and climate-related goals (communicated through the strategic questions the analysis aims to answer). A discussion of the impact on stakeholders is provided, too.



What is useful?

Rolls-Royce indicates the key areas of estimation uncertainty that it has identified and how these are incorporated into scenarios. The assumptions underpinning each of the scenarios are explained and provide enough detail to evaluate the scenarios and the company's conclusions.

Base case scenario

The Group's base case scenario assumes a deep impact on the Civil Aerospace and ITP Aero businesses, with a slow and gradual recovery in demand in 2021. Whilst new variants of the COVID-19 virus create some uncertainty, vaccination programmes are successfully rolled out and/or mass airport testing is introduced to alleviate quarantine restrictions in place across many countries. Widebody flying hours returns to 55% of the pre-crisis baseline in 2021 and approximately 80% in 2022, with slower growth to a full recovery to 2019 levels of widebody activity by the end of 2024 based on industry data.

The Civil Aerospace and ITP Aero forecast assumes:

- flying hours of widebody aircraft are 55% of 2019 level in 2021 recovering to 80% of 2019 level in 2022 (based on year averages);
- flying hours of business aviation are 2% above 2019 level in 2021 and increase to 10% above the 2019 level in 2022 (based on year averages);
- widebody OE engine sales reduce from 450 in 2019 to 187 in 2021 (42% of 2019 level) before increasing to 204 in 2022 (45% of 2019 level);
- widebody spare engine sales are 80% of 2019 level in 2021 and 75% of 2019 level in 2022;

- business aviation engine sales are 54% of 2019 level in 2021 increasing to 88% of 2019 level in 2022;
- newer aircraft fleets (A350, A330neo and 787) recover at a faster pace than older fleets due to the economics and investment value of the aircraft;
- older aircraft fleets (A330, A380 and 777) recover on a slower, more varied profile taking into account regional market recovery and unique market dynamics; and
- the pressure on the transitions market, driven by new aircraft delivery and volume of surplus assets, results in an elongation in transition time to ~24 months.

Severe but plausible downside scenario

As noted above, due to the inherent uncertainty over the extent and duration of the disruption caused by the COVID-19 pandemic and therefore the timing of recovery of civil aviation to pre-crisis levels, the Directors have also considered a severe but plausible downside scenario.

This severe but plausible downside is based in principle on a general assumption that recovery remains subdued due to ongoing infection rates and an increase in new variants of the COVID-19 virus, with a slower recovery in demand compared with the base case. Restrictions on travel between countries remain in place across many parts of the world during the first part of 2021, with a gradual recovery of the global economy and the Group taking place once those restrictions are lifted.

The resulting key underlying COVID-19 specific assumptions included in the severe but plausible downside scenario in relation to each of the Civil Aerospace and ITP Aero businesses are as follows:

- flying hours of widebody aircraft are 45% of 2019 level in 2021, recovering to 70% of 2019 level in 2022 (based on year averages);
- flying hours of business aviation are 1% above 2019 level in 2021 and increase to 8% above 2019 level in 2022 (based on year averages);
- widebody OE engine sales are 28% of 2019 level in 2021 before falling to 26% of 2019 level in 2022;
- widebody spare engine sales are 20% of 2019 in 2021 and remain at 20% of 2019 in 2022;
- business aviation engine sales are 54% of 2019 level in 2021 increasing to 80% of 2019 level in 2022;
- newer aircraft fleets (A350, A330neo and 787) recover at a faster pace than older fleets due to the economics and investment value of the aircraft;
- older aircraft fleets (A330, A380 and 777) recover on a slower, more varied profile taking into account regional market recovery and unique market dynamics; and
- the pressure on the transitions market, driven by new aircraft delivery and volume of surplus assets, results in an elongation in transition time to ~24 months.



What is useful?

Tesco provides a link between the principal risks reported and the scenarios used in its assessment of the company's viability.

Scenario	Associated principal risk description	Description
Macroeconomic downturn	<ul style="list-style-type: none"> – Competition and markets – Customer – Brand, reputation and trust 	The macroeconomic impact of the COVID-19 pandemic has been severe, causing business failure, increased unemployment, reduced disposable income and lower levels of consumer confidence. A reduction in disposable income results in a contraction in customer demand, driving like-for-like volume decline across our retail businesses. To maintain our competitive position in such a recessionary environment, further investment in our value proposition will be required, putting pressure on margins.
Brexit	<ul style="list-style-type: none"> – Competition and markets – Political, regulatory and compliance – Brexit 	Considers the trading agreement between the UK and European Union, which largely mitigates our exposure to tariffs levied on imports from the EU. A broad assessment of the remaining potential impact has been modelled, including higher sourcing costs, higher labour costs in our value chain driven by domestic cost of goods inflation and migration of labour out of the UK and potential cost of customs friction from border controls.
COVID-19	<ul style="list-style-type: none"> – Customer – COVID-19 	Allows for a six-month period of lockdown restrictions in the UK, in spring 2021 and winter 2022, should infection rates increase or a new strain of the COVID-19 virus emerge. In the modelling, the Group considers the potential impact on retail and wholesale sales and the operating cost impact of actions taken to safeguard customers and colleagues. The Bank has modelled the ongoing impact of a macroeconomic downturn, and the effect on expected credit losses on its lending book. The Bank has sourced macroeconomic forecasts from a third-party provider and has used this input to assess the adequacy of capital and liquidity in place to support the business through the expected downturn.
Climate change	<ul style="list-style-type: none"> – Climate change – Responsible sourcing and supply chain – Political, regulatory and compliance 	Rising global temperatures results in an increasing incidence and severity of extreme weather events, leading to a higher incidence of store closures due to flooding and disruption to our global supply chain, predominantly in the produce and animal protein categories. A fuller assessment of the climate-related risks the Group faces, and our actions to mitigate these risks is provided in the TCFD section, starting on page 26.
Data security or regulatory breach	<ul style="list-style-type: none"> – Brand, reputation and trust – Data security and data privacy – Political, regulatory and compliance 	A serious data or security breach results in a significant financial penalty and a loss of reputation among customers. The modelling of this scenario is approached via a 'reverse-stress test' given the inherent uncertainty of value. This assesses a risk in the context of the residual headroom after all other downside scenarios have been applied.

Next plc

15 year stress test



What is useful?

Next provides an interactive 'stress test' in an Excel format that allows users to alter a range of assumptions and inputs and see how these impact the outcome. This tool clearly illustrates the uncertainty inherent in such exercises. Even though the model was produced before the COVID-19 pandemic it still provides insight.

REPORTS AND PRESENTATIONS

Our full financial calendar can be found by clicking [here](#). If you would like to be notified when a new report/presentation is added to this site, please register with our [Alert Service](#).

	2021/22	2020/21	2019/20	2018/19	2017/18	Archive	
Title			Date	Press Releases	Reports	Slides	Webcasts
Annual report and accounts			Jan 2019				
Fifteen year stress test model			Jan 2019				

15-YEAR STRESS TEST: RETAIL ANALYST VERSION

This file is a simplified version of the 15-Year Stress Test model, designed for use by retail Analysts. The original stress test was published and explained in detail within our Results Announcement and CEO report for the year ending January 2019.

We hope you find this model useful.

Please read the Analyst briefing notes and legal notice included within the file before proceeding to use the model.

CONDITIONS OF USE

Within this Analyst version of the model, we have provided 256 possible outcomes. Please note, due to the complexity of the full model and the many permutations of outcomes, we will be unable to take Analyst calls or support with reconciliations to existing Analyst models.

Forward looking estimates

This model includes inputs, variables, assumptions and calculations that are forward looking and estimates only. By their nature, forward looking estimates involve risks, uncertainties or assumptions that could cause actual results to differ materially from those calculated in this model. You are solely responsible for evaluating the accuracy, fairness, reasonableness or completeness of the information presented.

[Go to Briefing Notes](#)

[Go to Disclaimer](#)

[Continue](#)

next

Company Stress Test

Sales Growth Inputs

	Sales Inputs		Output Compound Growth Rates			
			Yrs 1 - 5	Yrs 6 - 10	Yrs 11 - 15	15 Year
Next UK	+4.8%	15yr CAGR	+5.7%	+4.5%	+4.2%	+4.8%
LABEL UK	+8.4%	15yr CAGR	+14.6%	+6.9%	+4.1%	+8.4%
UK Online			+8.4%	+5.4%	+4.2%	+6.0%
Retail	-10%	Like for like	-10.1%	-13.7%	-13.5%	-12.4%
Total UK (incl Retail)			+0.0%	+0.7%	+2.2%	+1.0%
Overseas	+12.2%	15yr CAGR	+18.1%	+11.5%	+7.3%	+12.2%
Group (incl Finance)			+2.4%	+3.1%	+3.6%	+3.0%

Top tips: Scenario analysis and stress testing



While it is impossible to predict the future, it is very important to provide insight to users of the process undertaken in conducting scenario analysis. This illustrates how management views the business in the context of the environment it currently operates in and how it anticipates this will change over time. The process also allows management to tailor responses to changes in those factors identified in the scenario analysis and other 'unexpected' factors.

In the past, the Lab has identified many 'tips' regarding scenarios and their reporting. The following are some suggestions of how scenarios can be enhanced:

- Scenarios help management to develop an agile mind-set. The focus should be on what plausible actions can be taken in response to events and do not report actions unlikely to be taken.
- The chosen scenarios will not always reflect what transpires but this is not the point. The purpose of scenario analysis is instead to give comfort that a range of scenarios and outcomes are being considered. Disclosures of process, inputs, assumptions, actions and responses help investors obtain comfort over scenarios.
- All companies are affected by events or circumstances, but in different ways. Explain unique circumstances where relevant to users' understanding rather than providing generic scenarios and narrative.
- A scenario does not stand alone, it should make sense in the context of the rest of the report and the company's specific circumstances.
- Determining the future is not a perfect science and previous scenarios may not have been completely accurate. However, they should not be disregarded entirely as they are a vital source of information and learning. Explain how the company got from there to here and how the past shapes the future.
- Be clear on the detail of stress tests, do not just state that they have taken place.

Appendices



Appendix 1: Regulatory glossary

The following are the main regulations and guidance that provide valuable context for this report.

Companies Act 2006 ('Companies Act')

[Section 414C\(2\)\(b\)](#) requires that the Strategic Report contains a description of the principal risks and uncertainties facing the company. This requirement applies to a wide range of companies, including UK AIM and many private companies. It sits alongside the requirement for a balanced and comprehensive analysis of the development, performance and position of the company in [Section 414C\(3\)](#).

The requirement to disclose a non-financial information statement was introduced as part of the changes presented by [The Companies \(Miscellaneous Reporting\) Regulations 2018](#) and subsection [414CB\(2\)](#) includes a requirement for a description of principal risks and, where relevant and proportionate, relationships that may have an adverse effect on these risks and how the risks are being managed.

Guidance on the Strategic Report 2018 (the Guidance)

[The Guidance](#) supports and expands on ways to approach the legislative requirements within the Strategic Report section of the Companies Act. [Paragraph 7A.28](#) of the Guidance explains that the risks and uncertainties included in the Strategic Report should be those considered by the entity's management to be material to the development, performance, position or future prospects of the entity. They will generally be matters that the board regularly monitor and discuss because of their likelihood, the magnitude of their potential effect on the entity, or a combination of the two.

The UK Corporate Governance Code 2018 (the Code)

[The Code](#) was updated in 2018 and applies to accounting periods beginning on or after 1 January 2019. There are a number of relevant Code principles and provisions related to risk. For example, the Code reinforces the need for risk considerations to sit within the wider context of the company's business model and long-term success.

In addition, the Code sets the framework for a two-step process commonly referred to as the viability statement. Provision 31 states that:

"Taking account of the company's current position and principal risks, the board should explain in the annual report how it has assessed the prospects of the company, over what period it has done so and why it considers that period to be appropriate. The board should state whether it has a reasonable expectation that the company will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, drawing attention to any qualifications or assumptions as necessary".

FRC Guidance on Risk Management, Internal Control and Related Financial and Business Reporting (2014)

The FRC also issued [Guidance on Risk Management, Internal Control and Related Financial and Business Reporting](#) in 2014. This provides further guidance on risk and viability reporting, including a section on the 'Long Term Viability Statement'.

Appendix 2: Process and participants

Participants join projects by responding to a public call or being approached by the Lab. An iterative approach is taken, with additional participants sought during the project, though it is not intended that the participants represent a statistical sample. References made to views of 'companies' and 'investors' refer to the individuals from companies and investment organisations that participated in this project. Views do not necessarily represent those of the participants' companies or organisations.

Views were received from a range of UK and international institutional investors, analysts and retail investors through a series of in-depth interviews. We also heard from a range of companies through one-to-one interviews or roundtables with other agencies.

The Lab also received a great deal of support from a wide range of organisations, advisors and others throughout this project, particularly those organisations that have been working in this area for a number of years. This assistance has been invaluable, and we thank these organisations for giving so generously of their time.

Thank you to all of the participants for contributing their time to this project.

Companies

3i Group plc
Antofagasta plc
Ashmore Group plc
Coastline Housing Ltd
Croda International plc
Coca-Cola Europacific Partners plc
Coca-Cola Hellenic Bottling Company
First Group plc
Fresnillo plc
Hill and Smith Holdings plc
International Consolidated Airlines
Group S.A.
InterContinental Hotels Group plc
ITV plc
J Sainsbury plc
Keller Group plc
Legal & General Group plc
MP Evans Group plc
NatWest Group plc
Northern Ireland Water Ltd
Polymetal International plc
Royal Mail Group plc

Investors and other users

Artemis Investment Management LLP
Allianz Global Investors GmbH
Asset Management One
International Ltd
Castlefield Investment Partners LLP
Evenlode Investment Management Ltd
Federated Hermes International
Representatives of the UK Shareholders'
Association

We would also like to thank the following agencies for hosting company roundtables, where the Lab gathered further views:

Emperor
Falcon Windsor

Explore more work of the Lab

The Lab has published reports covering a wide range of reporting topics, including ones that are relevant to the topic of risks, uncertainties, opportunities and scenarios:

- [Risk and viability reporting \(2017\)](#)
- [Business model reporting \(2016\)](#)
- [Business model reporting; Risk and viability reporting – implementation study \(2018\)](#)
- [COVID-19 – Going concern, risk and viability](#)
- [COVID-19 – Going concern, risk and viability – a look forward](#)
- [COVID-19 – Resources, action, the future](#)
- [COVID-19 – Resources, action, the future – a look forward](#)

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