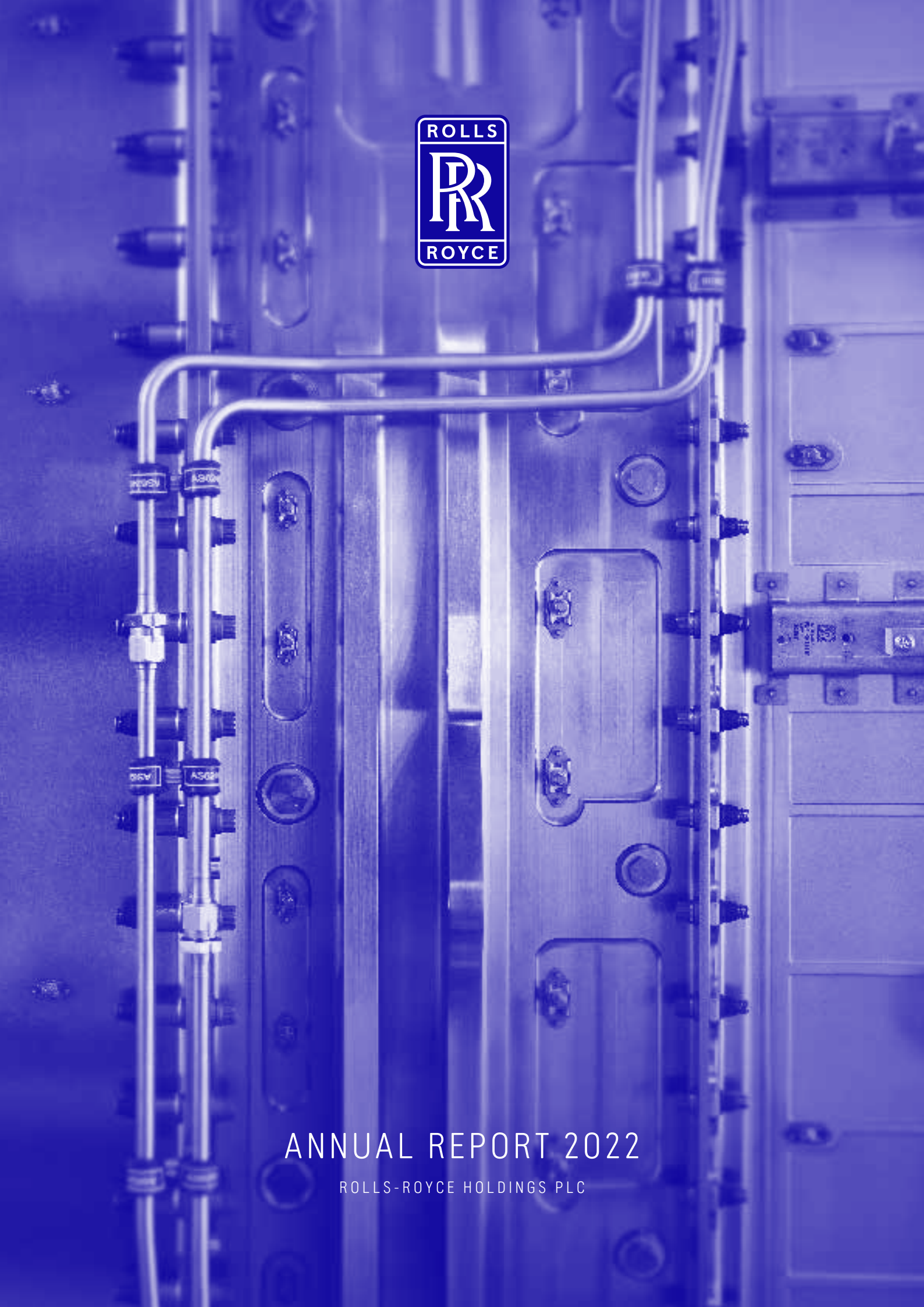

ANNUAL REPORT 2022

ROLLS-ROYCE HOLDINGS PLC

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Use of underlying performance measures in the Annual Report
All figures in the narrative of the Strategic Report are underlying from continuing businesses unless otherwise stated. We believe this is the most appropriate basis to measure our in-year performance as this reflects the substance of trading activity, including the impact of the Group's foreign exchange forward contracts, which lock in transactions at predetermined exchange rates. In addition, underlying results exclude the accounting impact of business acquisitions and disposals, certain impairment charges and exceptional items. A full definition of underlying and the reconciliation to the statutory figures can be found on pages 203 and 206. All references to organic change are at constant translational currency.

Forward-looking statements
This Annual Report contains forward-looking statements. Any statements that express forecasts, expectations and projections are not guarantees of future performance and guidance may be updated from time to time. This report is intended to provide information to shareholders, and is not designed to be relied upon by any other party or for any other purpose, and the Company and its Directors accept no liability to any other person other than that required under English law. Latest information will be made available on the Group's website. By their nature, these statements involve risk and uncertainty and a number of factors could cause material differences to the actual results or developments.

GROUP AT A GLANCE

FREE CASH FLOW [1,2]

£505m

2021: £(1,485)m

STATUTORY CASH FLOWS FROM OPERATING ACTIVITIES

£1,850m

2021: £(259)m

UNDERLYING REVENUE [1,2]

£12,691m

2021: £10,947m

STATUTORY REVENUE [1]

£13,520m

2021: £11,218m

UNDERLYING OPERATING PROFIT [1,2]

£652m

2021: £414m

STATUTORY OPERATING PROFIT [1]

£837m

2021: £513m

UNDERLYING PROFIT BEFORE TAX [1,2]

£206m

2021: £36m

STATUTORY LOSS BEFORE TAX [1]

£(1,502)m

2021: £(294)m

UNDERLYING EARNINGS PER SHARE [1,2]

1.95p

2021: 0.11p

STATUTORY (LOSS)/EARNINGS PER SHARE [1]

(14.24)p

2021: 1.48p

NET DEBT [3]

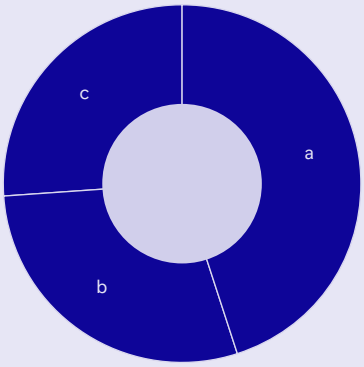
£(3,251)m

2021: £(5,157)m

LIQUIDITY [4]

£8.1bn

2021: £7.1bn



UNDERLYING REVENUE BY BUSINESS IN 2022

a. Civil Aerospace	**45%**
b. Defence	**29%**
c. Power Systems	**26%**
New Markets and other businesses [5]	**nil**

ORDER BACKLOG [1,5]

£60.2bn

GROSS R&D EXPENDITURE [2,6]

£1.3bn

COUNTRIES WITH ROLLS-ROYCE PRESENCE

48

EMPLOYEES (MONTHLY AVERAGE)

41,800

[1] 2022 and 2021 figures represent the results of continuing operations
[2] A reconciliation of alternative performance measures to their statutory equivalent is provided on pages 203 to 206
[3] Net debt (including lease liabilities) is defined on page 107
[4] Liquidity is defined as net funds plus any undrawn facilities, as listed on page 48
[5] See note 2 on page 129
[6] See note 3 on page 132 for a reconciliation of gross R&D expenditure to total R&D expenditure

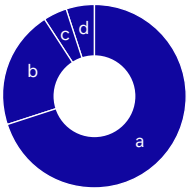
See note 2 on page 125 for a reconciliation between underlying and statutory results

OUR BUSINESSES IN 2022

CIVIL AEROSPACE

Civil Aerospace is a major manufacturer of aero engines for the large commercial aircraft, regional jets and business aviation markets. The business uses its engineering expertise, in-depth knowledge and capabilities to provide through-life service solutions for its customers.

UNDERLYING REVENUE



a. Large Engines	**70%**
b. Business Aviation	**21%**
c. Regional	**4%**
d. V2500	**5%**

UNDERLYING REVENUE

£5,686m

2021: £4,536m

UNDERLYING OPERATING PROFIT/(LOSS)

£143m

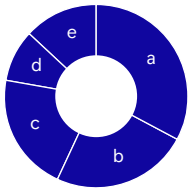
2021: £(172)m

See page 22

DEFENCE

Defence is a market leader in aero engines for military transport and patrol aircraft with strong positions in combat and trainer applications. It has significant scale in naval and designs, supplies and supports the nuclear propulsion plant for all of the UK Royal Navy's nuclear submarines.

UNDERLYING REVENUE



a. Transport	**33%**
b. Combat	**24%**
c. Submarines	**21%**
d. Naval	**9%**
e. Other	**13%**

UNDERLYING REVENUE

£3,660m

2021: £3,368m

UNDERLYING OPERATING PROFIT

£432m

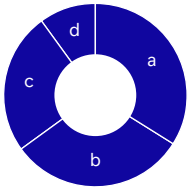
2021: £457m

See page 24

POWER SYSTEMS

Power Systems, with its product and solutions brand *mtu*, is a world-leading provider of integrated solutions for onsite power and propulsion, developing sustainable solutions to meet the needs of its customers.

UNDERLYING REVENUE



a. Power Generation	**34%**
b. Marine	**31%**
c. Industrial	**25%**
d. Defence	**10%**

UNDERLYING REVENUE

£3,347m

2021: £2,749m

UNDERLYING OPERATING PROFIT

£281m

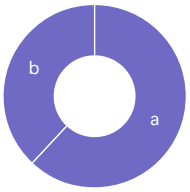
2021: £242m

See page 26

NEW MARKETS

New Markets are early-stage businesses. They leverage our existing, in-depth engineering expertise and capabilities to develop sustainable products for new markets, focused on the transition to net zero.

R&D EXPENDITURE



a. Rolls-Royce Electrical	**62%**
b. Rolls-Royce SMR	**38%**

UNDERLYING REVENUE

£3m

2021: £2m

UNDERLYING OPERATING LOSS

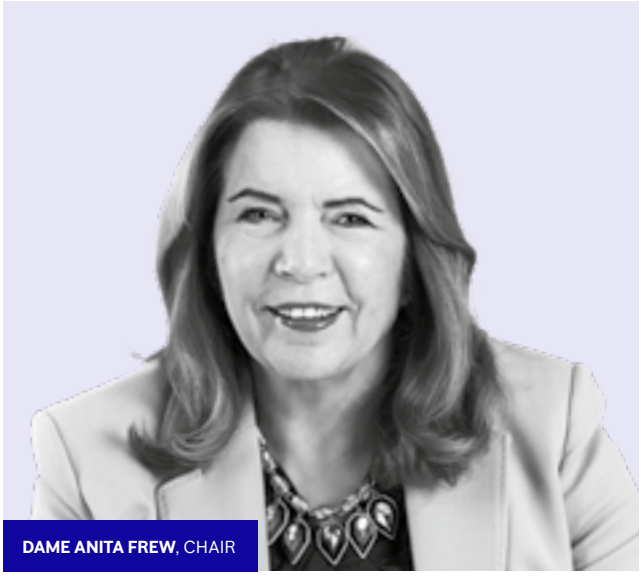
£(132)m

2021: £(70)m

See page 28

CHAIR'S STATEMENT

Rolls-Royce is a British industrial icon with world-leading technologies and exceptional people. We have significant opportunities to build on our foundations, realise our potential and create value that will benefit us all.



DAME ANITA FREW, CHAIR

Pride is a word so often used in conjunction with Rolls-Royce – the pride our engineers take in the products they develop or the pride all our people take in working for this iconic company. Rolls-Royce is a British industrial icon with a long heritage of innovation, from the Merlin engine all the way through to today's Trent XWB, which has helped change the world. I share that sense of pride. It has deepened over the past year as I have had the opportunity to meet many more of our committed and dedicated employees.

As many of you know, as a third generation Rolls-Royce employee, I grew up surrounded by my father and grandfather's passion and enthusiasm for Rolls-Royce's innovation, creativity and world-class engineering. I also saw first hand the impact on the Company and all employees of living through a financial crisis. It is critical, therefore, that we build financial resilience and sustainable performance. We must remain in control of our own destiny and able to weather whatever the external environment throws at us.

Any change journey starts with an acceptance of the current position and our new Chief Executive, Tufan Erginbilgic, who joined the Board in January 2023, has already delivered an honest assessment of our strengths and weaknesses. There are many positives – our strong market positions, the strength of our customer relationships, our exceptional technical competence, the commitment and passion of our people and the key role we play in the energy transition. Tufan, in his Chief Executive's review, talks passionately about why he joined Rolls-Royce, his commitment to the business and the challenges and opportunities that he sees. This shows the potential for significant performance improvements across our Group. This will benefit all our stakeholders. We will be a stronger long-term partner for our customers and suppliers. We will have the capacity to invest in innovation, engineering excellence and energy transition and we will be better able to reward our employees and investors.

Performance in 2022

In my first full year as Chair, we have made some progress towards a stronger financial future, as shown by our results for 2022. This was despite two significant macro events. Firstly, the bounce back from the pandemic led to inflationary and supply chain pressures, as lockdowns ceased and economic activity resumed in many parts of the world, albeit unevenly. Secondly, the Russia-Ukraine conflict exacerbated many of those inflationary pressures. Throughout the year, we continued to focus on operational execution, while actively managing inflation and supply chain challenges through tight cost control and robust long-term contracts with suppliers and customers, which enabled us to pass through much of the inflation risk. As a result, we were able to deliver on our financial expectations for the year (see page 18). Our expectations for 2023 (see page 19), however, are only the start of our new journey.

During the year, we laid some positive foundations for the future, achieving a number of significant contract, customer and partnership wins across the Group. In Civil Aerospace, we signed new large engine orders from Malaysia Aviation Group, Norse Atlantic Airways and Qantas. We also secured our place on a new aircraft platform with the Trent XWB powering a new freighter from Airbus. After the end of the year, we announced our first ever widebody engine deal with an airline customer in India. The deal will make Air India the largest operator of our Trent XWB-97 engines in the world. In Defence, the Bell V-280 Valor was selected by the US Army for the future long range assault aircraft programme. Power Systems also secured a number of important defence wins, including an order for engines for the British army and a five-year service contract to support all of our engines that power Britain's naval fleet. Finally, Rolls-Royce Electrical entered into a partnership with Hyundai Motor Group to collaborate on all-electrical propulsion and hydrogen fuel cell technology.

Leadership transition

In many ways, 2022 marked the end of a chapter for Rolls-Royce. All three of the short-term commitments made by the business at the height of the pandemic have now been met. The first commitment was met in 2021 as we completed, ahead of schedule, the restructuring programme we undertook as a result of the impact of the pandemic. Our return to positive free cash flow in 2022 marked the delivery of our second short-term commitment. Finally, during the summer, we completed the sale of ITP Aero to a consortium of investors, which marked the completion of our third and final short-term commitment: to deliver proceeds of around £2bn from a disposal programme.

Perhaps the most obvious ending of a chapter, however, was that relating to Warren who stood down as Chief Executive at the end of 2022. During his seven years at the helm of Rolls-Royce and a total of eight on the Board, he navigated more major crises than many chief executives experience in a whole career. Several of those crises had their roots planted well before Warren took over and one, the pandemic, was of an unprecedented scale compared with anything else that has happened in global aviation since World War II. Warren showed incredible tenacity and integrity throughout. He was hugely admired by our employees, many of whom speak of the

hugely enjoyable personal interactions they had with him whenever he visited one of our sites. Personally, it was a great pleasure to work with him, albeit briefly, as Chair and I know many people learned a lot from his humility, empathy and, above all, his unquenchable curiosity. I and the rest of the Board would like to thank him for his passion, commitment and dedication to Rolls-Royce. We all wish him well for the future.

Board developments

I inherited a Board in transition and while the task of ensuring the correct Board composition is never ultimately concluded, we have a significant level of diversity in terms of experience, skills, geography, leadership style, gender and ethnicity. Part of a Chair's role is also to ensure a culture of openness and transparency in which all views can be expressed and a 'collective brain' brought to bear on all issues. To ensure that brain is as high functioning as possible, requires diversity of thought. The breadth we now have encompasses everything from a wide range of business experience and sectoral expertise to cultural consideration and improved gender balance. We also have a firm grounding in engineering and technology and core competence in areas such as disciplined capital allocation which will stand us in good stead for the coming years.

I have already written about Tufan, who was appointed last summer following an in-depth global search conducted by external advisers (see page 72). Among other moves, Irene Dorner stepped down from the Board in May and Lord Jitesh Gadhia joined in April and became Chair of the Remuneration Committee following the 2022 Annual General Meeting (AGM). Lee Hsien Yang stepped down from the Board in December having reached his nine-year term. We recently announced the appointment of Birgit Behrendt with effect from the conclusion of the AGM on 11 May 2023. On joining the Board, Birgit will be appointed to the Nominations & Governance Committee and the Safety, Ethics & Sustainability Committee. Birgit brings extensive global operational experience in large, complex international industrial groups having spent much of her executive career at Ford Motor Company, latterly as Vice President Global Purchasing. Her non-executive appointments have focused on industrial groups beyond the automotive industry, all with a focus on sustainability and transformation. Mike Manley has indicated his intention to step down from the Board of Rolls-Royce in order to focus on his US business interests and will not be standing for re-election at this year's AGM on 11 May. Mike has been a valued member of the Board and I would like to thank him for his dedication during his time with Rolls-Royce.

The role of a board and its chair can, to some, appear somehow at arms' length to the operation of a business itself and somewhat distanced from the concerns of employees themselves. Amidst its supervisory, oversight and governance activities, which are well documented within this report (see page 59), the Board has, to my mind, a strong ambassadorial role. This is most obvious when dealing with our wide range of external stakeholders, with whom we continued to engage throughout the year (see page 50). During my first full year as Chair, I have endeavoured to further this mindset across the Board when interacting with our people. One of the opportunities we had during the year was our Meet the Board event immediately following the AGM, at which employees from across the Group were able to interact with Board members and share experiences, discuss concerns and swap insights. The level of interaction was terrific and such dialogue will be even more important going forward.

While there is significant activity to come in the year ahead, much groundwork was laid down by the Board in 2022. I continued to meet with our major institutional investors in order to understand their expectations and concerns. These interactions have remained insightful and instructive and have provided valuable feedback for the whole Board.

Board involvement in climate governance

The Board also took tangible steps during the year to remain abreast of current best practice in terms of climate change reporting. During 2022, we received tailored training on climate-related matters (see page 34) and the Board reviewed the Group's climate-related governance. We were also actively involved in interactions with the Science-Based Targets initiative (SBTi) and continued to closely review preparation for Taskforce on Climate-related Financial Disclosures (TCFD) reporting.

Shareholder payments

We had a ten year track record of payments to shareholders prior to the pandemic but had to cease payments in 2020 to protect our balance sheet. We are still restricted by some of the conditions attached to our loan facilities from making payments to shareholders at this time. We are committed to returning to an investment grade credit rating through performance improvement and to resuming shareholder payments.

Looking forward

As Tufan makes clear in his review (see page 6), we are now embarked upon the creation of a high-quality, sustainable, cash generative business with a strong balance sheet and growing returns, that can invest surplus capital in profitable growth. As our business strengthens we will create significant value for all stakeholders and be better able to play a key role in helping our customers benefit from the energy transition.

I would like to take this opportunity to thank, on behalf of the whole Board, everyone in Rolls-Royce for their hard work and continued dedication.

Dame Anita Frew
Chair

CHIEF EXECUTIVE'S REVIEW

We must harness the pride of our people to create a more successful company. We will reassert Rolls-Royce as a high-performing, growing and competitive business that has earned the right to invest in future growth. We are capable of moving faster, aiming higher and delivering stronger returns for all our stakeholders.

TUFAN ERGINBILGIC, CHIEF EXECUTIVE

It is an honour to lead Rolls-Royce. There are only a handful of companies whose products have helped shape modern society. From the birth of transatlantic flight and Europe's first high speed rail service to the development of the jet engine itself, our ingenuity has helped bring the world closer together. Our brand is estimated to be one of the top five most reputable in the world and we have strong market share in attractive markets.

During my introduction to the Company, I have spent time at our largest sites in the UK, Germany and US. Since joining, I have met many smart, hard-working and dedicated people and what struck me about all of them was the pride they feel in working for Rolls-Royce, in being part of a story that stretches back for generations. The people I have met are passionate about the products we make, excited about the possibility of their next invention and invested in our engineering capability. I am proud to be here too and I intend to harness the pride our people have and use it to create a stronger and much more successful company.

My career has been about partnering engineering expertise with a granular strategy, business acumen and intense performance management. What I strive to create, and have achieved in my previous roles, is an organisation that thrives on what I term strategic progress. That means setting clear targets, managing performance with real focus and creating a mindset that is constantly looking to go further and improve the business everyday.

This needs to happen at Rolls-Royce because, as a business, we must do better. We can move faster, aim higher and deliver stronger returns for all our stakeholders. It is that potential of Rolls-Royce as a business, not its place as a household name, that was the primary motivator for me when I accepted the job as Chief Executive.

That potential needs to be realised in an external environment that is changing rapidly. Rising inflation, recessionary pressures, interest rate increases and supply chain issues are realities that we need to face head on. We need to respond proactively to the major trends around us including the energy transition, digitalisation and the growth of the middle classes in the developing world. We must ensure that we move at a greater pace than the world around us and not get left behind.

If the past few years have taught the business community anything, it is that uncertainty and change are the norm. We have seen the pandemic give way to geopolitical and macroeconomic shocks, causing an inflationary environment and destabilising supply chains. Further shocks cannot be ruled out and Rolls-Royce must be able to face them in a stronger position than it has held in the past. This requires a stronger balance sheet to build resilience and to underpin profitable growth opportunities.

I am very confident that Rolls-Royce has the potential to do this but today we are underperforming and we have been for an extended period of time. Our total shareholder return over the last five years is negative. Cash generation is unsatisfactory. Our debt is too high. Too much of our gross profit is spent on overheads, interest payments and other costs. We must quickly and significantly improve our cash generation to strengthen our balance sheet. We need to get back to an investment grade credit rating through organic self-help, building on the £2bn raised from the disposal programme.

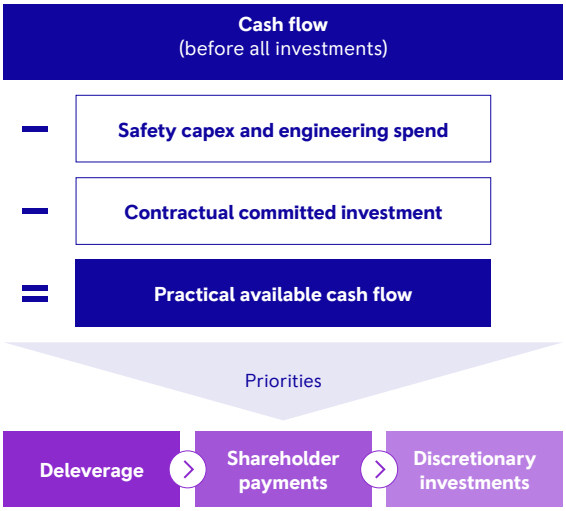
If the past few years have taught the business community anything, it is that uncertainty and change are the norm. Rolls-Royce must be able to face the future in a stronger position than it has held in the past.

Profit and margins must improve to create a quality business with satisfactory returns on capital employed. Our underperformance is most evident in Civil Aerospace but improvement is something that all our businesses need to deliver. In the past, Rolls-Royce has relied too much on market recovery to drive its success and our low operating margins and high cost base mean that we are not resilient enough to external factors when the environment is unfavourable.

We owe it to our stakeholders to perform better. It will require turning passion for engineering projects into a passion for profitable growth. We will set clear goals, performance manage with

NEW CAPITAL ALLOCATION FRAMEWORK

Higher priority on deleveraging the balance sheet and re-establishing shareholder payments and then on discretionary investment.



Only projects which demonstrate satisfactory scores against these criteria will be considered for investment.

real focus and create a winning mindset. That last element unlocks belief within an organisation which creates the energy required to deliver extraordinary outcomes.

We need to apply a clear financial framework to, firstly, strengthen our balance sheet; secondly, reward investors with growing returns; and, thirdly, invest our surplus capital to drive future growth. Improving our cash generation will enable us to pay down debt and deleverage the balance sheet, in order to position ourselves to return to an investment grade credit rating as soon as possible. This will make us stronger and give us flexibility to allocate capital to drive growth in the future.

We have to make the right capital allocation choices to grow the business in the most value accretive way. We cannot continue to allocate capital to projects that have low returns. This will mean capital allocation decisions in line with strategy and centrally allocated capital to markets and programmes in line with the framework.

Strategically, we remain committed to helping our customers embrace net zero and we remain steadfast in our opinion that Rolls-Royce has an important role to play in the energy transition. The pace and level of our investment, however, will vary across the business depending on the market opportunity, fit with strategy and our capability.

We must reward the patience and support of our investors. I firmly believe that generating greater returns for shareholders and investing in future growth are not binary options. Good businesses do both. For Rolls-Royce to do both, we will need to change. Before addressing how we will change, we will first look at where we stand today.

Improved profit and cash in 2022

Our financial figures showed an increase on 2021 for revenue, profit and cash. Underlying revenue increased by 14%. Underlying operating profit was £652m, £238m higher than the prior year, with the increase driven by Civil Aerospace and Power Systems. Free cash flow from continuing operations of £505m was £2.0bn higher than the prior year, led by engine flying hour recovery. Net debt of £3.3bn was down from £5.2bn at end 2021, due to disposals and improved cash flow.

Increased profits in Civil Aerospace and Power Systems were partly offset by lower profit in Defence and increased investment in New Markets. Margin growth reflected improvements in long term service agreement (LTSA) contract margins and increased spare engines profit in Civil Aerospace. This was partly offset by the non-repeat of a foreign exchange revaluation credit in Civil Aerospace and legacy spare parts sales in Defence in 2021, and lower margins in Power Systems due to cost increases.

Free cash flow from continuing operations improved from an outflow of £1.5bn in 2021 to an inflow of £0.5bn, driven by 35% growth in large engine flying hours, comparatively lower growth in large engine major shop visits at 19%, and higher Defence cash flow. Higher inventory in Power Systems saw its cash conversion ratio fall.

In 2023, a continued recovery in our end markets and the actions we are taking give us confidence in delivering higher profit and cash flow.

OUR TRANSFORMATION PROGRAMME

To realise our priorities and the potential embedded within our business, we have launched the boldest change programme Rolls-Royce has carried out in many years.

One Rolls-Royce, winning together

Our guidance for 2023 is, however, only the start of the journey. I see a business that is capable of far more. We cannot rely upon external factors alone to deliver better results. We have already carried out extensive work benchmarking our Group performance and that of our businesses against our peers. That work shows there is significant scope for us to deliver materially higher profit, cash flows and returns in the medium-term. We have now launched a number of multi-year priorities and we are committed to operating a 'one Rolls-Royce' model, aligning the whole organisation behind them.

Our priorities are clear. They are:

- focus on the safety of our people and products;
- significantly improve earnings and the cash potential of the business;
- deliver substantial efficiency improvements;
- improve cash generation and deleverage the balance sheet;
- develop a clear and granular strategy;
- play a key role in the energy transition; and
- engage our people and build capability.

It is imperative that the safety of our people and products remains our top priority throughout this process. In my previous roles, I have been able to achieve financial resilience and stronger returns while delivering record-setting safety performance. Safety is absolutely paramount to me and I fully understand how crucial both product and personal safety is within Rolls-Royce, which operates in some of the world's most regulated safety-critical industries. We will not tolerate any degradation of standards in the pursuit of efficiencies and, in fact, we will look to improve both.

To realise these priorities and the potential embedded within our business, we have launched the boldest change programme Rolls-Royce has carried out in many years. Internally, we refer to it as 'winning together' a name which signifies that this is about being the best we possibly can be and that it involves everyone within the organisation. It is not an activity which is the responsibility of one individual project team, it is the responsibility of everyone in Rolls-Royce. Our transformation programme will ensure that everyone moves at pace and is held accountable for their deliverables.

The transformation consists of seven workstreams and each of them is led by a senior leader. We are already delivering changes as we work at pace. Activity on many of the workstreams is already underway and as the year progresses we will look to embed the performance management and culture we need to ensure long-term sustainable success across the Group.

Efficiency and simplification

We are examining the organisational structure of the Group including synergies that we can harness from our one Rolls-Royce approach. We see opportunities for footprint consolidation as well as direct and indirect third party efficiencies. While costs were removed during the pandemic, particularly in Civil Aerospace, this was predominantly linked with the dramatic reduction in flying activity. We believe there remains significant opportunity to right-size our cost base to deliver sustainable cost efficiencies across the whole Group.

Commercial optimisation

We are bringing a sharper commercial edge to everything that we do to deliver increased profitability of contracts to improve our earnings, cash generation and returns. This means being rewarded by our customers for the value our products bring and the risks we take. A stronger Rolls-Royce will be a much better partner, better able to deliver operationally and invest in new products. I have met with a number of our largest customers already who understand this.

Business improvements
These programmes, now live within each business and led by our Business Presidents, are tasked with building plans to deliver the full potential of the business. Each business has a resourced programme aligned to our winning together change programme. We have set stretching performance targets following peer benchmarking analysis and we have already identified performance gaps we must address. Each business will be able take advantage of the other workstreams in this winning together programme to continually improve and reinforce their plans.

Working capital
This workstream is tasked with delivering a significant and structural reduction in working capital across the Group. By deep diving into the operational value chain and addressing working capital in its component parts, we believe that there are sustainable improvements available.

Strategic review
Our strategic review process has now been launched. This Group-wide review will decide which areas we are going to invest in and which ones we will not. This investment prioritisation activity will ensure that we focus on profitable opportunities, in new technologies where we are differentiated, where the market size is sufficiently large and where there is a good fit and synergy with our existing activities.

This exercise is not about searching for easy wins but about taking tough decisions to create enduring value for all our stakeholders. The result of this review will be mid-term targets and a strategic implementation plan that we will share in the second half of 2023.

Performance management
In order to succeed in all these areas, our performance management workstream is vital as it will enable us to ensure we are both proceeding with urgency and on track to achieve our goals. This work is already underway and will formalise as the year progresses. We will manage our businesses in a tight and timely manner and deliver on our expectations of high performance from everyone in support of our priorities and strategy.

Purpose and culture
Later in the year we will complement our transformation with our final remaining workstream, purpose and culture. This will embed our purpose and winning culture throughout Rolls-Royce.

We are already in action across all of these workstreams. It is a multi-year programme that will establish a high-performing Rolls-Royce and we will start to see the impact of this programme this year.

A new mindset for a winning company
Alongside being clear in setting out the 'what' of our change programme, what needs to be done differently and to what ends, we are also being very clear on the 'how', how we go about doing this. Alongside the greater strategic clarity, we have set clear expectations of leadership. While this mindset starts at the top, it is permeating throughout the business. We are going to hold ourselves accountable for delivery and performance and we are all team players, working as one company. On a practical level, this means taking a Group approach to making investment choices. On a more emotional level, it means we are all in this together. We are all passionate and committed to the extraordinary success of Rolls-Royce and, ultimately, here to make a real difference.

We are all team players working as one company. We have a lot of hard work ahead of us but we have begun at pace and the potential rewards for all our stakeholders are great.

I believe we have the potential to be a much higher quality and more competitive company. The ultimate purpose of this activity is to create a Rolls-Royce of which all stakeholders can be proud. We have a lot of hard work ahead of us, but we have begun at pace and the potential rewards for all our stakeholders are great.

Through the actions we are now taking, we will reassert Rolls-Royce as a high-performing and competitive business with strong returns, profitability and cash flow. That will earn us the right to invest in future growth.

Rolls-Royce has created tremendous engineering solutions in the past which have engendered pride among our people. Now that same pride will be generated by realising the full potential of Rolls-Royce. I couldn't be more excited to be part of this team.

Tufan Erginbilgic
Chief Executive

STRATEGY

PURPOSE, VISION AND MISSION

We provide power that is central to the successful functioning of the modern world. As a broad-based power and propulsion provider, we operate in some of the most complex, critical systems at the heart of global society.

Purpose

Power is vital to the success of our customers and drives the economic development of the world. We create value for all stakeholders by harnessing the potential of cutting-edge technologies to create safe, cleaner and more efficient power and propulsion solutions.

We operate in some of the most complex and critical parts of the global economy that are central to the successful functioning of the modern world. Our products and services enable our customers to connect people, societies, cultures and economies together; they meet the growing need for power and energy; and enable governments to equip their armed forces with the power required to protect their citizens.

Vision

We create industrial technologies using our expertise and an extensive network of partners, suppliers and customers built over many years, adding to our winning position. We combine distinct engineering disciplines to deliver highly complex power and propulsion solutions in the air, at sea and on land. The thread linking the Group together is the technical and engineering expertise and commercial skillset required to develop complex solutions, products and services. We build long-term relationships with our customers through our services offerings and these relationships ultimately enable us to deliver value for all our stakeholders.

Mission

Global economic development is driving increased demand for energy, international trade and travel. We provide the power that supports that growth – connecting, powering and protecting society – and we understand that power must be made compatible with combatting climate change. As our customers increasingly search for more sustainable solutions, we believe the energy transition creates opportunities for innovation and growth as well as further efficiency in the way we run our operations. It also provides long-term careers for our people and a strong draw for future talent seeking an opportunity to join a company creating innovative solutions, adding value to our stakeholders and supporting energy transition.

OUR VALUES AND BEHAVIOURS

Our values and behaviours

Trust: We strive to outperform the expectations of our stakeholders. We have to earn trust every day and always remember it is easy to lose.

Integrity: We live up to all our ethical principles and we demonstrate this by being true to ourselves and showing honesty and good judgement in all that we do.

Safety: We put health and safety first. We care about the health and safety of our people and our products.

Embrace Agility: We explore different ways of doing things, we respond quickly and adapt to challenges.

Be Bold: We believe in ourselves, push boundaries and speak up.

Pursue Collaboration: We find strength in working together, both inside and outside of our business, and value the diversity of people and perspectives.

Seek Simplicity: We keep it simple and remove complexity in how we communicate and the way we work.

Strategic review

We have launched a Group-wide strategic review that will help us to identify and assess strategic options, prioritise growth opportunities and assess current portfolio attractiveness. The result of this review will be a granular strategic plan with clearly defined milestones and key performance indicators to enable us to measure the progress.

Near-term areas of focus

In 2022, we dealt with external pressures, particularly in our supply chain and the inflationary issues caused by the recovery from the pandemic, the Russia-Ukraine conflict and economic uncertainty. We are taking the necessary actions to protect our business from the risks of inflation, supply chain disruption and a tightening labour environment. We see the benefits of productivity and efficiency improvements and expect to see more progress to come, alongside being ever more disciplined on our commercial terms. In 2022, demand for our products and services continued to improve significantly, with a record year for order intake in Power Systems, accompanied by continued recovery in Civil Aerospace engine flying hours and a strong order book in Defence. We continue to capitalise on the opportunities presented by our long-term customer relationships and installed product base; to grow our capabilities in core markets and create new business opportunities.

Delivering on our commitments

We are delivering on our commitment to rebuild our balance sheet in the medium term. We have completed four disposals since 2020 with the sale of ITP Aero in September 2022. We repaid a £2bn debt facility in September 2022, significantly reducing our net debt position while maintaining strong liquidity. In the second part of the year, Fitch, Moody's and S&P Global upgraded our credit rating outlook which is a stepping stone to achieving our mid-term ambition of returning to an investment grade credit rating. In 2022, we grew our revenue and made significant progress on profitability which allowed us to deliver against our commitment to return to positive cash flow. We are also seeing the benefits from operational improvements. We will work on increasing the momentum by protecting the efficiencies that have been achieved and focus on supply chain and pricing strategy optimisation, cost control and working capital discipline alongside being more disciplined on our commercial terms.

We are also delivering against our commitment to simplify the way we communicate our business performance. In May 2022, we held an investor day to help investors with their understanding of the key drivers of our financial and operational performance and provided more details about the cost reduction programme and expected near-term improvements. We have introduced a new approach to foreign exchange hedging where we will carry a smaller hedge book, with a declining percentage of cover over a five-year period, which will mean that market movements in foreign exchange will impact us sooner. This change is more cost effective, brings us in line with our peers and allows us to anticipate and react to risks more quickly.

Maximise value from existing capabilities

We are the beneficiaries of years, in some cases decades, of hard work, investing in the development of new products and growing market share. Across all our businesses, the key driver of revenue is the number of installed products in the market. This provides resilience against original equipment sales volatility and allows us to increase the scope of our aftermarket reach continuously and to maximise value through the lifecycle of the product.

This is especially true for Civil Aerospace. We are moving beyond a period of unprecedented investment in new Civil Aerospace engine programmes, with four new large engines and three new business jet engines launched in the last decade, to a period in which we will realise the benefits of that effort and investment. Increasing the size of our installed fleet in Civil Aerospace will drive aftermarket revenues which will create value in the medium term and beyond as older engines in our fleet will be retired and replaced with newer models. We remain focused on our services strategy to deliver high quality services to our customers while increasing the returns from the installed products by optimising our processes and operational footprint, reducing costs of maintenance and improving time on wing. There are two key areas we are working on: firstly, the fuel efficiency improvement of existing and newly developed products; and secondly, enabling our customers to use the products in a way that is compatible with sustainable fuels. We can pull the technology levers in our control through testing our existing products with new lower carbon and sustainable fuels and creating upgrade kits, where necessary, to assist adoption.

Growth opportunities

Over many years, Rolls-Royce has built expertise that led to the development of a wide range of technologies and products across various industries and markets. We are continuously exploring opportunities to develop new solutions for existing markets, applying current technologies to new markets, as well as entering new markets with new products.

Innovation is difficult in those sectors where emissions need to reduce but it plays a critical role in developing our Civil Aerospace and Defence businesses. For instance, where our customers around the world are exploring ways to reduce the carbon footprint, there is demand for newer, more efficient products that are compatible with sustainable fuels. In Power Systems we are working on developing new sustainable technologies that allow us to tap into new addressable markets and stay competitive in existing markets while helping our customers in their net zero transition. Our New Markets business, comprising Rolls-Royce SMR and Rolls-Royce Electrical, draws on our existing technological and engineering expertise and experience in delivering complex solutions while working across a wide range of partners.

PRIORITIES

Our purpose, vision and mission provide an overall framework within which our strategic focus sits. This provides our people with clear guidance on our in-year priorities.

PRIORITIES TO WIN TOGETHER

1	**Focus on the safety of our people and products**	G H
2	**Significantly improve earnings and the cash potential of the business**	A B C F
3	**Deliver substantial efficiency improvements**	C D F I
4	**Improve cash generation and deleverage the balance sheet**	B C F
5	**Develop a clear and granular strategy**	D E G I
6	**Play a key role in the energy transition**	A B D E I
7	**Engage our people and build capability**	G H

Links to key performance indicators

Financial performance indicators

A Order backlog
B Underlying revenue
C Underlying operating profit/(loss)
D Capital expenditure as a proportion of underlying revenue
E Self-funded R&D as a proportion of underlying revenue
F Free cash flow from continuing operations

Non-financial performance indicators

G Customer metric
H Employee engagement
I Sustainability

See Key Performance Indicators on pages 16 and 17

EXTERNAL ENVIRONMENT

Conflict in Europe

The Russia-Ukraine conflict has brought large-scale armed conflict to Europe, leading to a humanitarian crisis through the lives and livelihoods lost and disrupted. It has triggered mass displacement of people, political realignment and international sanctions as well as sharp escalations in food and energy costs. Cuts to supplies of gas to Europe are amplifying stresses in commodity markets and bring into focus the importance of secure access to energy; with policy shifting towards more diversified, increasingly domestic energy supply. The conflict has resulted in changes to the political landscape, including a re-appraisal of national security and defence priorities in countries most impacted by the conflict.

Our response

Following the imposition of sanctions on Russia affecting areas of Rolls-Royce business, and an internal review of our willingness to do business in Russia, we took the decision in March 2022 to stop doing business in Russia. All of our activities affected by sanctions, which were first introduced in February 2022, were stopped immediately. We are reducing our reliance on Russia for titanium through securing a long-term agreement with an alternative supplier. As countries re-evaluate their defence capabilities, we are responding to customers and we are increasing production capacity in our Power Systems business to meet increased demand for military power and propulsion equipment. The need for domestic energy security sovereignty creates an opportunity for Rolls-Royce SMR.

Economic uncertainty

Global economic activity in 2022 was impacted by a broad and deep series of issues resulting in lower-than-expected growth and levels of inflation higher than seen in several decades. The post-COVID-19 global economy continues to face powerful challenges. Initial problems resulting from high levels of government debt and post-pandemic supply chain disruption have been compounded by conflict in Europe, fuelling a cost-of-living crisis, as well as by a slowdown in China driven in part by continued intermittent lockdowns. Sustained uncertainty over energy supplies has contributed to reduced economic activity, particularly in manufacturing, dampening consumer and, to an extent, business confidence. Inflationary pressures have triggered a rapid and synchronised tightening of monetary conditions driving interest rate rises and a powerful strengthening of the US dollar against most other currencies. Labour markets remain tight with historically low unemployment rates and high levels of vacancies. Household debt levels are rising and discretionary spend falling.

Our response

Diversity in our portfolio helps us to be resilient to short-term shocks. Throughout the pandemic, our Defence and Power Systems businesses helped offset some of the impact in Civil Aerospace. We have taken a number of actions to protect our business from the risks of inflation, supply chain disruption and a tightening labour environment through a sharper focus on pricing, productivity and costs. Many of our long-term contracts, as are common in the aerospace sector, contain inflation-linked pricing clauses based on standard indices for energy, materials and wages to mitigate cost increases. In Power Systems, a shorter cycle business, we have been able to raise prices in an environment where demand is strong and margins are closely leveraged to volumes. In Defence, we are working hard to manage supply chain costs through long-term purchasing agreements. Across the business we are taking steps to right size, reduce our cost base and focus investments; and will continue to manage the current energy and raw material inflation risks through supplier agreements and hedging policies.

Long-term trends

Despite the turbulence in 2022, underlying longer-term opportunities and challenges presented by demographics, global economic development and environmental pressures remain. According to the UN, the global population reached eight billion in 2022 and is set to increase to almost ten billion by 2050, with more than 70% of people living in urban environments. Population and economic growth will lead to increased demand for power in markets served by Power Systems. Defence budgets, mainly driven by threat perception and economic growth, are forecast to grow with at least low single digits in real terms each year. One key determinant for demand in our Civil Aerospace business is the number of people in middle and higher-income levels able to afford air travel. Significant growth is expected globally but particularly in countries like China and India. With commitments to reduce greenhouse emissions being increasingly formalised, while being a tremendous societal challenge, this will provide business opportunities to bring cutting-edge technologies to market.

Our response

In Civil Aerospace, we are now positioned to realise the benefits of having built market position over the last few decades. At the same time, we are developing technologies for next-generation aero-engines, certifying our products to be compatible with low and net zero carbon fuels and beginning research into the longer term potential of hydrogen. We have structured our Power Systems business to address particular growth areas in power generation, commercial marine and industrial segments. Through our joint ventures in China and India we are well-positioned to serve these rapidly growing markets. Our Defence business is well positioned in new markets that could enable growth beyond the existing core. Through Rolls-Royce SMR, we seek to bring to scale an affordable, low-carbon source of power and through Rolls-Royce Electrical we will pioneer electrical power and propulsion in the emerging advanced air mobility market. We are working to enable all our products, on air, sea and land, to be used sustainably.

BUSINESS MODEL

We have a business model which we believe creates value for our stakeholders.

Our cross-cutting capability and assets that support our strategy

Brand and heritage

Our brand has global appeal; is enduring; engages a wide range of stakeholders; and is a powerful tool for attracting customers, partners and talent.

People and culture

We create an environment where all our people can be at their best. We work hard to release their full potential.

Innovation and technology

Delivering highly complex systems solutions has enabled us to build a significant breadth of disciplines; while the nature of our products means we have acquired extraordinary depth.

Partnerships

We build meaningful relationships with partners across the value chain.

Global network and infrastructure

Our geographic footprint ensures we are able to serve customers wherever they are.

Digitalisation

We use digital tools and skills across our business to drive operational efficiency and quality service.

Business excellence

We drive a culture of continuous improvement.

See our Viability Statement on page 49 and Stakeholder Engagement on pages 50 to 55

Our competitive advantage comes from:

Cutting-edge technologies
Our technologies ensure that our customers have the vital power that meets their emerging needs in an increasingly sustainable manner.

System solutions
We integrate individual enabling technologies into complete systems and power solutions, providing customers with the ability to work with a single partner.

1	2	3	4
Anticipate the needs of our customers	**Develop cutting-edge technologies**	**Design solutions**	**Develop world-class production capability**
Link to risks: c, d, g, h, i, j	Link to risks: a, c, d, e, f, i, j	Link to risks: a, c, d, e, f, j	Link to risks: a, b, c, d, e, f, j

DISCIPLINED CAPITAL ALLOCATION

1. Anticipate the needs of our customers
Our focus on building complete power solutions provides the basis for strong customer relationships. Increasingly, our customers are requiring us to develop more sustainable solutions as they look to make the transition to net zero. Our aftermarket model of through-life support further deepens our connection with customers.

2. Develop cutting-edge technologies
Our products rely upon cutting-edge technologies, which are generated from intellectual property developed over decades and often in collaboration with our long-term partners.

3. Design solutions
We harness the potential of design thinking and digital applications to create solutions that generate the greatest value from our cutting-edge technologies.

4. Develop world-class production capability
We use our production expertise and network of partners to harness new manufacturing techniques and technologies.

System life
We provide complete through-life support of our products during their lengthy operating lives which creates opportunity from aftermarket services.

5
Grow installed original equipment base
Link to risks: a, b, c, d, e, h, i, j

6
Capture through-life value of in-service products
Link to risks: a, b, c, d, e, f, h, i, j

7
Generate stakeholder value
Link to risks: a, b, c, d, e, f, g, h, i

See page 7

5. Grow installed original equipment base
Increasing our installed product base generates both in-year growth and the potential for our business to capture long-term service revenue.

6. Capture through-life value of in-service products
Our substantial installed product base provides a large, diverse and long-term revenue, profit and cash flow stream.

7. Generate stakeholder value
Our activities worldwide generate added value for a wide range of stakeholders.

Principal risks

a Safety
b Business continuity
c Climate change
d Competitive environment
e Compliance
f Cyber threat
g Financial shock
h Market shock
i Political risk
j Transformation
k Talent and capability

See Principal Risks page 42 to 47

Value creation for our stakeholders

Customers
We develop product solutions that improve the competitiveness and efficiency of our customers.

See Business Review pages 22 to 29

Investors
We aim to return to generating attractive returns for investors over the long term.

See Remuneration Committee Report pages 77 to 95

Employees
We enable them to learn and develop in a style and at a pace that suits them, at every point of their career.

See People and Culture pages 37 to 40 and Non-financial KPIs page 17

Partners
We create partnerships based on collaboration where each partner benefits from the relationship.

Communities
We improve the communities that we impact locally, nationally and globally.

See People and Culture pages 37 to 40

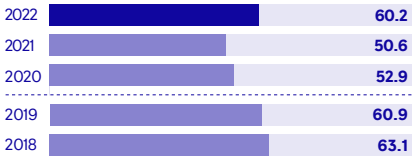
GROSS R&D EXPENDITURE	INVESTMENT IN LEARNING AND DEVELOPMENT (HOURS)
£1.3bn	581,505
SPEND WITH EXTERNAL SUPPLIERS	HOURS OF EMPLOYEE TIME VOLUNTEERED
£8.3bn	48,347

See Stakeholder Engagement pages 50 to 55

KEY PERFORMANCE INDICATORS

FINANCIAL PERFORMANCE INDICATORS [1,2]

ORDER BACKLOG (£BN)

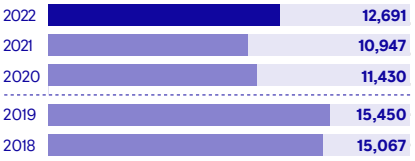


How we define it
Total value of firm orders placed by customers for delivery of products and services where there is no right to cancel. This KPI is the same as the statutory measure for order backlog. See note 2 on page 129 for more information.

Why it is important
Order backlog provides visibility of future business activity.

Link to remuneration
Customer orders drive future revenue growth which, in turn, enables profit and cash flow growth. Profit and free cash flow performance are key financial metrics in the Rolls-Royce Incentive Plan, accounting for 60% of the metrics in 2022.

UNDERLYING REVENUE (£M)

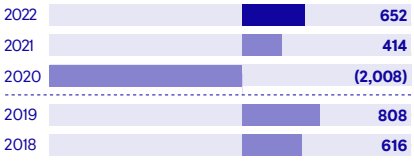


How we define it
Revenue generated from operations at the average exchange rate achieved on effective settled derivative contracts in the period that the cash flow occurs. See note 2 on page 125 for more information.

Why it is important
Underlying revenue provides a measure of business growth and activity.

Link to remuneration
Underlying revenue growth maximises the opportunity to improve profit and free cash flow performance in the year, both of which are financial metrics in the Rolls-Royce Incentive Plan.

UNDERLYING OPERATING PROFIT/(LOSS) (£M)

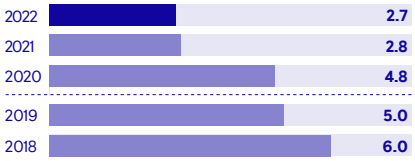


How we define it
Operating profit generated from operations at the average exchange rate achieved on effective settled derivative contracts in the period that the cash flow occurs. It excludes M&A, exceptional items and certain other items outside of normal operating activities. See note 2 on page 125 for more information.

Why it is important
Underlying operating profit indicates how the effect of growing revenue and control of our costs delivers value for our shareholders.

Link to remuneration
Profit is a key financial performance measure for our Rolls-Royce Incentive Plan.

CAPITAL EXPENDITURE AS A PROPORTION OF UNDERLYING REVENUE (%)

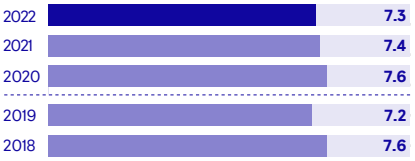


How we define it
Cash purchases of property, plant and equipment (PPE) in the year for continuing operations relative to underlying revenue.

Why it is important
This measure demonstrates the balance between essential investments in infrastructure and delivering short-term shareholder returns.

Link to remuneration
Disciplined allocation of capital expenditure optimises in-year profit and cash flow performance without compromising longer-term growth. Long-term metrics in the Rolls-Royce Incentive Plan in 2022 and 2023 reward strong financial performance.

SELF-FUNDED R&D AS A PROPORTION OF UNDERLYING REVENUE (%)

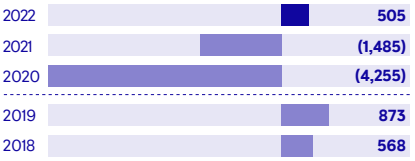


How we define it
In-year self-funded cash expenditure on R&D before any capitalisation or amortisation relative to underlying revenue.

Why it is important
This measure demonstrates the balance between long-term strategic investments and delivering short-term shareholder returns.

Link to remuneration
Disciplined control and allocation of R&D expenditure optimises in-year profit and cash flow performance without compromising long-term growth through innovation. There is a balance of long-term metrics which reward strong financial performance and also relative returns to our shareholders through total shareholder return (TSR) in the 2023 Incentive Plan.

FREE CASH FLOW FROM CONTINUING OPERATIONS (£M)



How we define it
Free cash flow is the change in cash and cash equivalents excluding: transactions with ordinary shareholders; amounts spent or received on activity related to business acquisitions or disposals; financial penalties paid; exceptional restructuring payments; proceeds from increase in loans; and repayment of loans. Cash flow from operating activities is our statutory equivalent. See note 28 on page 172.

Why it is important
Free cash flow is a key metric used to measure the performance of our business and how effectively we are creating value for our shareholders. It enables the business to fund growth, reduce debt and make shareholder payments.

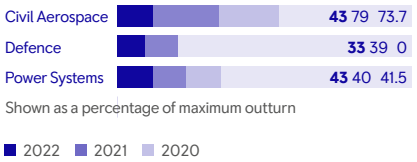
Link to remuneration
Free cash flow is a key financial metric in the Rolls-Royce Incentive Plan.

[1] The adoption of IFRS 16 *Leases* in 2019 had no material impact on our financial KPIs
[2] 2021 figures represent the results of continuing operations. 2020 figures have been restated, where relevant, to show ITP Aero as a discontinued operation in line with 2021 reporting. 2018 and 2019 figures have not been restated

A reconciliation from the alternative performance measure to its statutory equivalent can be found on pages 203 to 206

NON-FINANCIAL PERFORMANCE INDICATORS

CUSTOMER METRIC (%)



How we define it

In 2019, we introduced a new balanced scorecard of metrics for each business. The business scorecards include on-time delivery, engine availability and quality amongst other indicators. The focus for 2022 has been on the individual business performance against the scorecards.

Why it is important

Customer satisfaction demonstrates whether we are meeting our commitments to our customers across our businesses. This, in turn, drives our cash and profitability.

Link to remuneration

This metric accounts for up to 15% of the individual business incentive outturns.

EMPLOYEE ENGAGEMENT (SCORED 1 TO 5) [3]

How we define it

In 2019, we introduced a new survey, Gallup Q12. Responses are scored on a scale of one to five. The employee engagement score averages the responses to all 12 questions in the survey. Our target for 2022 was to score a grand mean of 3.84. See page 39 for more information.

Why it is important

Our people are crucial to delivering future business success. This is an objective way to assess how engaged our employees are with the business and its leaders.

Link to remuneration

Employee engagement performance against our target accounts for up to 10% of the Rolls-Royce Incentive Plan.

SUSTAINABILITY

The metrics for the Rolls-Royce Incentive Plan combine short-term measures which focus on in-year performance, with longer-term strategic measures. The sustainability metric is a longer term measure with targets set at the start of 2021, which will form 5% of the 2023 Rolls-Royce Incentive Plan.

How we define it

Targets for the three year performance period ending 31 December 2023 relate to product compatibility with sustainable fuels.

Why it is important

Proving compatibility of our products with sustainable fuels is central to our strategy for supporting customers in the energy transition.

Link to remuneration

This metric accounts for up to 5% of the Rolls-Royce Incentive Plan for 2023.

[3] External assurance over the employee engagement score is provided by Bureau Veritas. See page 199 for their assurance statement

A reconciliation from the alternative performance measure to its statutory equivalent can be found on pages 203 to 206

FINANCIAL REVIEW

We delivered on our remaining short-term commitments in 2022. We continue to focus on improving our performance to strengthen our balance sheet and put us on a path to generate long-term sustainable value for stakeholders.

PANOS KAKOULLIS, CHIEF FINANCIAL OFFICER

In 2022, our underlying revenue was £12.7bn, underlying operating profit increased to £652m and we returned to a positive cash flow £505m. We completed our programme of disposals, achieving around £2bn in total proceeds, which we used to repay debt. Strengthening our balance sheet is a priority and we remain committed to achieving an investment grade rating in the medium term through performance improvements. Although our 2022 results were improved year-on-year, we must do more. We will be bolder with our ambitions in 2023 and beyond as we deliver sustainable value to our stakeholders.

Demand for our products and services continued to meaningfully improve, with a record year for order intake in Power Systems, accompanied by continued recovery in Civil Aerospace flying hours and progress in Defence, underpinned by key contract wins.

Financial performance

Our financial performance improved in 2022, largely driven by the recovery of our end markets following the pandemic. Large engine flying hours were up 35% compared with 2021. We generated free cash flows of £505m, a £2.0bn improvement on the prior year, reflecting higher large engine flying hour receipts, which grew ahead of shop visit events. On an organic basis, underlying revenue improved by 14% and underlying operating profit improved by 48%, helped by the mix of OE engine sales in Civil Aerospace. In 2022, there was a higher volume and different mix of large spare engine sales, with more third party sales to capacity providers than in the prior year. Spare engines carry a higher margin than installed engine sales and accounted for a greater proportion of total engine sales than the 10% to 15% we typically expect in a year. Spare engine sales will be higher than the typical range next year also, as we grow the pool of spare engines to underpin fleet health and improve resilience. Contractual improvements in 2022 also increased the expected returns on our long-term contracts. These contract improvements trigger the recognition of additional revenue and profits. These catch-ups are a normal part of our business and are a good indicator of progressive and sustainable performance improvement.

In 2022, we faced challenges from supply chain disruption and inflation. We are actively managing these headwinds through a sharper focus on pricing, productivity and costs and we will continue to address these areas as we strive to succeed in a challenging external environment. Examples of our actions to tackle these issues include our partnership approach with key suppliers, ensuring that we have contractual pricing protection in place through long-term contracts and the hedging of key raw materials and energy. We are tackling rising costs and supply chain constraints by repairing and reusing spare parts where we can. We will continue to improve our productivity and efficiency as we remain focused on these areas, as well as being more disciplined on our commercial terms.

Strengthening our balance sheet

Strengthening our balance sheet remains a high priority. Our net debt was reduced to £3.3bn from £5.2bn. Since 2020, we have completed four disposals, including the sale of ITP Aero in September 2022 with proceeds of €1.6bn and a dividend of €0.1bn paid shortly prior to completion. The proceeds of this disposal were used to repay a £2bn loan, which was supported by an 80% guarantee from UK Export Finance. As a result, we ended the year with £4.1bn of drawn debt, all of which is on fixed interest rates and £3.3bn net debt, including £2.6bn of cash and £1.8bn of lease liabilities. Our credit ratings are currently below investment grade, which is unacceptable and we must address this. We have seen positive momentum with outlook upgrades from Fitch, Moody's and S&P Global in 2022. Our liquidity position remains strong with £8.1bn of liquidity and no significant debt maturities before 2024.

Simplification of reporting

We are committed to simplifying our reporting and the way we communicate our business performance. In 2022, we held an investor day at our Civil Aerospace site in Derby, UK, which was also streamed online. This event brought to life the changes we have started to make in our business to reduce cost and improve performance. This additional information, illustrated by a number of examples, helped investors to better understand the way our business works and how we are focusing on the improvements required to deliver better financial performance.

Other examples of how we are driving simplicity include our new approach to foreign exchange hedging. Historically, we have hedged a declining percentage of our net foreign exchange exposure across a rolling ten-year horizon, based on our projected net US dollar revenues. Under our new approach, we will carry a smaller hedge book, with a declining percentage of cover over a five-year period, which will mean that market movements in foreign exchange will impact us sooner. This change is more cost effective, brings us in line with our peers and allows us to react quicker to changes in the external environment. We also refreshed our results press release to make it clearer and more concise.

Investing wisely

Capital allocation is critical to generating the right returns from our business. Our first priority is to reduce our debt, accelerating progress to an investment grade credit rating. We also recognise the importance of shareholder returns, both from investing in high return opportunities and from shareholder payments, which we aim to resume once our balance sheet is stronger.

We have strict criteria that we follow when considering investments. Firstly, any investment must be aligned to our strategy, taking us in the right direction to achieve our goals and vision. Linked to this are our strict criteria on sustainability and carbon impact, where investment opportunities must demonstrate alignment with our decarbonisation ambitions. Secondly, it needs to have a risk and reward profile that generates value. Our investments aim to generate a combination of near, medium and long-term returns. We are looking to strike a balance of protecting and growing our established businesses and pursuing long-term growth opportunities.

As we focus on strengthening our balance sheet we will be vigilant with our capital allocation decisions. In 2022, we spent £1.3bn on research and development, £359m of which was paid for by funding from third parties. Investments made in 2022 included engineering to increase time on wing for our in-service engines, leading to better aftermarket margins as well as longer-dated investments in new products. Not all of our capital allocation decisions are based purely on commercial returns. The health of our people and the safety of our processes and products remain the top priority, where investment will be made to ensure our people can be at their best in a safe environment. In 2022, we approved an investment to replace one of our ageing Defence test beds with a state-of-the-art facility, ensuring on-going health and safety standards are met.

Outlook

A continued recovery in our end markets and the actions we are taking give us confidence in delivering higher profit and cash flows in 2023. This is based on large engine flying hours at 80% to 90% of the 2019 level and 1,200 to 1,300 total shop visits. We expect underlying operating profit between £0.8bn and £1.0bn, including £100m to £200m of targeted contract improvements (2022: £319m). We expect free cash flow of between £0.6bn to £0.8bn, which is based on £500m to £700m growth in the Civil LTSA creditor (2022: £792m), a year-on-year headwind of approximately £200m associated with legacy Boeing OE concessions and around £100m adverse impact in 2023 due to fires at two suppliers' premises in late 2022 and early 2023. This cash impact will reverse in 2024.

Panos Kakoullis
Chief Financial Officer

Statutory and underlying Group financial performance from continuing operations

	2022					2021
£ million	Statutory	Impact of hedge book [1]	Impact of acquisition accounting	Impact of non-underlying items	Underlying	Underlying
Revenue	13,520	(829)	–	–	12,691	10,947
Gross profit	2,757	(264)	58	(74)	2,477	1,996
Operating profit	837	(264)	58	21	652	414
Gain arising on disposal of businesses	81	–	–	(81)	–	–
Profit before financing and taxation	918	(264)	58	(60)	652	414
Net financing costs	(2,420)	1,935	–	39	(446)	(378)
(Loss)/profit before taxation	(1,502)	1,671	58	(21)	206	36
Taxation	308	(416)	(9)	69	(48)	(26)
(Loss)/profit for the year from continuing operations	(1,194)	1,255	49	48	158	10
Basic (loss)/earnings per share (pence)	(14.24)				1.95	0.11

[1] Reflecting the impact of measuring revenue and costs at the average exchange rate during the year and the valuation of assets and liabilities using the year end exchange rate rather than the rate achieved on settled foreign exchange contracts in the year or the rate expected to be achieved by the use of the hedge book

- **Revenue:** Underlying revenue of £12.7bn was up 14%, largely driven by underlying revenue increases across Civil Aerospace, Defence and Power Systems. Statutory revenue of £13.5bn was 21% higher compared with 2021. The difference between statutory and underlying revenue is driven by statutory revenue being measured at average prevailing exchange rates (2022: GBP:USD1.24; 2021: GBP:USD1.38) and underlying revenue being measured at the hedge book achieved rate during the year (2022 GBP:USD1.50; H1 2021: GBP:USD1.39; H2 2021: GBP:USD1.59).
- **Operating profit:** Underlying operating profit of £652m (5.1% margin) versus £414m (3.8% margin) in the prior year. The year-on-year growth was led by Civil Aerospace and Power Systems, partly offset by marginally lower year-on-year profits in Defence and increased investment in New Markets. Statutory operating profit was £837m, higher than the £652m underlying operating profit largely due to the £264m negative impact from currency hedges in the underlying results. Net charges of £21m were excluded from the underlying results as these related to non-underlying items comprising: net restructuring charges of £47m; net impairments of £65m, partly offset by the write back of exceptional Trent 1000 programme credits of £69m; and a £22m pension past service credit.
- **Profit before taxation:** Underlying profit before tax of £206m included £(446)m net financing costs primarily related to net interest payable. Statutory loss before tax of £(1,502)m included £(1,579)m net fair value losses on derivative contracts, £(308)m net interest payable and a net £81m profit from disposals of businsess from continuing operations.
- **Taxation:** Underlying taxation charge of £(48)m (2021: £(26)m). This reflects a tax charge on overseas profits of £(175)m and a tax credit due to increases in certain UK deferred tax assets of £127m. Deferred tax has not been recognised on current year UK tax losses. The tax charge in 2021 was driven by similar factors.

Free cash flow

£ million	2022 Cash flow	Impact of hedge book	Impact of acquisition accounting	Impact of other non-underlying items	2022 Funds flow	2021 Funds flow
Operating profit	837	(264)	58	21	652	414
Operating profit/(loss) from discontinued operations	86	–	–	–	86	(43)
Depreciation, amortisation and impairment	1,076	–	(58)	(65)	953	971
Movement in provisions	(197)	91	–	83	(23)	(136)
Movement in Civil LTSA balance	1,158	(366)	–	–	792	66
Other operating cash flows [1]	72	(53)	–	22	41	(90)
Operating cash flow before working capital and income tax	3,032	(592)	–	61	2,501	1,182
Working capital (excluding Civil LTSA balance) [2]	(348)	(165)	–	(19)	(532)	(810)
Cash flows on other financial assets and liabilities held for operating purposes	(660)	737	–	–	77	(85)
Income tax	(174)	–	–	–	(174)	(185)
Cash from operating activities	1,850	(20)	–	42	1,872	102
Capital element of lease payments	(218)	20	–	–	(198)	(374)
Capital expenditure and investment	(512)	–	–	36	(476)	(426)
Interest paid	(352)	–	–	–	(352)	(331)
Settlement of excess derivatives	(326)	–	–	–	(326)	(452)
Other	49	–	–	(78)	(29)	39
Free cash flow	491	–	–	–	491	(1,442)
– of which is continuing operations	505				505	(1,485)

[1] Other operating cash flows includes profit/(loss) on disposal, share of results and dividends received from joint ventures and associates, interest received, flows relating to our defined benefit post-retirement schemes, and share based payments
[2] Working capital includes inventory, trade and other receivables and payables, and contract assets and liabilities (excluding Civil LTSA balances)

Free cash flow in the year was £0.5bn, an improvement of £2.0bn compared with the prior year driven by:

- **Operating cash flow before working capital and income tax of £2.5bn,** £1.3bn higher year-on-year. The improvement at the Group level was principally due to higher flying hours in Civil Aerospace. Large engine flying hours increased by 35%, driving a £1.3bn increase in invoiced EFH receipts (from £2.3bn in 2021 to £3.6bn in 2022). Large engine major shop visit volumes of 248 were 19% higher than in the prior year (2021: 208). The movement in provisions of £(23)m largely related to utilisation of the Trent 1000 provision and movements in the contract loss provisions. Other operating cash flow movement of £41m included £36m interest received, the £131m improvement year-on-year was mainly due to lower pension contributions and higher dividends received from joint ventures.
- **Working capital £(0.5)bn,** £0.3bn better year-on-year. Supply chain disruption resulted in an increase in inventories through 2022, notably in Civil Aerospace and Power Systems, which partly unwound at the end of the year. This was partly offset by a net inflow across payables and receivables reflecting collections of overdue debts in Civil Aerospace (c£180m in 2022), increased advance payment receipts in Power Systems (a c£150m year-on-year benefit) and a £63m advance payment received in Defence.
- **Income tax of £(174)m,** net cash tax payments in 2022 were £(174)m (2021: £(185)m).
- **The capital element of lease payments was £(198)m,** £(176)m lower than 2021 (£(374)m). In the prior year the elevated cost was driven by end of lease payments made on a small number of engines, as well as timing impacts on lease payments, with 2022 returning to more typical levels.
- **Capital expenditure and investments of £(476)m,** comprising £(302)m PPE additions net of disposals, £(202)m intangibles additions, partly offset by a net movement in investments of £28m. The combined additions were similar to last year.
- **Interest paid of £(352)m,** including lease interest payments, similar to the £(331)m in 2021. Following the repayment of the £2bn UK Export Finance backed loan in September 2022, we would expect interest paid to fall in 2023.
- **Settlement of excess derivative contracts of £(326)m,** down from £(452)m in 2021. The decrease was in line with previously communicated guidance and reflects the profile of derivative contracts taken out to reduce the size of the hedge book. In total £710m of excess derivative settlements are left to be settled between 2023 and 2026.

Balance sheet

£ million	2022	2021	Change
Intangible assets	4,098	4,041	57
Property, plant and equipment	3,936	3,917	19
Right of use assets	1,061	1,203	(142)
Joint ventures and associates	422	404	18
Contract assets and liabilities	(10,681)	(8,836)	(1,845)
Working capital [1]	2,297	1,458	839
Provisions	(2,333)	(1,582)	(751)
Net debt [2]	(3,251)	(5,110)	1,859
Net financial assets and liabilities	(3,649)	(3,034)	(615)
Net post-retirement scheme deficits	(420)	(225)	(195)
Taxation	2,468	1,787	681
Held for sale [3]	–	1,305	(1,305)
Other net assets and liabilities	36	36	–
Net liabilities	**(6,016)**	**(4,636)**	**(1,380)**
Other items			
US$ hedge book (US$bn)	19	22	
Civil LTSA asset	885	915	
Civil LTSA liability	(8,257)	(7,129)	
Civil net LTSA liability	(7,372)	(6,214)	

[1] Net working capital includes inventory, trade receivables and payables and similar assets and liabilities
[2] Net debt (adjusted by £0.1bn to exclude net debt held for sale in 2021) includes £86m (2021: £37m) of the fair value of derivatives included in fair value hedges and the element of fair value relating to exchange differences on the underlying principal of derivatives in cash flow hedges
[3] Held for sale in 2021 mainly related to ITP Aero which was disposed of on 15 September 2022

Key drivers of balance sheet movements were:

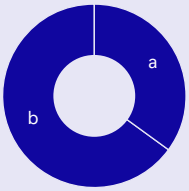
- **Contract assets and liabilities:** The £(1,845)m movement in the net liability balance was mainly driven by an increase in deposits, foreign exchange movements and invoiced LTSA receipts in Civil Aerospace exceeding revenue recognised in the year, partly offset by £360m positive LTSA catch-ups.
- **Working capital:** The £2.3bn net current asset position was £0.8bn higher than prior year, due to increased inventory of £1.0bn mostly in Civil Aerospace due to delayed outputs and supply chain disruption and Power Systems to support sales. Receivables increased by £1.6bn and payables increased by £(1.8)bn primarily driven by ITP Aero being external to the Group at year-end. Other drivers included higher trading volumes resulting in higher payables and receivables.
- **Provisions:** The £(751)m increase primarily reflected the adoption of the amendment to IAS 37 for Onerous Contracts – Cost of Fulfilling a Contract which increased contract loss provisions by £(723)m on 1 January 2022. The amendment clarifies that the direct cost of fulfilling a contract comprises the incremental costs of fulfilling that contract and also an allocation of other costs that relate directly to fulfilling contracts.
- **Net debt:** Decreased from £(5.1)bn to £(3.3)bn driven by the completion of the disposal programme and free cash inflow of £0.5bn. Our liquidity position is strong with £8.1bn of liquidity including cash and cash equivalents of £2.6bn and undrawn facilities of £5.5bn. Net debt included £(1.8)bn of lease liabilities (2021: £(1.7)bn).
- **Net financial assets and liabilities:** A £(615)m increase in the net financial liabilities driven by a change in fair value of derivative contracts largely due to the impact of the movement in GBP:USD exchange rates, partly offset by deals that matured in the year.
- **Net post-retirement scheme deficits**: A £(195)m increase in the net deficit driven by an increase in bond yields and inflation impacting both plan assets and obligations.
- **Taxation:** The net tax asset increased by £681m, most of which related to an increase in the deferred tax asset on unrealised losses on derivatives of £329m and certain other UK deferred tax assets of £118m reflecting tax relief that will be taken in the future, based on profit forecasts. There has also been a £165m decrease in deferred tax liabilities, the majority of which related to a reduction in the UK pension surplus.

Civil Aerospace

Civil Aerospace is a major manufacturer of aero engines for the large commercial aircraft, regional jets and business aviation markets. The business uses its engineering expertise, in-depth knowledge and capabilities to provide through-life service solutions for its customers.

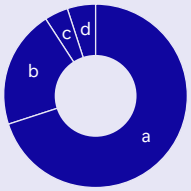
UNDERLYING REVENUE	UNDERLYING OPERATING PROFIT/(LOSS)	ORDER BACKLOG
£5,686m	**£143m**	**£47.7bn**
2021: £4,536m	2021: £(172)m	2021: £41.1bn

UNDERLYING REVENUE MIX



a. OE	**35%**
b. Services	**65%**

UNDERLYING REVENUE MIX BY SECTOR



a. Large Engines	**70%**
b. Business Aviation	**21%**
c. Regional	**4%**
d. V2500	**5%**

Market overview

The Civil Aerospace market continues to recover from the effects of the COVID-19 pandemic. In 2022, recovery continued and our large engine flying hours (EFH) were 64% of 2019 levels, a solid improvement from 48% in 2021. The restrictions in China were a key hurdle to get back to pre-pandemic levels, along with increased staffing for airlines and airports to meet demand in countries that have largely recovered. Business aviation flying hours continue to be above 2019 levels and original equipment (OE) engine deliveries are increasing as expected with a strong start for our Pearl family of engines. Industry forecasts for the recovery in long-haul travel are positive with a predicted return to 2019 large engine flying levels in 2024.

The aerospace market was impacted by the Russia-Ukraine conflict which caused supply-chains to become strained and some raw materials have been in short supply for the whole industry. We have actively managed the disruption by having diversified sources of supply and through the use of hedging for near and mid-term price protection.

Inflation risk increased in 2022, with higher costs for energy, raw materials, freight and wages impacting our own costs and those of our suppliers. We manage inflation risk by having long-term contracts with our customers, suppliers and hedging counterparties and by having a cost aware culture that focuses on cost saving initiatives and efficiencies. As a result, we were able in part to protect margin against inflation in 2022. Our actions resulted in improvement in our long-term service agreement margins, which contributed to positive catch-ups in the year.

Market activity for large engine passenger aircraft is now increasing, albeit from a low base as a result of the pandemic. OE deliveries rose by 15% year-on-year, with 165 Business aviation deliveries (2021: 114) and 190 total large engine deliveries (2021: 195). In 2022, we delivered 44 large spare engines (2021: 36), which represented 23% of total large engine deliveries (2021: 18%). This is above the typical range of 10% to 15% of total engine deliveries, as we grow the pool of spare engines to underpin fleet health and improve resilience. We expect this elevated level of spare engine deliveries to continue in 2023 and 2024.

Total shop visits were 1,044 versus 953 in 2021. There were 248 large engine major shop visits in 2022 versus 208 in 2021. In 2022, we agreed with Air China to create a joint-venture overhaul facility that will eventually support up to 250 shop visits per year.

Financial performance

Underlying revenue of £5.7bn was up 25%. OE revenue of £2.0bn was up 23% reflecting higher spare engine deliveries. Services revenue of £3.7bn was up 26% on the prior year, reflecting higher large engine shop visits, aftermarket revenue growth from business aviation, regional and V2500, and positive LTSA catch-ups £360m, (2021: £214m).

Underlying operating profit was £143m (a 2.5% margin) versus a loss of £(172)m in 2021. The year-on-year increase was driven by improvements in LTSA contract margins, with an onerous provision credit of £51m (2021: a £122m charge) and £319m of positive LTSA catch-ups (2021: £256m), a higher volume and different mix of large spare engine sales with more third party sales to capacity providers than in the prior year, increased aftermarket profit, and reduced losses on installed large engine OE deliveries. This was partly offset by the non-repeat of a foreign exchange revaluation credit of c£140m in 2021.

Trading cash flow was £226m versus £(1,670)m in the prior year. The improvement was due to higher engine flying hour receipts reflecting the growth in LTSA flying hours, which grew at a materially faster rate than shop visits in 2022. Cash flows in 2022 benefited from the recovery of overdue balances from airlines incurred during the pandemic of c£180m.

Improvements in underlying operating profit and cash flows were delivered despite the challenges associated with inflation and the supply chain, which are expected to persist in 2023.

Financial overview

£ million	2022	Organic change [1]	FX	2021	Change	Organic change [1]
Underlying revenue	**5,686**	**1,126**	**24**	**4,536**	**25%**	**25%**
Underlying OE revenue	1,982	374	(4)	1,612	23%	23%
Underlying services revenue	3,704	752	28	2,924	27%	26%
Underlying gross profit	**853**	**359**	**20**	**474**	**80%**	**76%**
Gross margin %	15.0%			10.4%	4.6%pt	4.3%pt
Commercial and administrative costs	(371)	(71)	(3)	(297)	25%	24%
Research and development costs	(452)	(15)	(3)	(434)	4%	3%
Joint ventures and associates	113	23	5	85	33%	27%
Underlying operating profit/(loss)	**143**	**296**	**19**	**(172)**	**nm**	**nm**
Underlying operating margin %	**2.5%**			**(3.8)%**	**6.3%pt**	**6.0%pt**

	2022	2021	Change
Trading cash flow	**226**	**(1,670)**	**1,896**

Key operational metrics:

	2022	2021	Change
Large engine deliveries	190	195	(5)
Business jet engine deliveries	165	114	51
Total engine deliveries	**355**	**309**	**46**
Large engine LTSA flying hours (million)	10.0	7.4	2.6
Large engine LTSA major refurbs	248	208	40
Large engine LTSA check & repair	455	402	53
Total large engine LTSA shop visits	**703**	**610**	**93**

[1] Organic change is the measure of change at constant translational currency applying full year 2021 average rates to 2022. All underlying income statement commentary is provided on an organic basis unless otherwise stated

Operational and strategic progress

Within our Civil Aerospace business we have a large installed product base of more than 4,100 large engines and around 8,600 business aviation and regional engines. Around two thirds of these are covered by LTSA contracts, which provide aftermarket services for our customers for many years. Our order book in Civil Aerospace stands at 1,300 new large engines, due for delivery over the next few years.

OE orders slowed during the COVID-19 pandemic but recovered substantially in 2022 with considerable orders from Malaysia Aviation Group, Norse Atlantic Airways and Qantas, as well as a large order with Air India in 2023. These OE orders also include TotalCare agreements, which will create value into the future and demonstrate a return in demand, which we expect to continue into 2023.

Increasing time on wing and reducing the cost of our maintenance activities are key value drivers in our aftermarket business model. In May, at our Civil Aerospace investor day, we talked about how product improvement, life limited parts extensions, enhancing temperature limits and better aircraft operations are all contributing to a greater time on wing. In addition, utilising lean engine overhaul methods, increased re-use of parts, more repair of parts and advanced repair technologies are reducing our shop visit costs.

The launch of the Airbus A350 as a freighter aircraft in 2022 was an important addition and gives us significant new opportunity in the freight market. Furthermore, we are seeing an increase in passenger to freighter conversions on the Airbus A330, which will keep our engines flying for longer and extend our aftermarket contracts.

As shop visit events return, we will assess the size of our operation and take action where required. We continue to grow our MRO network to support future shop visit volumes, for example the launch of our new MRO partnership with Air China.

We remain focused on the decarbonisation of the civil aerospace market and we will continue to collaborate with third parties to explore sustainable aviation fuel (SAF) and clean propulsion systems. One of our commitments is to demonstrate that all of our Trent and Business Aviation engines are compatible with 100% SAF by the end of 2023. All our Trent and Business Aviation engines are already certified and ready to operate on a 50% SAF blend with traditional fossil-based aviation jet fuels. A recent agreement with Air bp will ensure that all fuel supplied for engine testing at our Derby, UK, Bristol, UK, and Dahlewitz, Germany, facilities will be 10% SAF. In addition, Air bp will also provide the fuel for the testing of our UltraFan demonstrator engine, which will be carried out entirely on SAF.

In business aviation, our Pearl 10X engine development programme continues to make good progress. The Pearl 10X, which is the newest member of the state-of-the-art Pearl family and the first of our engines to power a business aviation aircraft produced by Dassault, has surpassed its target thrust level on the first test run, making it the most powerful business aviation engine in our portfolio. Furthermore, the development programme has included rigorous testing of the new ultra-low emissions ALM combustor, which is compatible with 100% SAF. Further progress was made on our Pearl 700 development programme for the new Gulfstream G700/800, with EASA engine certification achieved in September 2022.

Outlook

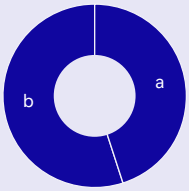
Industry forecasts predict a continued recovery in international travel which is a key driver of our financial performance. In 2023, we expect large EFH to be in the range of 80% to 90% of the 2019 levels compared with 64% in 2022. Business and regional markets are expected to continue to perform above 2019 levels, with growth year-on-year.

Defence

Defence is a market leader in aero engines for military transport and patrol aircraft with strong positions in combat and trainer applications. It has significant scale in naval and designs, supplies and supports the nuclear propulsion plant for all of the UK Royal Navy's nuclear submarines.

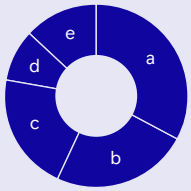
UNDERLYING REVENUE	UNDERLYING OPERATING PROFIT	ORDER BACKLOG
£3,660m	**£432m**	**£8.5bn**
2021: £3,368m	2021: £457m	2021: £6.5bn

UNDERLYING REVENUE MIX



a. OE	**45%**
b. Services	**55%**

UNDERLYING REVENUE MIX BY SECTOR



a. Transport	**33%**
b. Combat	**24%**
c. Submarines	**21%**
d. Naval	**9%**
e. Other	**13%**

Market overview

We continue to be a trusted and key supplier to governments in the provision of defence power for the protection of society, preservation of peace and in underpinning economic and social stability. We operate with integrity in a tightly regulated and closely controlled industry in the provision of defence power. We remain long-term partners in the development, manufacture and maintenance of countries' defences, as we power critical military assets that deter threats and save lives.

Defence budgets are increasing globally and this increased investment is providing for the long-term success of our Defence business and will underpin new contract wins to provide robust value to the Group over many decades. However, due to the long life of our Defence products and the availability and readiness of fleets currently, we are not immediately affected by changes to defence demand and governmental budget uplifts.

The defence market is long cycle, with production programmes spanning decades. Customer contracts typically range between one and five years and the Defence business has been going through a cycle of renewals. In 2022, contract renewals totalling USD1.8bn were agreed, including five additional years of support for the US Navy T-45 flight trainer aircraft and C-130J and KC-130J transport airport aircraft for the US Marine Corps and Kuwait. In addition, in 2022, we won a contract with the UK Ministry of Defence to provide support for our Adour engine which powers the Hawk Jet trainer aircraft. This 11-year contract, worth £105m, will enable us to provide the maintenance, repair and overhaul of the two Adour engines in service in the UK.

There was a high level of programme win activity in our Defence business in 2022, with the end of the year seeing announcements that will underpin the long-term outlook for the business. The Bell V-280 Valor, powered by our AE1107F engines, was selected by the US Army for the future long range assault aircraft programme. Meanwhile, the governments in the UK, Italy and Japan announced the launch of the new global combat air programme (GCAP) to create a sixth-generation fighter jet due to enter service in 2035, building on the research and development progress already made by team tempest. Australia concluded negotiations for the first deliveries of the Australian Hunter frigate programme which will be powered by our MT30 gas turbine engine.

Financial performance

Order intake in our Defence business was £5.4bn in 2022 versus £2.3bn in 2021, with a book-to-bill of 1.5x versus 0.7x last year. The Bell V-280 Valor, powered by our AE1107F engines, was selected by the US Army for the Future Long Range Assault Aircraft programme. Major contract awards included the renewal of $1.8bn of services contracts in the U.S. for trainer and transport aircraft over the next five years. These awards, combined with increased military activity and spending underpin the long-term outlook for the business. Our order backlog at the year end was £8.5bn, with 86% order cover in 2023 and a high degree of cover in 2024 and beyond.

Revenue increased 2% to £3.7bn. OE revenue was up 10% year-on-year, with strong growth in Submarines along with new programmes (including B-52 and UK Combat). This more than offset reductions in services revenue, down 3% due to the non-repeat of legacy spare parts sales made in 2021.

Operating profit was £432m (11.8% margin) versus £457m (13.6% margin) in the prior year, reflecting the non-repeat of £45m of high margin one time legacy spare parts sales in the prior year and the changing mix of the business. Self-funded R&D and investment levels were elevated, as we support growth across the portfolio including the UK Future Combat programme and opportunities in North America.

Trading cash flow of £426m improved versus £377m last year, despite slightly lower underlying profit and increased inventory, due to an advance payment from one of our customers of £63m.

Financial overview

£ million	2022	Organic change [1]	FX	2021	Change	Organic change [1]
Underlying revenue	**3,660**	**78**	**214**	**3,368**	**9%**	**2%**
Underlying OE revenue	1,634	136	87	1,411	16%	10%
Underlying services revenue	2,026	(58)	127	1,957	4%	(3)%
Underlying gross profit/(loss)	**726**	**(28)**	**33**	**721**	**1%**	**(4)%**
Gross margin %	19.8%			21.4%	(1.6)%pt	(1.3)%pt
Commercial and administrative costs	(174)	(6)	(7)	(161)	8%	4%
Research and development costs	(122)	(9)	(8)	(105)	16%	9%
Joint ventures and associates	2	(1)	1	2	–	–
Underlying operating profit	**432**	**(44)**	**19**	**457**	**(5)%**	**(10)%**
Underlying operating margin %	**11.8%**			**13.6%**	**(1.8)%pt**	**(1.6)%pt**

	2022	2021	Change
Trading cash flow	**426**	**377**	**49**

[1] Organic change is the measure of change at constant translational currency applying full year 2021 average rates to 2022. All underlying income statement commentary is provided on an organic basis unless otherwise stated

Operational and strategic progress

At a time where there is heightened focus on military and defence applications, we continue to support our customers in maintaining peace and providing protection for society. Rolls-Royce does not provide or manufacture weapons for our customers.

Our position in the US has been further solidified with the completion of a major investment programme in our naval facilities in Pascagoula, Mississippi and Walpole, Massachusetts. These will provide increased capability and capacity to meet US Navy demand for the manufacture of propellers and propulsion components for their naval platforms. These investments, in addition to the previous investment made in our Indianapolis facility, mean we are well positioned to provide the US Department of Defence with world-class products and services for decades to come.

A new market opening up for us is participation in the manufacture of advanced nuclear microreactors for deployable military applications and base power in the US. We are proud to be a key part of a contract awarded by the US Department of Defense to build the first full-scale transportable microreactor prototype for delivery in 2024, developing technology which will enable militaries to become untethered from fossil fuels and increase their energy resilience. The transportable microreactor will also have potential for commercial applications such as disaster recovery and remote location power coverage.

In the UK, we opened our nuclear skills academy based in Derby to enhance the pipeline of talent in this field. The academy has funding to take on 200 apprentices each year for the next ten years and will be a key enabler as we explore solutions to satisfy the growing demand of society for clean, carbon-free energy.

In July, at the Farnborough Air Show, the UK Government's defence, science and technology laboratory and the UK's national security strategic investment fund announced a joint programme to deliver significant enhancements to UK defence capabilities through the development of innovative hypersonic technologies. Rolls-Royce is partnered with Reaction Engines and the Royal Air Force's rapid capabilities office on the hypersonic air vehicle experimental programme which aims to establish the UK as a leader in reusable hypersonic air systems.

In November, the Rolls-Royce Trent 700 engine helped the Royal Air Force and industry partners carry out a world-first 100% sustainable fuel flight using a military aircraft of its size, and the first of any aircraft type in the UK.

Our Defence site at Bristol, UK became the first Rolls-Royce production facility to achieve net zero carbon status on operational emissions (excluding product test emissions) during the year. The site utilises a combination of rooftop solar and onsite ground source heat pumps, alongside the procurement of renewable electricity and gas. A small quantity (<10%) of independently verified carbon offsets were used to achieve net zero carbon status where there is no immediately viable alternative to mitigating residual emissions, such as diesel usage in emergency generators. We will apply learnings from the decarbonisation of operations at Bristol, UK, to the wider estate to help support our goal of reaching net zero facility emissions by 2030.

Outlook

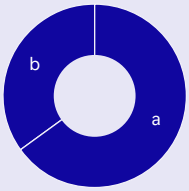
Our Defence business is resilient, with many programmes already in place stretching out over future decades. Our order book is strong at £8.5bn and order coverage is 86% for 2023. Increased government spending on military and defence applications provides confidence for the future, as we look to take an ever-increasing role in the protection of society, whilst pursuing lower carbon solutions for our customers.

Power Systems

Power Systems, with its product and solutions brand mtu, is a world-leading provider of integrated solutions for onsite power and propulsion, developing sustainable solutions to meet the needs of its customers.

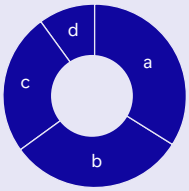
UNDERLYING REVENUE	UNDERLYING OPERATING PROFIT	ORDER BACKLOG
£3,347m	**£281m**	**£4.0bn**
2021: £2,749m	2021: £242m	2021: £2.8bn

UNDERLYING REVENUE MIX



a. OE	**65%**
b. Services	**35%**

UNDERLYING REVENUE MIX BY SECTOR



a. Power Generation	**34%**
b. Marine	**31%**
c. Industrial	**25%**
d. Defence	**10%**

Market overview

The short-cycle nature of Power Systems relative to our Civil Aerospace and Defence businesses means there has been a greater degree of inventory build, due to supply chain disruption as well as to provide a buffer stock to minimise disruption to our customers as we work through our order backlog. We monitor our supply chain closely and expect these inventory levels to begin to unwind in 2023 as we balance financial health with meeting the needs of our customers.

Part of the Power Systems supply chain has been impacted by the Chinese economy closing and reopening through 2022. As a result of this, and industry-wide pressures on the supply chain, our Power Systems business suffered heightened disruption to its production and output. This led to a larger amount of inventory being held in our Power Systems business, as we waited for parts input to complete orders and ship these to our customers. The reopening of the Chinese economy and manufacturing facilities across Greater China towards the end of 2022 is a promising signal that disruption will be more limited going forward. We continue to monitor the situation closely and will take mitigating action to limit disruption to our customers, whilst maintaining appropriate levels of inventory across the business.

Financial performance

Order intake in our Power Systems business was £4.3bn, 29% higher than the prior year, a record level for the business. We saw strong demand in many of our end markets, notably Power Generation including mission critical backup power, and for our engine systems and services. As a result, we now have 76% order cover for 2023.

Underlying revenue was £3.3bn, up 23% and above the previous peak in 2019. Services revenues grew 16% as product utilisation increased in our end markets, and OE revenue rose by 26%. Sales were strongest in the industrial and power generation end markets, partly offset by lower activity in China.

Operating profit was £281m (8.4% margin) versus £242m (8.8% margin) in the prior year. The lower margin versus the prior year reflects higher costs associated with inflation and supply chain disruption, increased self-funded R&D, one-off charges including intangible asset impairments and write-downs of assets due to the Russia-Ukraine conflict, partly offset by the benefit of higher volumes.

Trading cash flow was £158m, a conversion ratio of 56% versus 90% last year. The lower conversion year-on-year reflects a higher level of inventories due to supply chain disruption and the pace of revenue growth, partly offset by increased customer advance payments.

Financial overview

£ million	2022	Organic change [1]	FX	2021	Change	Organic change [1]
Underlying revenue	**3,347**	**626**	**(28)**	**2,749**	**22%**	**23%**
Underlying OE revenue	**2,187**	462	(19)	1,744	25%	26%
Underlying services revenue	**1,160**	164	(9)	1,005	15%	16%
Underlying gross profit	**918**	**148**	**(8)**	**778**	**18%**	**19%**
Gross margin %	**27.4%**			28.3%	(0.9)%pt	(0.9)%pt
Commercial and administrative costs	**(441)**	(62)	4	(383)	15%	16%
Research and development costs	**(204)**	(49)	2	(157)	30%	31%
Joint ventures and associates	**8**	4	–	4	–	–
Underlying operating profit	**281**	**41**	**(2)**	**242**	**16%**	**17%**
Underlying operating margin %	**8.4%**			**8.8%**	**(0.4)%pt**	**(0.4)%pt**

	2022	2021	Change
Trading cash flow	**158**	**219**	**(61)**

[1] Organic change is the measure of change at constant translational currency applying full year 2021 average rates to 2022. All underlying income statement commentary is provided on an organic basis unless otherwise stated

Operational and strategic progress

We are focused on being the market leader for mission critical power and propulsion solutions, as we are transforming our business from supplying stand-alone engines to fully integrated products and services. Key contract wins strengthen our market position and secure future demand. Notable contract wins include more than 500 *mtu* engines for the UK's future Boxer tanks, a service partnership with the Royal Navy and the extension of a frame agreement with world leading luxury yacht manufacturer, Ferretti Group. These are in addition to the supply of a new large-scale battery storage system for Dutch energy supplier Semperpower.

Our pathway to net zero remains a priority. This year the world's first hybrid diesel-battery-electric regular passenger operation train ran from London to Aylesbury in the UK with *mtu* Hybrid PowerPacks, reducing CO_2 emissions by up to 25%. We also took a 54% stake of German electrolyzer stack company Hoeller Elektrolyzer to develop *mtu* electrolyzers for producing green hydrogen. Furthermore, we announced the development of *mtu* methanol engines for large yachts and *mtu* hydrogen engines for power generation.

Last year, we pledged to prove that our most successful engine series can be used with sustainable fuels by the end of 2023. In 2022, we took significant steps towards meeting our net zero ambitions by reaching key milestones, including the achievement of our series 4000 and series 1600 engines having run on a range of sustainable synthetic fuels.

In 2022, we signed a contract with a solar park with 3.7 MWp capacity in southern Germany, which will generate around four million kilowatt hours of electricity per year for Power Systems. This power generation source saves 1,300 tonnes of CO_2 per year compared to electricity available through the German grid network.

For our efforts to drive decarbonisation, Power Systems has been awarded the special global transition high potential prize which recognises companies that have taken practical steps in their strategies to prevent global warming by more than 1.5°C by the year 2100.

We are prepared to support the increasing customer demands for military products as a result of the shift in security policy. We will do this in a timely and reliable manner, ensuring that our Power Systems business contributes to global security. *mtu* solutions power many of the vehicles and vessels on which operational readiness depends.

Outlook

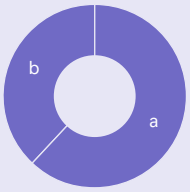
As customers look to ensure a continuous source of power for their applications, we are well placed to take advantage of increasing demand. Inventory unwind began in 2022 and will continue through 2023.

New Markets

New Markets are early-stage businesses. They leverage our existing, in-depth engineering expertise and capabilities to develop sustainable products for new markets, focused on the transition to net zero.

UNDERLYING REVENUE	UNDERLYING OPERATING LOSS	EMPLOYEES (FTE AT YEAR END)
£3m	**£(132)m**	**1,059**
2021: £2m	2021: £(70)m	2021: >570

VALUE R&D SPEND £108M



a. Rolls-Royce Electrical **62%**
b. Rolls-Royce SMR **38%**

Market overview

Our New Markets business is made up of our Rolls-Royce SMR (Small Modular Reactor) business and Rolls-Royce Electrical. As we develop greener solutions for future use, nuclear and electrification applications will play a pivotal role in our product mix and make-up. We continue to invest in these technologies along with our partners and we use our combined expertise to progress on the path to net zero.

Nuclear power will play a key role in producing sustainable zero carbon power. Our SMRs will enable the production of stable, secure supplies of power for grid scale electricity supply and off-grid energy intensive users. They are faster to build and more cost-efficient than conventional nuclear power stations. The modular design means that 90% of the manufacturing can take place in a factory environment, not subject to the productivity constraints of conventional large nuclear sites such as poor weather. While we await the first firm commitment to deploy an SMR, we continue to work in parallel through the UK generic design assessment (GDA) process, with a view to having the first SMRs on grid in the early 2030s.

Electrification will assist in the decarbonisation of the aviation industry and the technologies we develop here can be leveraged in our Civil Aerospace and Defence applications. We pursue solutions on multiple fronts, where small, all-electric aircraft can offer short journeys, with a more efficient, quieter and zero-emissions power source. As we look to increase the range of the aircraft, hybrid power systems, such as electric and SAF pairings can provide commercially viable alternative solutions to the traditional larger, regional aircraft market. Within Rolls-Royce Electrical we continue to build on existing relationships and create new ones, to collaborate with expert third parties to develop electric solutions as a means of air travel. We also use this engineering capability to support product development in Power Systems, where there is increased demand for hybrid systems which can leverage our electrical engineering capability in Rolls-Royce Electrical.

There was a tightening of the labour market in 2022, where job vacancies were higher, unemployment was lower and the availability of skilled workers was lower. As a result, our New Markets business faced greater challenges in filling some vacancies than our other business. Progress has been slower than anticipated, therefore, but not materially lower to impact our progression against key milestones.

The potential from our New Market products is significant and the technologies we develop in Rolls-Royce SMR and in Rolls-Royce Electrical can have alternative applications.

Financial performance

Underlying revenue of £3m came from Rolls-Royce Electrical sales relating to marine engineering services and propulsion systems. Both Rolls-Royce Electrical and Rolls-Royce SMR are early-stage businesses in their investment phase, with significant future revenue generating potential in the 2030s.

Underlying operating loss of £(132)m increased from the prior year comparative as we increased the pace of investment in both Rolls-Royce SMR and Rolls-Royce Electrical. R&D costs of £108m included £41m on the design development to ready our SMRs to enter the UK GDA process and £67m on electrical propulsion technology.

Operational and strategic progress

Collaboration will play a key role in our Rolls-Royce Electrical journey, and we look to partner with experts across the industry to further advance our technology and explore different avenues for net zero travel. We entered into partnership this year with EVE, an advanced air mobility (AAM) business created by Embraer S.A., to develop propulsion systems for their platform. Together with our existing propulsion partnership, Vertical Aerospace, we are well positioned to deliver differentiating power and propulsion solutions in this new AAM market.

Financial overview

£ million	2022	Organic change [1]	FX	2021	Change	Organic change [1]
Underlying revenue	**3**	**1**	**–**	**2**	**50%**	**50%**
Underlying OE revenue	1	1	–	–	–	–
Underlying services revenue	2	–	–	2	–	–
Underlying gross (loss)/profit	**(1)**	**(2)**	**–**	**1**	**nm**	**nm**
Gross margin %	(33.3)%			50.0%	(83.3)%pt	(83.3)%pt
Commercial and administrative costs	(23)	(20)	–	(3)	667%	667%
Research and development costs	(108)	(40)	–	(68)	59%	59%
Joint ventures and associates	–	–	–	–	–	–
Underlying operating loss	**(132)**	**(62)**	**–**	**(70)**	**89%**	**89%**
Underlying operating margin %						

	2022	2021	Change
Trading cash flow	**(57)**	**(56)**	**(1)**

[1] Organic change is the measure of change at constant translational currency applying full year 2021 average rates to 2022. All underlying income statement commentary is provided on an organic basis unless otherwise stated

In addition to the above, we have entered into an agreement with Hyundai Motor Group to bring all-electric propulsion and hydrogen fuel cell technology to the AAM market. The partnership will leverage our aviation and certification capabilities and Hyundai Motor Group's hydrogen fuel cell technologies and industrialisation capability. The benefits of using a hydrogen fuel cell system in an all-electric aircraft propulsion system is that it is a zero-emission, silent and reliable on-board power source that enables scalability in power offerings as well as long distance flight range. Jointly we will advance this technology into Hyundai's AAM vehicles and complete our all-electric and hybrid-electric power and propulsion system portfolio offerings.

Increased investment in Rolls-Royce Electrical is a key part of our net zero strategy. This year we announced the development of our turbogenerator technology. A new, small engine designed for hybrid-electric application, the turbogenerator, will extend platform range initially based upon SAFs and, at a later date, will be compatible with hydrogen fuel. The technology, currently being developed by experts in Germany, Norway and Hungary, is being part funded by the German Ministry for Economic Affairs and Climate Action.

We have shortlisted three possible sites which will be home to one of our major factories in the production of our SMR components and modules. Planning processes will be initiated to ensure we can work in parallel and construction will take place once certainty on a domestic deployment plan has been secured. In addition to factory locations, four nuclear sites have been identified across England and Wales that could host the first SMR units with sufficient land for around 15GW of SMR deployment across these sites. These are key milestones in the development of our SMR programme and support our ambitions to manufacture the first fully operational SMR in the early 2030s.

Outlook

In Rolls-Royce SMR, regulatory activities such as the GDA, factory development and siting plans will continue simultaneously as the work to secure a firm domestic commitment is secured. For Rolls-Royce Electrical, partnership and commercial opportunities will be developed, as we look to draw upon our own talent and the talent of others to bring our ambition to life.

SUSTAINABILITY

Our sustainability approach ensures we operate our business and deliver our strategy in an ethically, environmentally and socially responsible manner.

2022 HIGHLIGHTS

- Achieved second place in Dow Jones Sustainability Index corporate sustainability assessment for our industry
- Launched human rights development programme and completed saliency risk assessment
- Developed and submitted decarbonisation targets to the Science-Based Targets initiative for validation

OUR SUSTAINABILITY APPROACH

We look to operate and act in an ethically, environmentally and socially responsible manner, by:

Managing and minimising environmental impacts across our value chain	Creating a positive social impact for our people, our partners and communities	Maintaining the highest standards of ethics and compliance
See pages 31 to 36	See pages 37 to 40	See page 41

Underpinned by our values and behaviours

Our sustainability approach sets out the areas where we can make the most material contributions to a sustainable future. As an engineering and technology company operating across critical and hard-to-abate parts of the global economy, including transport, energy and the built environment, mitigating our impact on climate change and decarbonising our product portfolio is the biggest driver for our sustainability approach.

We aim to create shared value for Rolls-Royce and our stakeholders; to us this means creating a positive social impact for our people, our partners and communities local to our operations, whilst managing and minimising environmental impacts across our value chain, and maintaining the highest standards of ethics and compliance.

We use our understanding of the impacts we have as a business, informed by global frameworks such as the United Nations Sustainable Development Goals, to help guide our approach. In addition, we routinely benchmark through selected sustainability and environmental, social, governance (ESG) assessments, such as the Dow Jones Sustainability Index (DJSI) and the CDP. In the 2022 DJSI, we achieved a total score of 71, achieving second place for the aerospace and defence industry. During the year, Power Systems was recognised with a global transition award by a German national newspaper, Handelsblatt, in recognition of the contributions the business is making to a more sustainable future.

Sustainability and climate change is embedded within our global governance framework, risk management system and operating model, including through a suite of global policies, such as Our Code and health, safety & environment policy, and key processes, such as our capital allocation framework and supplier management scorecards. In 2022 we entered into a new £1bn loan facility linked to our performance against key sustainability and environmental metrics. Delivery of our sustainability approach, including execution of policies and progress against our priorities and targets, is overseen by the Safety, Ethics & Sustainability Committee (see page 96) at Board level, and the environment & sustainability committee, which operates as a subset of the Executive Team to monitor progress routinely at management level.

Our sustainability approach and areas of focus are kept under constant review to respond to immediate and emerging trends, such as changes in legislation, as part of a dynamic materiality assessment. This is continuously assessed to ensure we are meeting the expectations of our customers, investors, regulators and our people, and is reviewed by the Safety, Ethics & Sustainability Committee. This also helps to inform our reporting and disclosures.

We seek to engage our people in our sustainability approach to understand their expectations and feedback on our progress, and to empower them to contribute through their individual and team roles. In 2022, we launched dedicated sustainability and climate content hubs as part of our digital learning platform, Leatro (see page 38), and established a communication campaign, 'sustainability & I', focused on showcasing the individual perspectives, drivers and contributions that people across the Group can make to our sustainability approach.

Throughout 2022, we have particularly focused on two areas of evolving global policy and growing strategic significance: continued progress against our decarbonisation strategy, execution of our climate programme and development of science-based targets (see Net Zero and Climate Change pages 31 to 35); and establishment of a global human rights development programme (see Ethics and Compliance section page 41). These activities will continue into 2023.

For more information on our sustainability approach, including our Group policies, materiality assessment, and metrics and targets, see www.rolls-royce.com

NET ZERO AND CLIMATE CHANGE

We aim to play a leading role in the global transition to a low carbon future, through the provision of sustainable power and technology solutions, and are committed to reaching net zero value chain emissions by 2050.

OUR PROGRESS IN 2022

- Released *mtu* Series 4000 and 1600 reciprocating engines for use on a range of sustainable fuels in power generation applications
- Completed first successful test flight of the Trent 700 powered RAF Voyager aircraft on 100% SAF, in partnership with the UK Ministry of Defence and Royal Airforce
- Carried out first ground test of an AE2100 aero engine on green hydrogen
- Achieved 61% reduction in facility emissions (scope 1 + 2, excluding product test emissions) from 2014

Mitigating our impact on climate change and decarbonising our product portfolio are intrinsically linked to our business strategy and are the biggest drivers of our sustainability approach.

During 2022, we have concentrated on the development of a climate programme that will ensure we are appropriately responding to the impacts of climate change on our business, including both the risk and opportunity it presents. To support this, a climate steering committee has been established with Executive Team representation, including the Chief Financial Officer, the Chief Technology Officer and the General Counsel. Key outputs from this programme include further work to quantify the potential impact of climate scenarios on our strategic planning and the development of science-based targets to enable us to effectively monitor progress against our decarbonisation goals.

Our decarbonisation strategy summarises our approach to managing climate-related impacts and risk through three interconnected pillars:

1. making our operations net zero carbon;
2. decarbonising complex, critical systems at the heart of global society by:
   a. enabling our products to be used in a way that is compatible with net zero;
   b. pioneering new breakthrough technologies that can accelerate the global energy transition; and
3. creating the necessary enabling environment, with public and policy support, to achieve this ambition.

Through the climate programme and wider activities, we have taken action against each of these elements during the year.

Making our operations net zero carbon

Emissions associated with our office, manufacturing and production activities are a small, but important, step in our journey to a net zero carbon value chain. Reducing the energy needs and climate impacts of our facilities will also help ensure they are more resilient to rising energy prices and energy insecurity.

Our total scope 1 + 2 emissions footprint for 2022 equalled 319 $ktCO_2e$. Of this, 175 $ktCO_2e$ (55%) came from facility emissions and 144 $ktCO_2e$ (45%) from product testing activities [1].

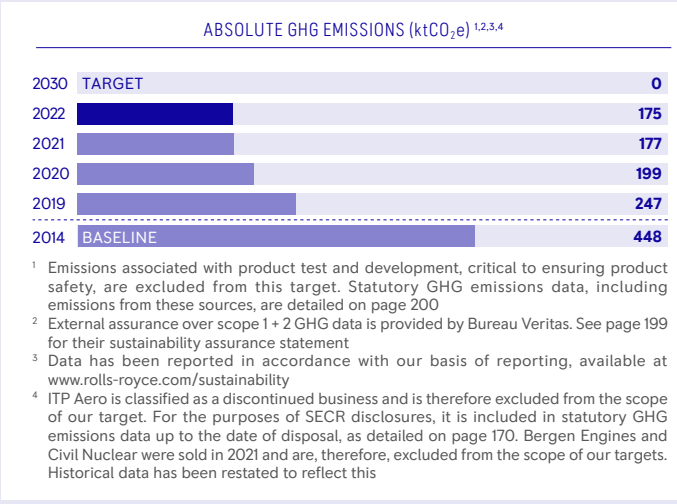
By 2030, our goal is to achieve net zero facility emissions (see page 32). During the year, we made good progress against this, despite the rising costs caused by the volatile energy pricing around the world. This included upgrading lighting systems, heating, ventilation and air conditioning (HVAC) systems and conducting feasibility studies into deployment of technologies such as large scale solar, battery storage and renewable heat networks. During 2022, our Defence site at Bristol, UK became our first production facility to achieve net zero carbon status for operational emissions (excluding emissions from product testing activities). The site utilises a combination of rooftop solar and onsite ground source heat pumps, alongside the procurement of renewable electricity and gas. A small quantity of independently verified carbon offsets (covering <10% of total emissions) were used to achieve net zero carbon status where there is no immediately viable alternative to mitigate residual emissions, such as diesel usage in emergency generators. During the year, we also entered an offtake agreement for the exclusive supply of renewable energy for our Power Systems facility in Friedrichshafen, Germany from two neighbouring solar parks. This supplies around a third of the site's total energy needs.

As part of our science-based target setting, we aim to replace our existing facilities-focused goal with a revised target to reduce total scope 1 + 2 emissions by 50% by 2030, from a 2019 baseline [2] (see overleaf). This target will be met primarily through the roadmaps that have been already identified for decarbonising facility emissions but also brings product test emissions into scope for the first time.

We undertake rigorous programmes of product testing as part of our technology development programmes, as well as to support customer deliveries, meet regulatory requirements and for engine certification purposes. This is a critical part of our product safety assurance programme. Emissions associated with product test can be mitigated through a combination of increasingly digital testing, use of sustainable fuels in our test beds and the growth of our low and zero carbon technology portfolio, such as hybrid and fully electric products. In the UK, we are already using a blend of 10% SAF in our Civil Aerospace and Defence testing activities.

[1] This data excludes ITP Aero in line with 2022 financial reporting as it was classified as a discontinued business in 2021
[2] Target awaiting validation from the Science-Based Targets initiative and therefore subject to change

SCOPE 1 + 2 FACILITY EMISSIONS



1 Emissions associated with product test and development, critical to ensuring product safety, are excluded from this target. Statutory GHG emissions data, including emissions from these sources, are detailed on page 200
2 External assurance over scope 1 + 2 GHG data is provided by Bureau Veritas. See page 199 for their sustainability assurance statement
3 Data has been reported in accordance with our basis of reporting, available at www.rolls-royce.com/sustainability
4 ITP Aero is classified as a discontinued business and is therefore excluded from the scope of our target. For the purposes of SECR disclosures, it is included in statutory GHG emissions data up to the date of disposal, as detailed on page 170. Bergen Engines and Civil Nuclear were sold in 2021 and are, therefore, excluded from the scope of our targets. Historical data has been restated to reflect this

By 2030, our goal is to achieve net zero greenhouse gas (GHG) emissions from all energy purchased and consumed in the operation of our buildings, facilities and manufacturing processes (facility emissions, excluding product test). This target is well aligned with the emissions reduction trajectory required to curb global temperature rise to 1.5°C. We are aiming to achieve our goal through on-site renewable energy installations, the procurement of renewable energy and continued implementation of energy efficiency improvements to reduce our overall energy demands and associated costs.

In 2022, the emissions associated with our operations and facilities target was 175 $ktCO_2e$. This is a 2 $ktCO_2e$ reduction (1.1%) from 2021.

As part of our science-based target setting, we aim to replace our existing facilities-focused goal with a revised target to reduce total scope 1 + 2 emissions by 50% by 2030, from a 2019 baseline *, bringing test emissions into the scope of our target for the first time. We will continue to work to target net zero GHG emissions from our operations and facilities within the same timescale.

* Target awaiting validation from the Science-Based Targets initiative and therefore subject to change

Decarbonising complex, critical systems

Achieving net zero carbon will require a wholesale transformation of the systems that make up the backbone of our global economy, including transport, energy and the built environment, some of the very sectors in which reducing emissions is the hardest. To decarbonise complex, critical systems we must continue to act across three areas: developing new low and zero carbon technologies and sustainable solutions; accelerating the availability and affordability of sustainable fuels; and continuing to improve engine efficiency and environmental performance.

To align with global climate goals and meet our own commitments under the UN Race to Zero, all our products must be compatible with net zero carbon operation by 2050 at the latest. This will be achieved by further advancing the efficiency and performance of our engine portfolio and ensuring our products can run on sustainable fuels.

Throughout 2022, and in collaboration with industry partners, we have conducted a series of one-off tests across our portfolio of in-production and in-development engines to demonstrate their readiness for 100% sustainable fuels. This includes the Trent XWB-84 and Trent 900 in Civil Aerospace, the Pearl 700 and the BR725 for business aviation and a successful in-flight test of the Trent 700 powered Royal Airforce Voyager aircraft in Defence. In Power Systems, we announced the release of our *mtu* Series 4000 and Series 1600 reciprocating diesel engines for use with a range of synthetic diesel fuels in power generation applications.

These tests, alongside our use of 10% SAF in our Civil Aerospace and Defence testing facilities in the UK, demonstrate that it is not a technology challenge to increase the uptake of sustainable fuels in transport and power generation applications but one of economics and policy. The cost of sustainable fuels is expected to be potentially significantly higher than today's oil prices and is produced in relatively limited quantities compared to conventional fossil fuels. It is critical, therefore, that we continue to invest in advanced efficiency technologies that can help reduce fuel burn in product operation.

Throughout 2022, we have continued to progress through the design stages of our UltraFan demonstrator package, the next generation of gas turbine technology for aviation, which will offer a 25% reduction in fuel burn compared to the first Trent engines. In our business aviation segment, the Pearl 10X engine has been developed utilising advanced technologies, such as our Advance2 engine core and advanced manufacturing techniques, such as 3D printing, to offer 5% higher efficiency than its predecessor.

Beyond mitigating the emissions associated with the use of today's products, we believe we are well positioned to play a critical role in accelerating the global energy transition through the introduction and scaling of new breakthrough technologies. This includes the development of new low, zero or even net negative products and solutions, such as fuel cells and microgrids for energy storage, hybrid-electric and all-electric technologies for commuter aviation and urban air mobility applications, direct air capture technology, and small modular nuclear reactors for large scale power generation. All of these offer great opportunities in markets or market segments we are not present in today.

Creating an enabling environment

Our ability to deliver on our decarbonisation roadmap hinges on an external environment that enables us to successfully transition to a net zero carbon future and to support others to do the same. We recognise that factors such as the provision and uptake of sustainable fuels or the inclusion of nuclear power in clean energy strategies is outside the immediate control of any one company.

In response, we continue to engage with partners across our value chain, including policy makers, to help create the necessary regulatory landscape and public sentiment. In 2022, this included active participation at the UNFCCC COP27 conference in Egypt; hosting clean technology showcases for political stakeholders in the UK and Europe; and publicly welcoming the announcement of the long-term goal to reach net zero carbon from the International Civil Aviation Organisation (ICAO), the UN body that oversees global aviation.

NON-FINANCIAL INFORMATION STATEMENT

As required by sections 414CA and 414CB of the Companies Act 2006, the non-financial information can be found as follows: Environmental matters, pages 31 to 36 and 200; People, safety, health & wellbeing and social matters, pages 37 to 40; Anti-bribery and corruption, page 41; and Human rights, page 41. Information on the Group's Principal Risks is included on pages 42 to 47, Key Performance Indicators on pages 16 and 17 and our Business Model on pages 14 and 15.

TCFD RECOMMENDATIONS

Through our ongoing climate programme and wider activities during 2022, we have worked to build on and improve our strategic response to climate change and in turn our disclosures against the Taskforce on Climate-related Financial Disclosures (TCFD) framework.

In our 2021 Annual Report, we stated that our climate disclosures were in line with nine of the 11 TCFD recommendations. The two areas we felt our disclosures were inconsistent were strategy part C, related to the assessment of organisational resilience in the face of climate change and metrics and targets, part B, related to the disclosure of scope 3 emissions. A key focus of our climate programme, climate steering committee and Safety, Ethics & Sustainability Committee throughout the year has been in strengthening these two areas. As a result, we have made considerable progress on the integration of climate within our routine strategic and financial planning activities, and in the calculation of scope 3, category 11 use of sold products emissions.

Against the latter, we have disclosed the impact of our scope 3, category 11 use of sold products, calculated in accordance with the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. As our category 11 emissions are most material, comprising >90% of our total emissions footprint, we have concluded this disclosure meets the TCFD recommendation to calculate and disclose appropriate scope 3 emissions sources. Targets for reducing these emissions have been developed and submitted for validation by the Science-Based Targets initiative, and are disclosed as draft.

Against strategy part C, we have sought to build on the work undertaken in 2021 where we had completed a preliminary, largely qualitative, assessment of the impact of climate-related risk under climate scenarios. For 2022, we have substantiated the two climate scenarios we use for strategic planning, one of which explores an accelerated transition pathway linked to global temperature rise of 1.5°C by 2100, the other accelerated physical risk linked to global temperature rise of 3.6°C by 2100, with further quantitative and qualitative inputs. These inputs, on variables such as anticipated carbon prices ($/t) and global GDP, have been taken from external sources, including Oxford Economics and the International Energy Agency, and are then used to model Group-specific assumptions such as demand for aviation and maritime transport. Each business has modelled these variables in detail to understand the extent to which each scenario manifests as a risk and, if so, how material.

In these assessments, eight key risks and two key opportunities relating to climate change have been considered. Each business has modelled the potential impact of each risk and/or opportunity against their strategic and financial plans under each scenario, the outputs of which have then been consolidated and assessed at Group-level for disclosure. This has included consideration of the impact of climate in the preparation of the Going Concern and Viability Statements, as well as in the preparation of our consolidated financial statements. A summary of the consideration of climate within our accounting policies is detailed in note 1 on pages 110 to 112. It is our assessment that we have met the principles of the TCFD recommendations through these activities.

However, as set out elsewhere in this Strategic Report, including the Chair's Statement (see page 4) and the Chief Executive's Review (see page 6), at the start of 2023 we announced the commencement of a strategic review and wider transformation programme. This will include identifying and assessing strategic options, prioritising growth opportunities and assessing current portfolio attractiveness; much of which relates to the decarbonisation of our product portfolio and the wider opportunities the energy transition presents (see Strategy, page 10). The results of this review will include developing a new, granular strategic plan with clearly defined milestones and key performance indicators to enable the measurement of progress. This will be developed throughout the course of 2023. At this time therefore it would be unreasonable to conclude that we have fully considered the impact of climate change within our business strategy while that strategy is under review.

As a result, we believe our 2022 disclosures are consistent with nine of the 11 TCFD recommendations. The two areas where we consider that we are not fully aligned are: strategy, part B, relating to the consideration of the impact of climate in business strategy; and, strategy, part C, relating to the assessment of organisational resilience in the face of climate change.

Playing a key role in the energy transition remains a strategic priority (see Strategy, page 12). Climate – that is both the consideration of the impact of climate on our business, including strategic planning, risk management and governance; and consideration of the impact of our strategic choices on the climate, including carbon emissions – will be a key consideration throughout the strategic review.

For 2022, we have taken the decision to detail our climate-related disclosures in a supplementary Climate Review, available at www.rolls-royce.com. This enables us to disclose further detail on our approach to climate-related governance, strategy, risk management and metrics & targets, supported by case studies and examples of in-year activity, than the Annual Report format allows. A summary of these disclosures, and details of where within the Climate Review further information can be found, is included overleaf. This includes the most material information pertinent to our strategic response to climate change.

For more information on our strategic response to climate change see our Climate Review on www.rolls-royce.com

Governance

See governance chapter of the Climate Review for further detail

A Board oversight

The Board has oversight of climate-related risks and opportunities impacting the Group and all Board Committees have climate-related issues as part of their remit. In particular, the Safety, Ethics & Sustainability Committee has delegated responsibility to review the principal risk relating to climate change. During the year, this Committee was specifically engaged in the development of our proposed science-based targets and reviewed the outputs of climate-related physical risk impact assessments, making recommendations for further modelling. Directors received climate training during the year, covering climate science, risk management and scenarios.

B Management's role

The Executive Team is responsible for managing climate-related risks and opportunities on a day-to-day basis and for delivering the roadmaps to achieve our decarbonisation strategy. The Chief Executive has specific risk ownership of the principal risk related to climate change. The environment & sustainability committee is a sub-committee of the Executive Team and meets regularly to review progress. In addition, a subset of the Executive Team meets on a monthly basis as the climate steering committee to specifically review our climate programme. In addition, we benefit from the expertise of an independent external environmental advisory committee, which reviews and advises management on our sustainability and climate approach.

Strategy

See strategy chapter of the Climate Review for further detail, including description and key data points for each scenario

See risks and opportunities chapter for details of the eight risks assessed

Further work against this recommendation, specifically Strategy B and C, will be considered as part of the strategic review that has been launched. Further information on our strategic review can be found on page 11

A Identification of climate risks and opportunities

The assessment and management of climate-related risk and opportunity is an integral part of our enterprise risk management process. A principal risk related to climate change, specifically the potential of risk to future revenue changes as a result of failure to transition to an inherently lower carbon product portfolio, is specifically noted on our Group risk register. Further details on the climate related principal risk can be found on page 44.

Broader climate-related risks and opportunities can manifest themselves beyond those described in our climate change principal risk and can also act as drivers for other principal risks. For example, extreme weather events disrupting our supply chain (business continuity), carbon taxes reducing the competitiveness of our products (competitive environment), or shifts in consumer preferences reducing the size of the accessible market (market shock).

To reflect this broader impact, we have consolidated a long list of potential identified climate risks into eight key risks. These represent the key hazards that could have a potentially material impact. These are: increased costs due to carbon pricing; reduced revenues due to changing customer demand; increased costs due to commodity price changes; regulatory changes on types of engines; product performance deterioration under changing physical climate; increased investment required in R&T/D; increased capital investment required due to changes in product mix and/or volume; and changes to demand for low carbon products.

Additional opportunities were identified including increased market demand for existing products and opportunities to enter new markets through the development of new low or zero emissions products.

B Consideration of the impact of climate risks and opportunities

The potential impact of climate-related risks and opportunities is quantified as part of our enterprise risk management. This includes consideration of probability and impact against which we define thresholds for what we consider to be substantive. Our tolerance for risk depends on the nature of the risk itself, as well as the potential impact and likelihood of its occurrence. Through our work on climate scenarios in 2022, we have assessed the potential impact of each of the eight key risks relating to climate change identified, seeking to quantify potential impact, understanding the trajectory and timeframe over which we expect the risk to occur and seeking to understand and assess the existing strategic response and controls in place.

C Resilience assessment, including climate-related scenarios

We use climate scenarios to quantify the impact of climate-related risks and thereby assess the viability of our business strategy, decarbonisation plans, our approach to managing climate-related risk and their impact on our financial results. Two scenarios have been developed based on independent external climate scenarios and representative concentration pathways that present plausible levels of global temperature rise and associated policy responses. One scenario explores an accelerated transition pathway linked to global temperature rise of 1.5°C by 2100, the other accelerated physical risk linked to global temperature rise of 3.6°C by 2100.

In 2022, we have sought to further quantify each scenario, using third-party data where relevant, to assess better the potential impact of the eight risks relating to climate change. Both scenarios present risk and opportunity for the Group that is used to inform our strategic planning and decision making. Our assessment concludes that under the 1.5°C scenario, transition risks including increased costs due to carbon pricing; reduced revenues due to changing customer behaviour; increased costs due to commodity pricing; regulatory changes on types of engines; and increased investment required in R&T/D are potentially material. In the 3.6°C scenario physical risks, such as product performance deterioration under a changing climate, are material.

We have then sought to assess the existing strategic response and controls in place to mitigate each risk. From this we have concluded that largely the actual impact of each risk is likely to be low or medium. Where relevant or material, potential impacts have been recognised in the preparation of our consolidated financial statements. Further information on our consideration of climate change can be found in note 1 of the Accounting Policies on page 110 to 112.

Risk management

See risks and opportunities chapter of the Climate Review for further detail

Metrics & targets

See metrics and targets chapter of the Climate Review for further detail, including calculation method for scope 3 emissions

A Processes for identifying and assessing climate-related risks

We continually review emerging climate-related risks as part of our wider emerging risk management processes. Risks are identified across businesses and functions by considering what may prevent us achieving our strategic, operational or compliance objectives. They may be identified through a range of processes, including horizon planning, subject matter expertise (such as that provided by our environmental advisory committee), stakeholder engagement and through climate scenario modelling. Once identified, we assess the risk's likelihood and potential impact, determining whether it may manifest as a threat or an opportunity, reviewing and taking into account current mitigating control activities and identifying where additional action may be needed. Threats are routinely reviewed to determine whether they are within our risk appetite.

During 2022, we also carried out preliminary physical risk impact assessments on selected Company locations and third-party sites, such as key joint ventures and supplier locations. These assessments considered the potential likelihood and impact of weather events such as flooding, severe storms, wildfires and extreme heat based on the central grid reference of the location. Of the 50 sites assessed, eight were identified as presenting a potential high level of risk. There is further work underway to improve the specificity of these hazards and identify mitigating actions as part of our ongoing assessment and response to business continuity risk.

B Processes for managing climate-related risks

Risk owners assess the risk's likelihood and potential impact, taking into account current mitigating control activities and identifying where additional activities may be needed. The Chief Executive is the risk owner for the climate-related principal risk and the Safety, Ethics & Sustainability Committee has delegated oversight.

C Integration of climate-related risk management into enterprise risk management

Climate-related risk identification and assessment is embedded within our wider approach to enterprise risk management. This looks to understand the risks to our objectives and sets common assessment criteria to ensure all risks, including those arising from climate change, are consistently assessed. Further detail on our approach to enterprise risk management can be found on pages 42 to 47.

A Disclosures of metrics used to assess climate risks and opportunities

We monitor selected metrics relevant to our climate change principal risk, specifically the potential of risk to future revenue changes as a result of failure to transition to an inherently lower carbon product portfolio, and to the key risks related to climate change determined to be potentially material. For 2022, this includes assessing the carbon intensity of our product and technology portfolio through metrics such as:

- use of sold products emissions normalised by original equipment revenue (fossil fuel based pathway): 0.015 $MtCO_2e$/ £m OE revenue; and
- percentage of net R&D expenditure allocated to the development of energy transition products and services: 74% (2021: 72%).

B Disclosure of greenhouse gas emissions

We monitor and measure our GHG impacts across relevant categories. For 2022, our emissions were:

- Scope 1: 233 $ktCO_2e$
- Scope 2 (location based): 86 $ktCO_2e$
- Scope 3, category 11 (use of sold products):
  - Fossil fuel based pathway: 87.3 $MtCO_2e$
  - Sustainable fuels based pathway: 70.1 $MtCO_2e$

These emissions have been calculated in accordance with the Greenhouse Gas Protocol. Due to the forward looking nature of scope 3, category 11 emissions calculations in particular, we have reported against two differing projections of sustainable fuels uptake. These act as bookends by calculating emissions against a 100% fossil fuel based pathway out to 2050 and a near 100% sustainable fuel based pathway out to 2050.

We continue to focus on improving the rigour of our emissions calculations and reporting, particularly related to scope 3 emissions. For 2022, we have focused on preparing our scope 3, category 11 (use of sold products) emissions as the most material aspect of our total emissions footprint (>90%). In 2023, we will focus on further scope 3 emissions categories, particularly category 1 purchased goods and services.

C Targets used to manage climate risks and opportunities

Our climate strategy is supported by a suite of short and medium term targets intended to help measure and accelerate progress. This includes targets to mitigate emissions, build strategic resilience and capability development in relation to climate change. Our 2023 targets, which include targets related to the testing of products on 100% sustainable fuels, form part of executive remuneration.

We have made good progress against our existing facility emissions target and broader environmental targets, such as energy and waste reduction, each of which have an inherent climate impact. Since 2014 we have reduced our facility emissions (scope 1 + 2, excluding test) by 61%, and are on track to meet our 2030 goal.

In June 2022, we developed and submitted new science-based decarbonisation targets to the Science-Based Targets initiative for validation. We expect these to be finalised in 2023. Our proposed interim targets include reducing scope 1 + 2 emissions by 50% by 2030, and reducing scope 3, category 11 (use of sold products) emissions, normalised by original equipment revenues, by 55% by 2030 *.

*Targets awaiting validation from the Science-Based Targets initiative and therefore subject to change

RESPONSIBLE CONSUMPTION

Understanding and managing our impacts across our value chain is a key part of being a responsible and resilient business. We seek to manage our environmental impacts and optimise resource efficiency.

OUR PROGRESS IN 2022

- Achieved a recycling and recovery rate above 80% in Power Systems
- Achieved zero waste to landfill status in 80% of our reporting sites
- Introduced sustainability due diligence, including environmental performance assessments, in our supply chain

Reducing waste and maximising resource efficiency helps to mitigate our environmental impacts whilst also delivering cost savings across our operations. As stated in our health, safety & environmental policy, we are committed to reducing the environmental impacts of our business activities. We work in collaboration with partners across our value chain, including suppliers, to help them do the same.

Across our global operational footprint we seek opportunities to reduce our environmental impacts and increase our operational resilience, with a particular focus on optimising energy use; reducing GHG emissions; reducing waste and optimising material efficiency; and reducing water use. Where appropriate, progress against these focus areas is monitored through Group-wide environmental targets.

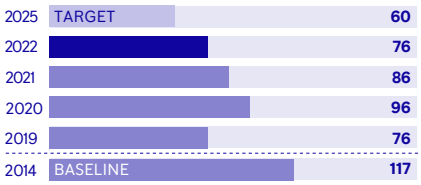
These Group targets are supported by individual business-level targets as well as specific local targets to respond to particular risks or opportunities. For example, we monitor water consumption and exposure to areas of water-stress and/or high water usage. During 2022, we have continued to progress against these environmental targets, with good performance against our waste reduction and energy reduction targets in particular.

We recognise that it is often those closest to a challenge who can come up with the best solution. We have engaged our people in supporting our environmental targets, generating the small ideas that can make a big difference. In our Civil Aerospace business, for example, a big ideas event was held to help identify and scale employee-led proposals that will help deliver our targets. In total, the campaign generated over 100 submissions that ranged from parts recycling and better waste segregation, to renewable energy installations.

During 2022, we introduced sustainability due diligence, including environmental performance assessments, for our tier 1 supply chain. This will help us to understand better the environmental impacts of our suppliers and identify areas we can work together to reduce environmental impacts, build operational resilience and improve performance. These assessments will also provide greater visibility of scope 3, category 1 purchased goods and services emissions and broader climate impacts on our supply chain.

In addition, during the year we began work to understand better our impacts on biodiversity and nature, driven by emerging policy; this will continue in 2023.

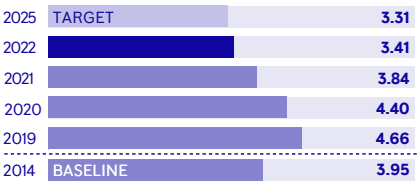
ENERGY CONSUMPTION (MWh/£m)



Target:
Reduce total energy consumption, normalised by revenue, by 50% by 2025 [1,2,3,4]

In a period of continued challenges around energy security and rising energy costs, reducing our overall energy demand will help reduce our exposure to energy-related risk, as well as support the delivery of our decarbonisation goals. Our normalised energy consumption in 2022 was 76 MWh/£m. This represents a reduction of 352,579 MWh (25.6%) since 2014. The total amount of energy consumed in the year was 1,025,783 MWh, of which 30.8% came from renewable energy sources, including 0.9% generated from our own on-site clean energy installations.

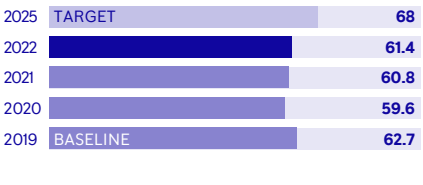
TOTAL SOLID AND LIQUID WASTE (t/£m)



Target:
Reduce total solid and liquid waste production, normalised by revenue, by 25% by 2025 [1,2,3,4]

We continue to focus on opportunities to prevent and minimise waste generation. In 2022, our total normalised solid and liquid waste was 3.41 kilotonnes/£m, a 13% reduction since 2014. The total amount of solid and liquid waste generated in operations was 46.1 kilotonnes, compared to 43.0 in 2021. This includes 16.5 kilotonnes of hazardous, primarily chemical, waste. The overall increase in the volume of waste produced has been driven in part by increased production activities following the impact of COVID-19.

RECYCLING & RECOVERY RATE (%)



Target:
Increase the recycling and recovery rate to 68% by 2025 [1,2,3]

Our recycling and recovery rate for 2022 was 61.4%. This represents a 1.3% reduction against the baseline, driven by an increased focus on managing materials consumption efficiency across our production facilities. Our Power Systems business now has a recycling and recovery rate above 80%. During the year, 4.1 kilotonnes of waste were sent to landfill, a 20% reduction since 2014. We continue to work to identify appropriate alternatives to landfill disposal for complex waste streams, such as foundry sand.

[1] External assurance over selected sustainability data is provided by Bureau Veritas, see page 199 for their sustainability assurance statement
[2] Data has been calculated in accordance with our basis of reporting. This and further data is available at www.rolls-royce.com
[3] ITP Aero is classified as a discontinued business and Bergen Engines and Civil Nuclear were sold in 2021 and are, therefore, excluded from the scope of our targets. Historical data has been restated to reflect this
[4] Energy and waste data are normalised by Group revenue (£m)

PEOPLE AND CULTURE

Creating a working environment where all colleagues are empowered to be at their best sits at the heart of our approach to people and culture.

OUR PROGRESS IN 2022

Launched new digital technologies to strengthen our approach to learning and skills development

Our people contributed 48,347 hours in community investment and STEM activities

Our 2022 engagement results keep us on track to achieve our 2023 ambition as we achieved a 75% participation rate and grand mean score of 3.85

In a year marked by geopolitical and macroeconomic disruption, our work, workplaces and workforce expectations changed significantly. Our people worked with great dedication and adapted to this rapidly changing environment. We sought ways to support and empower our people through this uncertainty, to enable them to be at their best. We did this by prioritising the following areas:

- safety, health and wellbeing of our people;
- creating an environment of inclusion and belonging;
- promoting a learning environment by continuing to directly engage our colleagues with digital content and enhanced learning tools;
- leadership capability;
- listening and engagement – hear what we do well and what areas we need to focus on, and do better; and
- community investment and focus on STEM.

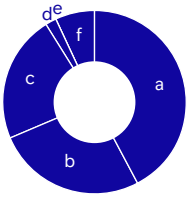
We continued to invest in the infrastructure, tools and systems required to enhance our performance and ways of working. New digital technologies and platforms strengthened our approach to ongoing learning, and skills development. Our investment also enabled us to enhance our leadership capabilities through rolling out our refreshed leadership learning programmes.

Safety, health and wellbeing

A healthy and safe working environment is fundamental to our success as a Group. We work to identify and control preventable incidents and we believe that motivating our colleagues to lead healthy lifestyles and maintain good wellbeing, including mental health, enables them to thrive.

Our industry leading LiveWell programme supports the delivery of our wellbeing strategy, empowering and enabling our colleagues to take personal responsibility for their health and wellbeing. We believe in creating a working environment where our colleagues can be at their best and we provide resources to support healthy bodies, minds and workplaces.

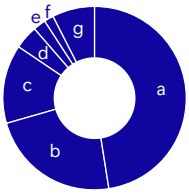
41,800 EMPLOYEES TOTAL (MONTHLY AVERAGE) *



a. Civil Aerospace	17,700
b. Defence	11,000
c. Power Systems	9,400
d. New Markets	800
e. Corporate	100
f. Discontinued operation (ITP Aero)	2,800

* Segments are defined in note 2 on page 125

EMPLOYEES IN 48 COUNTRIES (MONTHLY AVERAGE) *



a. UK	19,900
b. Germany	9,700
c. US & Canada	5,700
d. Spain	1,800
e. Italy	900
f. Singapore	700
g. Rest of world	3,100

* Employee headcount data represents permanent employees and excludes contractors

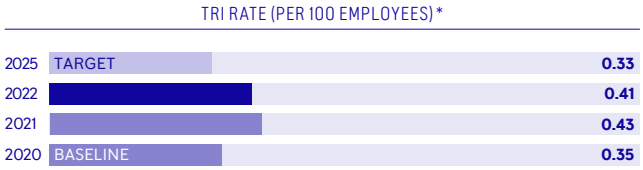
In 2022, we deployed resources to encourage open discussion on mental health. We further developed our global mental health champions, volunteers trained to guide colleagues and provide support on mental health. We also continued our work on menopause, providing support and information to reduce the stigma associated with reproductive health at work. We signed the wellbeing of women Menopause Workplace Pledge, committing to talk openly, positively and respectfully about the menopause.

Our work on wellbeing enabled us to support the development of the Confederation of British Industry's (CBI) Work Health Index (WHI). The WHI enables businesses to benchmark their workplace approach to health and wellbeing against peers. In 2022, our LiveWell programme featured as a case study within the CBI WHI.

Proactive safety behaviour is the foundation of our safety culture and journey to zero harm. In 2021, we introduced a safety index which consists of a composite score of five leading indicators. The indicators measure five key areas: senior leadership safety walks; safety case improvement activity; HSE alert response; close-out of HSE non-conformances; and accountable person engagement. These measurements drive proactive safety behaviour and action, as well as more traditional measures such as injury rates.

In 2022, we achieved our target safety index score of 85%, representing a 15% improvement compared to 2021. The most significant improvement was in the number of safety leadership walks, which increased from 53% in 2021 to 83% in 2022. Visible, engaged leadership is integral to our journey to zero harm strategy and this will continue to be an area of focus in 2023. Our total reportable

injury (TRI) rate in 2022 was 0.41 per 100 employees. There was a total of 176 TRIs with 20 incidents resulting in major injuries (including one contractor). This represents a 5% reduction compared to 2021. There were no fatalities.



* Our TRI rate shows the Group TRI performance (absolute and rate). External assurance over the TRI data is provided by Bureau Veritas (see page 199)

Diversity and inclusion

We believe that a diverse, equitable and inclusive workplace makes us a stronger company, enables us to hire the best talent, create high performing teams where our colleagues can reach their full potential and be at their best. In 2022, we focused on inclusion and belonging though our 'Being' campaign, where colleagues volunteered to participate in 'people like me' stories, celebrating them as a person and what makes them unique (see page 52).

We accelerated our efforts to attract and retain diverse talent and we embedded new inclusive hiring processes. We delivered our goals through four key pillars: lead, attract, retain, develop.

In 2022, we continued our focus on increasing the diversity of our external hires, 22% of all global hires were female compared with 19% in 2020. Additionally, 17% of hires in the UK and 26% of hires in the US were of ethnic minority backgrounds. We were recognised externally, winning a variety of awards, including first place in the Times Top 100 Engineering Graduate Employers, Best Engineering Employer for both males and females in the Universum Rankings and Best Diversity Initiative in the Engineering Talent Awards.

To support the growth and development of our under-represented populations, we introduced two new learning programmes: Connect & Belong, aimed at ethnically diverse talent; and Thrive, aimed at gender minorities. Both feature internal mentoring and skill development workshops. Forty-eight participants took part in Connect & Belong and 91 participated in our Thrive programme.

We give full and fair consideration to all employment applications from people with disabilities. If an employee becomes disabled whilst working for us we take steps to support their continued working including, wherever possible, making adjustments to ways of working.

While we have work to do to meet our stretching 2025 diversity targets (see page 40), we continue to refresh our approach against our diversity and inclusion pillars, to expand the global reach and impact of programmes, while driving accountability through continued measurement.

Inspiring future talent

We refreshed our approach to early careers attraction this year through embedding inclusive hiring. We also focused on employee advocacy as a powerful tool to reach diverse talent pools. Our approach has centred on creating an authentic narrative, provided through people's stories, utilising social media and digital platforms. Partnerships became a key lever for attracting diverse talent into our internship and graduate roles. We sponsored three undergraduate of the year awards and converted 89% of the finalists into internship offers across our female, social mobility and neurodiversity categories (76% female, 42% ethnicity). We have also grown our i-Accelerator insights programme to support 80 ethnically diverse students across both STEM and business programmes. Through holistically redesigning our end to end early careers approach, enhancing digital engagement and refreshing our assessment methods to focus on values and behaviours the diversity of our intake significantly increased. Our female graduate hires increased globally from 19% in 2021 to 40% in 2022.

In 2022, a new nuclear skills academy was opened in the UK to 200 apprentices as part of our strategy to inspire the next generation of future engineers. Creating and maintaining this pipeline of talent is crucial for industry growth in UK Defence, alongside providing jobs and opportunities for individuals across the UK. Working in partnership with the National Skills Academy for Nuclear (NSAN), Rolls-Royce SMR also developed a nuclear skills programme for colleagues who are new to nuclear within the nuclear industry framework.

Enabling and inspiring our people

We promote a learning environment by continuing to directly engage our colleagues with digital content and enhanced learning tools. These tools enable and empower our people to take ownership of their own learning and development, to support personal growth and high performance.

In 2022, our investment in learning and development was £17.8m (2021: £13.3m), delivering 581,505 hours of formal learning (2021: just over 250,000 hours). This reflects our transition to a new learning culture focused on providing on-demand learning and resources which are fully integrated into the flow of work. Leatro, our digital learning tool, facilitates learning in a style and pace to suit our colleagues learning requirements. Leatro Collections was introduced in 2022 and provides specially curated content for Rolls-Royce, focusing on commercial and technical areas, including digital and electrical skills, as well as enterprise topics such as: sustainability and climate; safety, health and wellbeing; leadership and engagement; and inclusion and diversity. LinkedIn Learning was also launched in 2022, adding over 16,000 new learning resources to our learning portfolio. Our continued focus on Leatro reflects our transition to a new learning culture that is focused on providing

on-demand learning and resources which are fully integrated into the flow of work, rather than more traditional methods such as classroom training.

In 2022, Leatro also facilitated our mandatory training which included diversity and inclusion with a specific focus on micro-aggressions and comprised team discussions on real life cases. Of those employees in scope, 94.3% completed the training (2021: 97%) by the year-end deadline, with 99.5% of managers certifying their commitment to adhere to the principles set out in Our Code (2021: 99%) *.

Developing our potential using skills and gigs

In 2022, we have introduced an entirely new approach to learning and skills development called gigs. It uses digital systems and artificial intelligence to create an internal marketplace of bite-sized tasks that support colleagues to drive their own career development.

Our launch featured a pilot for around 500 engineers, a critical area where there is a need for skills to continually develop and grow due to changing technologies and customer requirements. Due to the success experienced by the initial participants around 8,500 people had signed up by year end.

It is driving growth in discretionary effort of people seeking new opportunities to learn and reskill for future technologies such as electrical flight and 6,000 hours of gigs in total have been completed so far. In addition gigs are also helping to drive progression of diverse colleagues. Of people doing a gig, 23% are female and 30% are from an ethnically diverse background. Our journey has received significant external recognition through awards such as a gold medal at the Brandon Hall International awards and winners of the talent management category at the 2022 Personnel Today awards.

Leadership capability

We continued our investment in leadership capability through the roll out of two creative and interactive blended learning programmes, providing critical leadership skills for first and second-line leaders. We also revolutionised our global learning experience by providing highly interactive and experiential programmes that bring subject-matter to life. This includes pre and post-course coaching/mentoring and 24/7 access through mobile devices. These programmes have been recognised externally, achieving a bronze Brandon Hall Award for the Best Unique or Innovative Leadership Programme.

Alongside our formal leadership development programmes, our digital leadership toolkit has been refreshed and updated to enable unlimited access for our leaders. In 2022, utilisation was just over 138,500 learning engagements and total utilisation since its launch in 2020 has reached 323,650.

Employee engagement

We believe that highly engaged colleagues fuel business performance and that engagement is driven by leadership, a clear purpose and an environment where everyone can be at their best. Engagement is a key measure in our annual leadership incentive plans (see page 17). Furthermore we believe that listening to our colleagues provides opportunities to hear about what we do well and what areas we need to focus on and do better.

Gallup became our employee engagement partner in 2019 and we outlined our ambition to achieve a grand mean (overall average) score of 3.97 by the end of 2023. Our 2022 results keep us on track to achieve this ambition as we achieved a 75% participation rate and a grand mean score of 3.85. This meaningful increase of +0.12 since 2021 represents our third consecutive year of sustained improvement (+0.32 since 2019).

We provide a variety of channels for communication and engagement including interactive learning sessions, newsletters and team briefings, as well as digital communication channels such as Yammer. We work closely with colleagues, elected employee representatives and with our employee resource groups (ERGs) to ensure we remain connected with our people. The ERGs are groups of colleagues organised primarily around a specific characteristic or life experience who provide personal and professional support to each other and run events for all to raise awareness of key issues and to help everyone to focus on inclusion.

In 2022, we held multiple leader led sessions with our employees. Topics included our financial results, incentives, pay, wellbeing and inclusion. Our Executive Team also held regular virtual conversations (Teams Talks) where colleagues globally participated in a live Q&A. We also held an in-person Meet the Board event where colleagues participated in a ballot to attend and they engaged in small group discussions with our Board members (see page 51).

Community and STEM outreach

We believe that we have a responsibility to invest in and engage communities, to inspire the next generation, enable opportunities for our people and reflect the diversity of the communities that we operate in, by building a pipeline of future talent.

We work with local partners to identify issues, define objectives and evaluate impacts within a global framework. Together, we develop activities to meet local needs and particularly focus on groups that are disadvantaged by social and economic factors.

In 2022, global community contributions totalled £5.1m (2021: £2.73m), with £2.99m in cash donations, which included our response to the Russia-Ukraine conflict. Funds received as a result of a share forfeiture programme were not spent during 2022 but will be allocated in the future.

Together with our people, we contributed at least £1m to help the people of Ukraine. Contributions included a global matched giving scheme in partnership with Habitat for Humanity. We also matched employee time contributions with our Works Council and made cash and in-kind donations to local agencies supporting refugees arriving in Germany. Our Power Systems business donated gensets to maintain power to hospitals in Ukraine.

Our people remain at the heart of all our programmes and contributed 48,347 hours (2021: 26,427) to community programmes. In 2022, at least 80 teams across the Group completed practical projects in their local communities ranging from improving facilities to maintaining natural environments.

Our non-financial KPIs are on page 17. External assurance over the employee engagement scores is provided by Bureau Veritas. See page 199 for their sustainability assurance statement

* Code certification for Power Systems is scheduled for completion by the end of the first quarter of 2023

The majority of our investment underpins our top priority to support good quality education for all (UNSDG 4). We reached 0.9 million people through our STEM programmes in 2022 and are now 37% towards our target to inspire 25 million of tomorrow's pioneers by 2030. Again, our people power this commitment, inspiring future generations as role models and educators.

Inspiring future generations with STEM

Emerging technologies are at the heart of our STEM outreach activities. At the Big Bang Fair, the UK's largest STEM education event for young people, we connected with over 28,500 individuals in 2022.

Addressing inequalities in STEM

Our programmes aim to remove barriers and enable success for people facing social and economic challenges. Our Unnati programmes (taken from the Hindi word meaning development) in India, help girls and young women studying STEM through school and university by providing targeted support to sustain learning through socioeconomic challenges (see page 55).

High quality teaching in STEM

In the UK, we are nurturing inspiring teachers in partnership with STEM Learning. We provided bursaries to support continuous professional development for 662 STEM teachers in 2022 and invited more than 60,000 teachers to enter the Rolls-Royce Schools Prize for Science and Technology through Project Enthuse.

Ways of working and supporting our colleagues

We believe the future of work is all about balance. In 2022, we continued to support flexible ways of working and we looked at ways to enable better collaboration, innovation and performance. We will continue to assess the effectiveness of our approach and support leaders and teams to work together, to reimagine how we use our physical and digital workspaces in the future, to create a working environment where everyone can be at their best.

We have continued to make changes to our total reward arrangements this year to manage costs and to remove inequalities between employee groups. We took steps to simplify and de-risk the Group's pension arrangements, ensuring that our people have access to good quality retirement plans but with less risk and leverage on our balance sheet. This included:

- the termination and full risk transfer of our main US defined benefit pension plan;
- securing agreement to termination of future accrual to our Canadian defined pension plans; and
- securing agreement with our largest German employee group to transition future build up of retirement benefits onto a defined contribution basis.

We conducted and concluded pay reviews and negotiations with our employees and their representatives (where relevant). We focused on making sure that our pay and benefit arrangements are competitively positioned and sustainable for the future.

Against the backdrop of economic and geopolitical uncertainty, our pay negotiations for several of our bargaining groups were protracted and at times difficult. UK pay agreements were reached with our various bargaining groups, to provide increases of 6.5% in 2022, plus a one-off payment of £1,500, to help towards the cost of living, for most of our employees.

We entered a new multi-year deal in Canada with our largest employee groups that will provide certainty of salaries until 2028. Our largest collectively bargained groups in the US are still within a multi-year deal that will run until 2025.

Our German colleagues are covered by the Metal Tariff arrangements which were reviewed during the year and will provide increases of 5.2% in 2023, followed by 3.3% in 2024, together with one-off payments totalling €3,000 following a three-year freeze on tariff rates. We also make our incentive schemes and share programmes widely available to all colleagues to enhance connection and share in business successes.

During 2022, we experienced industrial action within our Civil Aerospace business in Canada. The matter was resolved with agreements supported by the local workforce. Overall, our approach and ways of working with our employee and trade union representatives has remained collaborative and we will continue to work closely with all colleagues and employee representatives to deliver the productivity and efficiency improvements which are vital for the future competitiveness of our workforce.

Our diversity metrics at 31 December 2022 [1]

Female diversity percentage tracking and 2025 targets

	2021	2022	2025 Target
The Board	38%	33%	40%
Executive Team	9%	18%	33%
ELG	21%	22%	35%
Senior leaders [2]	20%	22%	30%
All employees	17%	18%	25%

Ethnic diversity percentage tracking and 2025 targets for UK and US [3]

	2021	2022	2025 Target
UK ethnicity	10%	11%	14%
US ethnicity	15%	16%	20%

Gender diversity

	Female	Male	Total	Female %
The Board	4	8	12	33%
Executive Team (ET)	2	9	11	18%
ET, Chief Governance Officer and direct reports	19	67	86	22%
Senior leaders [2]	20	70	90	22%
All employees	7,575	34,300	41,875	18%

[1] The data for diversity information is showing permanent employee year-end actuals
[2] Senior leaders are defined in the Companies Act 2006 (those who have responsibility for planning and directing or controlling the activities of the entity or a strategically significant part of it). We define this as the Executive Team and ELG
[3] For ethnicity information we are only able to monitor and track this in the UK and US and therefore this only includes businesses in these locations. The population is only those who have chosen to disclose this information

ETHICS AND COMPLIANCE

We strive to uphold high standards of ethics and compliance in everything we do and are guided by our values to ensure we are always at our best.

OUR PROGRESS IN 2022

- Updated Global Supplier Code of Conduct
- Completed human rights saliency assessment
- Enhanced sustainability assessments in our supply chain
- Improved accessibility to Group policies by embedding them into the digital offering of Our Code

We are committed to maintaining high ethical standards underpinned by our values and behaviours to create a working environment where everyone at Rolls-Royce and those we work with can be at their best. Our code of conduct (Our Code) and associated Group policies form a key part of the Rolls-Royce framework. Together they guide our business decision making to ensure we can be proud of the way we behave and the way we do business.

Our Global Supplier Code of Conduct sets out our minimum ethical expectations on our suppliers. In 2022, this was updated to enhance alignment to the principles in Our Code. All suppliers are contractually required to adhere to this or a mutually agreed alternative.

We actively encourage people to speak up in the event of a question or concern and provide a number of channels to our employees and our stakeholders to enable them to do so, including the Rolls-Royce speak up line. We issue a report to everyone at regular intervals to highlight key statistics and remind them of the importance to speak up. In 2022, the mandatory diversity and inclusion training included a specific section on the importance of speaking up and a reminder of the different speak up channels available to employees.

We have a zero tolerance approach to misconduct of any kind and will take disciplinary action, where appropriate, up to and including dismissal in the event of a breach of Our Code. In 2022, 76 employees (2021: 45) left the business for reasons related to breaches of Our Code. The increase in cases is principally due to improved consistency and accuracy on classification of dismissals.

Anti-bribery and corruption

Our Code and associated anti-bribery and corruption policy clearly set out our commitment to zero tolerance of bribery and corruption in any form. In 2022, we embedded our Group policies into our digital Code to improve accessibility for our employees. We have continued to make improvements on our bribery and corruption risk assessment and controls, following recommendations made by an independent review of our ethics and compliance programme undertaken in 2021. We also continued to improve our compliance programme in Brazil which involved co-operating with the Controller General, Brazil under the terms of a two-year leniency agreement signed in October 2021 relating to historical bribery issues.

Human rights and anti-slavery

As set out in our human rights policy, we are committed to protecting and preserving the internationally recognised human rights of those that may be impacted by our business activities along our value chain.

We operate in accordance with human rights requirements through strict compliance with strategic export laws and sanctions regulations in the countries where we operate. Our due diligence activities are embedded within our ethics, people, export control and procurement programmes. Human rights risks in our value chain are identified and assessed through a range of channels including our speak up line, country and sector risk analysis, screening platforms and self-assessment questionnaires. Potential or actual human rights impacts are addressed using tailored corrective action plans and a series of preventative measures. These activities are overseen by the human rights steering group and the Safety, Ethics & Sustainability Committee (see page 96).

In 2022, we established a human rights development programme to strengthen our due diligence activities in the value chain. This included updating our human rights policy and working with an external specialist to complete a human rights saliency assessment drawing from international standards, stakeholder consultations, and country and sector risk indices. Using an external platform, we evaluated our human rights and sustainability performance and continue to improve our programme based on those recommendations. Specific human rights leaders were appointed at Group and business level to drive implementation of the programme. Furthermore, we continue to enhance our sustainability assessments with our supply chain partners and have set appropriate KPIs to monitor effectiveness.

Find more information on our anti-slavery and human trafficking statement; Group policies and materials stewardship page at www.rolls-royce.com

For more information on our ethics approach see the Safety, Ethics & Sustainability Committee report on page 96 or view 'Sustaining our culture of Integrity' document available at www.rolls-royce.com

PRINCIPAL RISKS

Our risk and internal control system

The Board has established procedures to manage risk and oversee the risk management system (RMS). The Board has also established procedures to determine the nature and extent of the principal and emerging risks the Group is willing to take in order to optimise its commercial opportunities and achieve its long-term strategic objectives.

The Audit Committee reviews the Group's internal financial controls which form a subset of the broader set of controls. Financial reporting controls are identified and subject to periodic review by the Group's internal control team. The Audit Committee, on behalf of the Board, performs an annual review of our RMS and its effectiveness (see page 75). During the year, the Board completed a robust assessment of both our principal and emerging risks. Details of how our principal risks have changed over the year are described below.

Our RMS is designed to identify and manage, rather than eliminate, the risk of failure to achieve business objectives and to provide reasonable, but not absolute, assurance against material misstatement or loss.

How we manage risk

Risks are identified by individuals across all businesses and functions and at many layers of the organisation by considering what could stop us achieving our strategic, operational or compliance objectives or impact the sustainability of our business model.

Risk owners assess the risks, likelihood and impact, taking into account current mitigating control activities, identifying where additional activities may be needed to bring the risk within our risk appetite.

Risk owners consider the effectiveness of current mitigating control activities in their assessment, supported by different assurance providers including internal audit. These considerations are recorded using a variety of systems and tools depending on the risk area. In managing the identified risks, judgement is necessary to evaluate the risks facing the Group in achieving its objectives, determine the risks that are considered acceptable, determine the likelihood of those risks materialising, assess the Group's ability to reduce the impact of risks that do materialise and ensure the costs of operating particular controls are proportionate to the benefit provided.

Risk owners bring the results of their assessment, current risk status and action plans to business, function and other management review forums as often as is required depending on the nature of the risk, for support, challenge and oversight. These forums include the monthly Executive Team and regular Board and Board committee meetings.

At least once a year the Audit Committee, on behalf of the Board conducts a review of the effectiveness of the RMS and where required identifies areas for improvement (more details of this review can be found on page 75). For key compliance and safety risks, the Group has a set of mandatory policies and training which set out the expectations on employees and the controls in place. Every employee is required, annually, to complete training and confirm that they will comply with the mandatory policies. The consequences of non-compliance are addressed via performance management systems that are linked to remuneration.

During 2022, we have continued to focus on improving our internal control environment for financial and non-financial controls and worked to embed these controls into our business processes. We expect this work to continue in 2023. It will be complimented by work to prepare for the changes set out in the BEIS proposals on 'restoring trust in audit and corporate governance'.

Principal risks

Our principal risks are identified and managed in the same way as other risks. Principal risks are owned by at least one member of the Executive Team and subject to a review at an Executive Team meeting at least once each year, before a review by the Board or a Board committee.

We have reviewed our principal risks over the course of the year and have updated them to reflect changes to the external environment and our existing plans. We will continue to monitor our principal risks in light of the strategic review.

Changes in our principal risk levels

We continue to review our principal risks and how we manage them to reflect their evolving nature. We have reviewed our risks in light of changes to the internal and external environment, in particular economic uncertainty, inflation, supply chain disruption and a tightening labour market; the current political situation including the Russia-Ukraine conflict and the subsequent cost and availability of electricity and natural gas and continuing disruptions to global supply chains. Despite the rigorous supply chain management, leaner manufacturing, strategic partnerships, application of contractual pricing protection, utilisation of our hedge book and continued focus on pricing, productivity and costs we believe the risk levels for financial shock, market shock, business continuity and political risk have increased since last year.

Increased risks:

Financial shock

The rapidly changing external environment, in particular rising interest rates, inflation, energy costs and the changing value of sterling have heightened the risk of financial shocks to the Group. As planned, the proceeds of the ITP disposal being used towards repaying the £2bn UKEF loan facility has in part helped to mitigate this risk, as all remaining debt is currently at fixed interest rates.

We use derivative financial instruments to hedge net foreign currency cash flows, which are mainly denominated in US dollar. In 2022, the Board agreed to update our hedging policy, reducing the hedging time horizon from ten to five years which will allow us to react quicker to changes in the external environment.

Market shock

The likelihood of one or more macroeconomic risk occurring has increased over the past 12 months, with economic growth reducing and energy costs, government borrowing and long-term interest rates increasing. The combined effect could be to reduce economic growth and disposable income which in turn could reduce capital investment and the propensity to travel. In addition, high level of debt by national governments, in particular the UK and US, could, in the long run, temper their spending on defence and funding research and technology.

Business continuity
A combination of supply chain constraints, high inflation, slowing economic growth and the potential for energy shortages in Europe means the likelihood of supply shortages, or supplier failure, has increased over the year. We have responded by using rigorous supply chain management, leaner manufacturing, strategic partnerships, application of contractual pricing protection, increasing working capital and reviewing supplier health and where necessary offering support to key partners. For further information on supplier engagement, see our case study on page 50.

Political risk
The Russia-Ukraine conflict has resulted in heightened political risk to the Group. As outlined on page 13, we took the decision to stop doing business in Russia and to reduce the supply of titanium from Russia.

New and retired risks:
In light of our transformation programme outlined on page 8, we have replaced our previous strategic transformation risk with a revised risk relating to the execution of this programme.

Other specific risks
Human capital: our approach to human capital is demonstrated in our 'Being' campaign set out on page 52.

Human trafficking and slavery: our approach is set out under the human rights and anti-slavery section on page 41.

Our current principal risks together with how we manage them, how we assure them (by activities and functions other than internal audit), the oversight provided by the Board and/or Board committees and how the risk levels have changed over the course of the year are set out in the table below.

Emerging risks
We continue to review additional emerging risks that could significantly impact or challenge our current strategy and business model. Any emerging risks identified have been recorded in our RMS and are being managed and monitored alongside our existing risks.

Change in risk level: ↑ Increased <> Static ↓ Decreased + New

HOW WE MANAGE PRINCIPAL RISKS

RISK	CONTROLS	ASSURANCE ACTIVITIES AND PROVIDERS	OVERSIGHT FORUM	BUSINESS MODEL	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 controls 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 lifecycle audits	— Safety, Ethics & Sustainability Committee — Product safety board	2, 3, 4, 5, 6, 7	<>
	People: — Our HSE management system includes activities and controls 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	2, 3, 4	<>

Change in risk level: ↑ Increased <> Static ↓ Decreased + New

RISK	CONTROLS	ASSURANCE ACTIVITIES AND PROVIDERS	OVERSIGHT FORUM	BUSINESS MODEL	CHANGE
Business continuity The major disruption of the Group's operations, which results in our failure to meet agreed customer commitments and damages our prospects of winning future orders. Disruption could be caused by a range of events, for example: extreme weather or natural hazards (for example earthquakes, floods) which could increase in severity or frequency given the impact of climate change; political events; financial insolvency of a critical supplier; scarcity of materials; loss of data; fire; or infectious disease. The consequences of these events could have an adverse impact on our people, our internal facilities or our external supply chain.	– We invest in capacity, equipment and facilities, dual sources of supply and in researching alternative materials – We provide supplier finance in partnership with banks to enable our suppliers to access funds at low interest rates – We hold safety stock – We plan and practice IT disaster recovery, business continuity and crisis management exercises – We undertake supplier diligence – We take out relevant and appropriate insurance	– Investment reviews – Supplier strategy and sourcing reviews – Group security and resilience team	– Audit Committee	4, 5, 6, 7	↑
Climate change We have committed to net zero carbon by 2050. The principal risk to meeting these commitments is the need to transition our products and services to a lower carbon economy. Failure to transition from carbon intensive products and services at pace could impact our ability to win future business; achieve operating results; attract and retain talent; secure access to funding; realise future growth opportunities; or force government intervention to limit emissions. In addition, physical risks from extreme weather events (and/or natural hazards) could potentially materialise, which may result in disruption for Rolls-Royce.	– We invest in: i) reducing carbon impact of existing products; and ii) zero carbon technologies to replace our existing products – Performance of climate scenario modelling and physical risk impact assessments – We balance our portfolio of products, customers and revenue streams to reduce our dependence on any one product, customer or carbon emitting fuel source – Communication of the actions we are taking to manage this risk, in order to demonstrate our alignment to societal expectations and global climate goals – In June 2022, we developed and submitted new science-based decarbonisation targets to the Science-Based Targets initiative for validation	– Strategy reviews – Technology reviews – Investment reviews – Group sustainability team	– Board and its committees – Executive Team and its committees – Climate steering committee	1, 2, 3, 4, 5, 6, 7	<>

Change in risk level: ↑ Increased ‹› Static ↓ Decreased + New

RISK	CONTROLS	ASSURANCE ACTIVITIES AND PROVIDERS	OVERSIGHT FORUM	BUSINESS MODEL	CHANGE
Competitive environment **Existing competitors**: the presence of competitors in the majority of our markets means that the Group is susceptible to significant price pressure for original equipment or services and we may have to absorb cost increases caused by high inflation. Our main competitors have access to significant government funding programmes as well as the ability to invest heavily in technology and industrial capability. **Existing products**: failure to achieve cost reduction, contracted technical specification, product (or component) life or falling significantly short of customer expectations, would have potentially significant adverse financial and reputational consequences, including the risk of impairment of the carrying value of the Group's intangible assets and the impact of potential litigation. **New programmes**: failure to deliver an NPI project on time, within budget, to technical specification or falling significantly short of customer expectations would have potentially significant adverse financial and reputational consequences. **Disruptive technologies** (or new entrants with alternative business models): could reduce our ability to sustainably win future business, achieve operating results and realise future growth opportunities.	— We review product lifecycles — We make investment choices to improve the quality, delivery and durability of our existing products and services and to develop new technologies and service offering to differentiate us competitively — We protect our intellectual property (e.g. through patents) — We monitor our performance against plans — We scan the horizon for emerging technology and other competitive threats, including through patent searches — Inclusion of inflation clauses in our contracts to manage cost increases — Investment in R&D opportunities, to support the development of new products or services to protect and sustain our future market	— Strategy reviews — Technology reviews — Investment reviews	— Board — Science & Technology Committee — Investment review committee	1, 2, 3, 4, 5, 6, 7	‹›
Compliance Non-compliance by the Group with legislation or other regulatory requirements in the heavily regulated environment in which we operate (for example, export controls; data privacy; use of controlled chemicals and substances; anti-bribery and corruption; human rights; and tax and customs legislation). This could affect our ability to conduct business in certain jurisdictions and would potentially expose the Group to: reputational damage; financial penalties; debarment from government contracts for a period of time; and suspension of export privileges (including export credit financing), each of which could have a material adverse effect.	— We continuously develop and communicate a comprehensive suite of mandatory policies and processes and controls throughout the Group — We undertake third-party due diligence — We encourage, facilitate and investigate speak up cases — We investigate potential regulatory matters — Our financial control framework activities are designed to reduce financial reporting and fraud risks — We classify data to meet internal and external requirements and standards	— Compliance teams — Financial controls team	— Safety, Ethics & Sustainability Committee	2, 3, 4, 5, 6, 7	‹›

Change in risk level: ↑ Increased <> Static ↓ Decreased + New

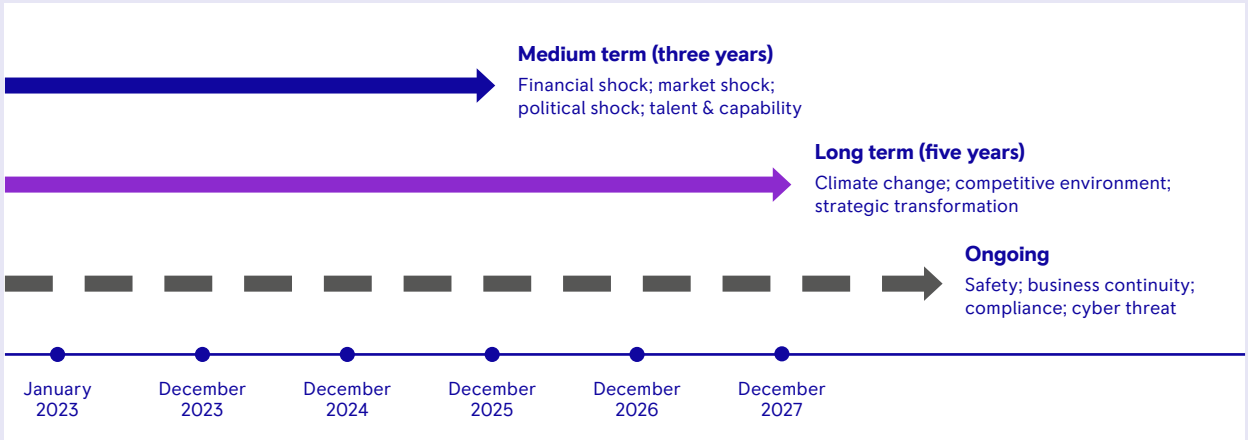
RISK	CONTROLS	ASSURANCE ACTIVITIES AND PROVIDERS	OVERSIGHT FORUM	BUSINESS MODEL	CHANGE
Cyber threat An attempt to cause harm to the Group, its customers, suppliers and partners through the unauthorised access, manipulation, corruption, or destruction of data, systems or products through cyberspace.	— We deploy web gateways, filtering, firewalls, intrusion, advanced persistent threat detectors and integrated reporting — We test software — We use our crisis management framework — Application of our crisis management framework to govern our response to potential cyber security incidents and significant IT disruption	— Group cyber security team and security operations centre	— Audit Committee — Data security sub-committee	2, 3, 4, 6, 7	<>
Financial shock The Group is exposed to a number of financial risks, some of which are of a macroeconomic nature (for example foreign currency, interest rates, high inflation and commodity prices) and some of which are more specific to the Group (for example liquidity and credit risks). Significant extraneous market events could also materially damage the Group's competitiveness and/or creditworthiness and our ability to access funding. This would affect operational results or the outcomes of financial transactions.	— Our financial control framework activities are designed to reduce financial reporting risks — Group strategic planning process — We incorporate trends, demand and other dependencies in our financial forecasts — We analyse currency and credit exposures and include in sourcing and funding decisions — We develop, review and communicate treasury policies that are designed to hedge residual risks using financial derivatives (covering foreign exchange, interest rates and commodity price risk) — We raise finance through debt and equity programmes. All drawn debt is currently set at fixed interest rates	— Strategy reviews — Finance risk committee — Financial controls team	— Audit Committee	1, 7	↑
Market shock The Group is exposed to a number of market risks, some of which are of a macroeconomic nature (e.g. economic growth rates) and some of which are more specific to the Group (for example, reduction in air travel or defence spending, or disruption to other customer operations). A large proportion of our business is reliant on the civil aviation industry, which is cyclical in nature. Demand for our products and services could be adversely affected by factors such as current and predicted air traffic, fuel prices and age/replacement rates of customer fleets.	— We monitor trends, market demand and future market forecasts and make investment choices to maximise the related opportunities — We incorporate trends, demand and other dependencies in our financial forecasts — We balance our portfolio with the sale of original equipment and aftermarket services, providing a broad product range and addressing diverse markets that have differing business cycles — We execute our short, medium and longer-term plans	— Strategy reviews — Technology reviews	— Board	1, 5, 6, 7	↑

Change in risk level: ↑ Increased ‹› Static ↓ Decreased + New

RISK	CONTROLS	ASSURANCE ACTIVITIES AND PROVIDERS	OVERSIGHT FORUM	BUSINESS MODEL	CHANGE
Political risk Geopolitical factors that lead to an unfavourable business climate and significant tensions between major trading parties or blocs which could impact the Group's operations. Examples include: changes in key political relationships; explicit trade protectionism, differing tax or regulatory regimes, potential for conflict or broader political issues; and heightened political tensions.	– We develop Group and country strategies and consider associated dependencies – We horizon scan for political implications and dependencies – We include diversification considerations in our investment and procurement choices	– Strategy reviews – Technology reviews – Supplier sourcing teams – Government relations teams	– Board	1, 2, 5, 6, 7	↑
Transformation Our transformation programme incorporating a strategic review, is outlined on page 8. Failure to execute the plan underpinning this programme will prevent us from achieving our longer-term ambitions.	– Completing internal and external assessments and benchmarking as part of the strategic review – Financial modelling, scenario planning and sensitivity analysis – Allocating cash and capital in accordance with our revised frameworks	– Strategy and business performance reviews	– Board	1, 2, 3, 4, 5, 6, 7	+
Talent and capability Inability to identify, attract, retain and apply the critical capabilities and skills needed in appropriate numbers to effectively organise, deploy and incentivise our people would threaten the delivery of our strategies.	– We undertake succession planning and monitor the talent pipeline – We survey employee opinion – We develop, implement and review strategic resourcing plans	– People leadership team	– Nominations & Governance Committee	1, 2, 3, 4, 5, 6, 7	‹›

With consideration to the nature and potential impact of our principal risks, our associated level of exposure has been assessed, and accordingly our timeline of exposure determined. As per the summary below, each of our principal risks will continue to be monitored and managed in line with this determined timeline.

RISK EXPOSURE OVER A FIVE YEAR PLANNING PERIOD



GOING CONCERN STATEMENT

Overview

In adopting the going concern basis for preparing the consolidated and Company financial statements, the Directors have undertaken a review of the Group's cash flow forecasts and available liquidity, along with consideration of the principal risks and uncertainties over an 18-month period from the date of this report to August 2024. The Directors consider this 18-month period to be appropriate as it includes the maturity of £1bn of the Group's £5.5bn undrawn borrowing facilities in January 2024 and the repayment at maturity of a €550m (£484m) bond in May 2024.

The plans approved by the Board are used as the basis for monitoring the Group's performance, incentivising employees and providing external guidance to shareholders.

The processes for identifying and managing risk are described on pages 42 to 47. As described on those pages, the risk management process and the going concern and viability statements are designed to provide reasonable but not absolute assurance.

Forecasts

Recognising the challenges of reliably estimating and forecasting the impact of external factors on the Group, the Directors have considered two forecasts in the assessment of going concern, along with a likelihood assessment of these forecasts. The base case forecast reflects the Directors current expectations of future trading. A stressed downside forecast has also been modelled, which envisages a 'stressed' or 'downside' situation that is considered severe but plausible.

The Group's base case forecast reflects a steady and ongoing recovery of trading towards pre-pandemic levels, especially in the civil aviation industry. Macro-economic assumptions have been modelled using externally available data based on the most likely forecasts, with inflation at 3%-4%, interest rates at 4%-6% and GDP growth at around 2%. In the base case forecast, Civil Aerospace large engine EFHs are expected to recover to pre-pandemic levels by the end of 2024.

The stressed downside forecast assumes no further recovery in Civil Aerospace large engines, with EFHs modelled at the average fourth quarter 2022 levels throughout the 18-month period to August 2024, reflecting slower GDP growth in this forecast when compared with the base case. It also assumes a more pessimistic view of inflation at around 6% higher than the base case covering a broad range of costs including energy, commodities and jet fuel. Interest rates in the stressed downside are 1%-2% higher than the base case. The stressed downside also considers lower demand and load reduction through our factories, and possible ongoing supply chain challenges.

The future impact of climate change on the Group has been considered through climate scenarios. Key variables include carbon prices based on the IEA Net Zero scenario, which assumes an increase from $46 per tonne of carbon in 2022 to $250 per tonne in 2050, commodity price trends temperature rises and GDP information derived from the Oxford Economics Global Climate Service Net Zero scenario aligned to IPCC SSPI-19. The climate scenarios modelled do not have a material impact on either the base case or downside forecast over the 18-month period to August 2024.

Liquidity and borrowings

The proceeds from the disposal of ITP Aero, which completed on 15 September 2022, were used towards the repayment of a drawn £2bn UKEF loan which was due to mature in August 2025. A new £1bn UKEF facility was entered into in September 2022, which remains undrawn.

At 31 December 2022, the Group had liquidity of £8.1bn including cash and cash equivalents of £2.6bn and undrawn facilities of £5.5bn.

The Group's committed borrowing facilities at 31 December 2022 and 31 August 2024 are set out below. None of the facilities are subject to any financial covenants or rating triggers which could accelerate repayment.

(£m)	31 December 2022	31 August 2024
Issued Bond Notes [1]	3,995	3,511
UKEF £1bn loan (undrawn) [2]	1,000	1,000
UKEF £1bn loan (undrawn) [3]	1,000	1,000
Revolving Credit Facility (undrawn) [4]	2,500	2,500
Bank Loan Facility (undrawn) [5]	1,000	–
Total committed borrowing facilities	**9,495**	**8,011**

[1] The value of Issued bond notes reflects the impact of derivatives on repayments of the principal amount of debt. The bonds mature by May 2028
[2] The £1,000m UKEF loan matures in March 2026 (currently undrawn)
[3] The £1,000m UKEF loan matures in September 2027 (currently undrawn)
[4] The £2,500m revolving credit facility matures in April 2025 (currently undrawn)
[5] The £1,000m bank loan facility matures in January 2024 (currently undrawn)

Taking into account the maturity of these borrowing facilities, the Group has committed facilities of at least £8.0bn available throughout the period to 31 August 2024.

Conclusion

After reviewing the current liquidity position and the cash flow forecasts modelled under both the base case and stressed downside, the Directors consider that the Group has sufficient liquidity to continue in operational existence for a period of at least 18 months from the date of this report and are therefore satisfied that it is appropriate to adopt the going concern basis of accounting in preparing the consolidated and Company financial statements.

VIABILITY STATEMENT

The viability assessment considers liquidity over a longer period than the going concern assessment. Our downside forecast uses the same assumptions as the going concern assessment for the first 18 months and in 2025 to 2027 assumes a slower recovery than assumed in our base case.

Consistent with previous years, we have assessed our viability over a five-year period which is in line with our five-year planning process. We continue to believe that this is the most appropriate time period to consider as, inevitably, the degree of certainty reduces over any longer period.

We have created severe but plausible scenarios that estimate the potential impact of our principal risks arising over the assessment period (descriptions of our principal risks and the controls in place to mitigate them can be found on pages 43 to 47). The risks chosen and scenarios used are as shown in the table below.

The cash flow impacts of these scenarios were overlaid on the five-year forecast to assess how the Group's liquidity would be affected.

The scenarios assume an appropriate management response to the specific event which could be undertaken and also consider specific activities to improve liquidity such as raising additional funds, reducing expenditure and divesting parts of our business.

Reverse stress testing has also been performed to assess the severity of scenarios that would have to occur to exceed liquidity headroom. The assumptions used in these stress tests were not considered plausible, as shown in the table below.

On the basis described above, the Board confirms that 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 next five years. In making this statement, the Directors have made the following key assumptions:

— the Group is able to refinance maturing debt facilities and drawdown existing available facilities as required. Debt maturities over the assessment period are as follows:

- £1,000m bank loan facility maturing in 2024 *
- €550m bond maturing in 2024
- £2,500m revolving credit facility maturing in 2025 *
- $1,000m bond maturing in 2025
- £1,000m UKEF loan maturing in 2026 *
- £1,000m UKEF loan maturing in 2027 *
- €750m bond maturing in 2026
- £375m bond maturing in 2027
- $1bn bond maturing in 2027
- £545m bond maturing in 2027;

* Currently undrawn facilities

— the Group has access to global debt markets and expects to be able to refinance these debt facilities on commercially acceptable terms;

— that implausible scenarios do not occur. Implausible scenarios include either multiple risks impacting at the same time or where management actions do not mitigate an individual risk to the degree assumed; and

— that in the event of one or more risks occurring (which has a particularly severe effect on the Group) all potential actions (such as but not limited to restricting capital and other expenditure to only committed and essential levels, reducing or eliminating discretionary spend, reinstating pay deferrals, raising additional funds through debt or equity raises, executing disposals and undertaking further restructuring) would be taken on a timely basis.

The Group believes it has the early warning mechanisms to identify the need for such actions and, as demonstrated by our decisive actions over the course of the pandemic, has the ability to implement them on a timely basis if necessary.

PRINCIPAL RISK	SCENARIO ASSUMPTIONS AND IMPACTS
Safety	Civil Aerospace product safety event resulting in aircraft being grounded, lower engine flying hour revenues, commercial penalties and additional costs (e.g. unplanned shop visits). The grounding time and number of shop visits required to exceed headroom are considered remote.
Business continuity	The loss of a key element of our supply chain resulting in an inability to fulfil Civil Aerospace large engine orders for 12 months. Reverse stress testing would require the time over which orders could not be fulfilled to be extended beyond what we consider plausible.
Climate change	This scenario is described in more detail against strategy part c of our TCFD disclosures as set out on page 34.
Competitive environment	A programme issue on a major programme of the same (proportionate) scale as Trent 1000. The extent to which engine life would need to be impacted to breach headroom is considered remote.
Compliance	A compliance breach resulting in fines (greater than those agreed as part of our DPAs) and loss of new business with governments and state-owned companies. The probability of the size of the fine required to exceed headroom is considered remote.
Cyber threat	A cyber attack resulting in loss and corruption of data and leading to the loss of EFHs. The time period over which EFHs would need to be affected to breach headroom is not considered plausible.
Financial shock	Inability to refinance debt when it matures (in combination with other risks).
Market shock	Captured in our downside forecast (described above).
Political risk	Sanctions imposed between major trading blocs resulting in supply chain disruption and a loss of sales in impacted markets. Reverse stress testing would require sanctions to persist over a period of time which is not considered plausible.

SECTION 172 AND STAKEHOLDER ENGAGEMENT

All of our Directors are briefed on their Companies Act 2006 duties during their induction. Our section 172 (s172) statement below sets out how the Directors have discharged their s172 duty. The Board recognises the responsibility to all our different but interrelated stakeholder groups and wider society. We recognise that effective engagement with a broad range of our stakeholders is essential for the long-term success of the business and we aim to create value for our stakeholders every day by maintaining levels of business conduct that are aligned to our values and our purpose. This section should be read in conjunction with the Board's focus which contains information on the principal decisions made by the Board over the year, see pages 67 and 68.

The likely consequences of any decision in the long term

During the year, the Directors considered the Group's strategic direction. This, in turn, creates long-term value for shareholders, recognising that the longer- term success of our business depends on the effects of our business activities on wider society. In a year marked by external shocks, both geopolitical and macro-economic, the Board discussions focused on the labour environment, implications of supply chain disruption and the impact of the swift withdrawal from Russia, including the longer-term reliance on Russia for key materials such as titanium.

The interests of the Company's employees

The Directors recognise that the success of our business depends on attracting, retaining and motivating talented people. The Directors consider and assess the implications of decisions on our people, where relevant and feasible. The swift withdrawal from Russia resulted in employees being relocated and the Board spoke with impacted colleagues during a site visit to Friedrichshafen, Germany. The Directors seek to ensure that the Company remains a responsible employer, including with respect to pay and benefits, health and safety issues, the workplace environment and engagement with the unions. A case study on our 'Being' campaign can be found on page 52.

The need to foster the Company's business relationships with suppliers, customers and others

Delivering our strategy requires a strong, mutual and beneficial relationship with suppliers, customers, governments and joint venture partners. The Directors receive updates on engagement across the Group at Board meetings. A case study on the impact of the Russia-Ukraine conflict on procurement can be found on page 53.

The impact of the Company's operations on the community and the environment

The Board receives information through reports from the Chief Executive and Group-level reviews on various topics to help the Directors make decisions relating to net zero ambitions and proposals to divest or invest. In addition, initiatives taken during the year, including one-off payments to employees in light of the economic climate, are set out on page 40. A case study on the Unnati STEM programmes in India can be found on page 55.

The desirability of the Company maintaining a reputation for high standards of business conduct

The Board reviews and approves our ethics and compliance frameworks. We updated our human rights policy during 2022. This, in conjunction with the Board monitoring compliance with governance standards, helps to ensure that Board-level decisions and the actions of our subsidiaries promote high standards of business conduct. Our Code of Conduct, supplier code and modern slavery statements ensure high standards are approved and can be found on www.rolls-royce.com.

The need to act fairly between members of the Company

After weighing up all relevant factors, the Directors consider which course of action best enables delivery of our strategy through the long term, taking into consideration the effect on the Group's stakeholders.

EXAMPLES OF ENGAGEMENT WITH OUR KEY STAKEHOLDER GROUPS

PEOPLE

The Board recognises that it is through our people that we fulfil our potential, achieve our vision and execute our strategy.

Board engagement
During 2022, our Employee Champions, Beverly Goulet, Wendy Mars and Lee Hsien Yang, ensured the voice of our people was heard in the boardroom see page 64. The Employee Champions provide regular feedback to the Board on topics of interest and/or concern. This provides a valuable link between our people and the Directors. We believe that these methods of engagement with our people are effective in building and maintaining trust and communication, whilst providing our people with a forum to influence change in relation to matters that affect them.

The Meet the Board event during 2022, enabled around 100 colleagues to ask the Board questions relating to their personal experiences, work life balance and other cultural topics, including imposter syndrome. Feedback from both colleagues and the Board was overwhelmingly positive.

The Employee Champions continue to meet regularly with the employee stakeholder engagement committee, which provides support for their focus on employee engagement. The Employee Champions also met with many of the employee resource groups (ERG) during the year. At the Asia-Pacific ERG there was active discussion on LGBTQ+, as well as debates on whether some cultures were not as open to everyone's differences. Culture was also a key theme at the North American ERG, with discussion on the importance of authentic and inclusive leaders. Feedback from the ERG sessions contributed to positive action being taken, including a dotted-line reporting route for ERGs into the global head of inclusion demonstrating leadership support. In addition, during 2022 there were several in-person and virtual site events, including a site visit to Friedrichshafen, Germany, in September. In addition, Wendy visited Indianapolis, US, to discuss diversity & inclusion with a focus on hybrid working with positive feedback shared on the Group's approach to flexible working. Wendy also visited Washington, UK, where employees discussed innovation and the automation of shop floor processes.

In addition, the Board engaged with CCLA Investment Management on cost of living and mental health. During the year, the Board received updates on ongoing matters with the unions across our operations, together with related strike action in Canada, see page 40. These updates influenced Board discussion and debate. Given the current economic situation with social pressures and cost of living, it was agreed that a one-off payment would be made to employees in some of our larger locations (see page 40).

Many of our people are also our shareholders and we encourage their participation in a variety of share plans.

CUSTOMERS

The Board recognises that the quality of the Group's customer relationships is based on mutual trust as well as our engineering expertise. We recognise that we must retain and strengthen our focus on the transition to a net zero carbon global economy by creating the sustainable power that our customers require. We continue to focus on helping our customers deliver their own sustainability agendas, making products more sustainable, maintaining peace and providing protection for society.

Board engagement
The Board regularly receives operational updates, including customer metrics and feedback, from each of the businesses. During 2022, the Business Presidents presented their updates to the Board. This greatly influences the Board's deliberations and its support for the Executive Team when considering our strategy.

The Chair continued to meet with key customers during the year.

Case study

‘Being’ campaign

Creating a more inclusive workplace where our people understand how we can all be at our best.

What we did and why we did it

— Insights told us that we needed to do more to be clear on what inclusion means at an individual and team level in our business

— We wanted to deliver a global focus across Rolls-Royce on the inclusive behaviours that we need from all colleagues in order to perform as a business, both today and for the future, ensuring that our people, leaders and teams are at their best

— Inclusion drives performance and innovation, both important for our customers; as well as creating a culture and environment that enables us to attract and retain the best diverse talent in a competitive market

— Our ‘Being’ campaign was based on the belief that an inclusive workplace starts with how we all treat each other every day

Q1 2022

Initially we sought stakeholder engagement and buy-in from our leaders and influencers.

Q2 2022 and throughout 2022

Our high-profile campaign launched across all channels and workplaces globally, with a consistent use of our new inclusion narrative used throughout.

Including:

— launching our 2022 Group mandatory learning, including a module on micro-aggressions

— a website page to enable colleagues to access many of our communications from their own devices

— a new ‘being included’ video to engage hearts and minds

— refreshed ‘leading inclusively’ resources in our digital leadership toolkit to enable self-led learning

Board and committee engagement

— In May, at the Nominations & Governance Committee, a D&I update was provided which covered the refreshed ‘leading inclusively’ digital toolkit

— The Chief Executive report at the June Board meeting provided an update following the ELG conference, which focused on building upon our ‘Being’ campaign. The Chief Executive reported to the Board that inclusive leadership was a key theme at the ELG conference

— In November, the Nominations & Governance Committee received an update on our ‘Being’ campaign. The Chief People Officer confirmed that feedback on the campaign had been extremely positive

— In November, the Nominations & Governance Committee received an update on the inclusion strategy

Storytelling from our people

Storytelling from our people was also a core part of the campaign. We launched the campaign alongside a thought-leader session for our senior leaders on the power of inclusion and an expectation to lead inclusively.

Outcome-led approach

Our goal was to reach everyone, everywhere

Our people and leaders:

— understand and demonstrate the inclusive behaviours we expect of everyone

Our external talent audiences:

— understand how vital inclusion is to us, who we are and what we stand for

Highlights

— A global internal and external campaign that focused attention and action across all business units, regions and sites

— Prominent on our global communications channels and in our workplaces from May 2022

— Built to reach the hard to reach (shop floor) enabling leaders, starting conversations, engaging and changing behaviours

— An increase in our inclusion measure using our engagement survey (powered by Gallup)

— Understood and prioritised by our leaders as part of our ELG conference in June

— Supported by a new global inclusion policy and mandatory learning (microaggressions)

— Sustained later in 2022 by our refreshed inclusion strategy

SUPPLIERS AND PARTNERS

The Group's global supply chain is a vital contribution to its performance, with significant investment in resources to ensure the complex global supply chain is resilient and efficient.

Board engagement
The interests of both our suppliers and partners are regularly considered as part of the Board's discussions on manufacturing strategy and when reviewing specific projects.

The Board supports our Executive Team who work collaboratively with our suppliers and partners to continue to improve operational performance through various means. The Board continued to receive updates from the businesses on supplier performance and supply chain disruption. The Board received an update on the first in-person global supplier conference since the pandemic.

Case study

Impact of the Russia-Ukraine conflict on procurement

Most components which go into an engine are bought from our suppliers. Power Systems has established a worldwide supply chain with 130 main suppliers (direct material) with a spend of approximately €1.4bn during 2022 (equalling 80% of the total direct material spend). This spend is managed by an international team of procurement and supply chain experts, located globally.

Strong risk management system

- Due to rising tensions prior to the conflict starting in 2022, Power Systems' risk management indicated a high risk from Ukraine suppliers and built up second sources for Ukraine-based suppliers
- After qualification of the parts, procurement could guarantee the supply of parts through several independent sources, enabling Power Systems to run the assembly without any interruption during the conflict

Supplier events

- Power Systems hosted two supplier expos during 2022, built around critical importance across the supply chain, possible gas and power shortages, the drive for zero defects and CO_2 reduction. Special focus was given to military rising demands and to securing the supply chain
- At the beginning of 2022, Power Systems held an event to recognise their best suppliers

Collaboration

- To protect the supply chain from unforeseen difficulties, Power Systems require the supply chain to reduce gas dependencies and therefore require regular progress reports to get an overview of existing risk
- A total of 146 European suppliers were contacted regarding potential energy and gas shortages. These included the top 60 suppliers as well as the energy-intensive suppliers. To minimise the risk, further evaluations were made regarding dual sourcing
- Regular management meetings were held with key suppliers to secure the supply chain, strategic partnerships and capacity to cover order increase in Power Systems during 2023

Board engagement

- During March, the Board discussed the direct and indirect impact on the supply chain taking into account the situation in Russia and cost inflation pressure on margins
- During May, the Board discussed scenario planning around targeted sanctions and the proposed impact on non-sanctioned Power Systems customers
- In September, the Board received an update on the strong order position with customers making advance deposit payments to secure orders

Improvement project

- The purpose was to stabilise the supply chain processes. It was a cross-Group effort, including logistics, quality and procurement to make the business more resilient and to focus all suppliers on supply chain resilience
- State-of-the-art software solutions were implemented to allow Power Systems to detect supply chain risks at an early stage. Solutions included real time information for buyers and management, together with an established risk monitoring process

COMMUNITIES

The Board recognises the importance of our communities and understands that everything we do can have an impact on our local and global communities.

Board engagement
The Safety, Ethics & Sustainability Committee received updates during 2022 on community investments during the year. A key focus for 2022 was the Habitat for Humanity campaign to support refugees fleeing the Russia-Ukraine conflict. Information on the Group's commitment and the matching of employee donations can be found on page 39.

In addition, Power Systems donated generators to maintain power to vital facilities. Colleagues in Freidrichshafen, Germany, donated €150,000, through their works council, which Power Systems matched, to support refugees arriving in the Lake Constance region.

GOVERNING BODIES AND REGULATORS

The Board recognises the importance of governments and regulators as stakeholders. Not only are governments across the world customers but they also support the Group's investment in infrastructure and technology.

Board engagement
The Board is updated on the Group's engagement with the tax authorities and the related regulatory landscape is discussed by both the Board and the Audit Committee. In addition, meetings with ministers and senior officials are held, when relevant, throughout the year. The General Counsel provides regular updates to the Board on compliance with regulation and the Safety, Ethics & Sustainability Committee reviews how the business engages with airworthiness regulations, as well as receiving updates on the continuing dialogue and co-operation with prosecutors, regulators and government agencies.

Throughout the year, the Chair attended meetings with UK Government ministers and officials, especially in support of her position as a member of the Prime Minister's Business Council which resulted in a range of discussions on sustainable aviation fuel, skills reform and infrastructure. The Chair also attended a follow-up meeting on the Prime Minister's Business Council with the then BEIS Secretary of State and provided the foreword to a UK Government report from the Regulatory Horizons Council on innovation-friendly regulation. The Chair is also a member of the Prime Minister's Business Council.

INVESTORS

The investor relations team is the key interface between the investment community and the Board, providing frequent dialogue and feedback.

Board engagement
The Chair and members of the Board make themselves available to meet with institutional investors and seek to understand and prioritise the issues that matter most.

Company and Executive Team engagement
In addition, the Chief Executive and Chief Financial Officer, supported by members of the Executive Team and investor relations, interact regularly with investors, most notably after our financial results, capital markets events and site visits and at conferences as well as at key points throughout the year.

The Chief Executive and Chief Financial Officer attended a US roadshow, in which they met many of the large shareholders.

The Chair discussed the Chief Executive's succession with investors.

Case study

Unnati STEM programmes in India

The Hindi word 'Unnati' means development and our Unnati community programmes aim to develop science, technology, engineering and maths (STEM) talent in India and increase diversity in these fields. Working with expert partners, we have identified social and economic barriers that prevent girls and women participating in STEM careers. We have developed a programme to address these barriers.

Developing Unnati Wings4Her

- Identified key societal issues with Charities Aid Foundation, India within the context of the STEM KPI which is to inspire 25 million of tomorrow's pioneers by 2030
- Developed and funded pilot Wings4Her programme with four schools in Delhi during 2021 and 2022
- Group charitable contributions and social sponsorships committee monitored progress
- Pilot programme evaluated in partnership with Charities Aid Foundation, India
- Wings4Her impact assessed against charitable contributions and social sponsorships policy and criteria
- Approved proposal to extend Wings4Her programme to Bangalore in 2023
- Included in the annual review of community engagement by the Safety, Ethics & Sustainability Committee

Social and economic factors

- Unnati Wings4Her was designed to bridge the gap in STEM education to empower girls facing social and economic challenges
- Lack of study support to help girls through the tough level of high-school studies discourages many from continuing with STEM subjects
- Financially disadvantaged families discontinue girls' education or lack resources to prepare them for competitive exams for undergraduate STEM courses
- A lack of awareness of the variety of STEM careers drives the perception that these are unsuitable for girls
- Crucial support from families to pursue STEM career ambitions can be lacking

Interventions and success data

Wings4Her provides targeted support to make STEM studies more equitable. The pilot programme in four government schools in Delhi, working with 100 girls, resulted in 30% of the girls going on to study at under-graduate level, as well as scholarship support for 20 students to further their STEM studies. The programme included:

- career guidance to increase aspiration and enable informed choices;
- workshops for parents to create positive support for their daughters' career ambitions; and
- scholarships for under-graduate study to enable continuing education.

Board and committee engagement

- The Board received an update on progress of the STEM programme more generally
- The Safety, Ethics & Sustainability Committee received an update on the STEM programmes in India, including Wings4Her and scholarships
- The Safety, Ethics & Sustainability Committee discussed the Wings4Her programme in light of the theory of societal change and received updates from the team on how these programmes align with national and governmental initiatives in India

Strategic Report
signed on behalf of the Board

Pamela Coles
Chief Governance Officer

23 February 2023

GOVERNANCE REPORT

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COMPLIANCE WITH THE CODE

COMPLIANCE WITH THE UK CORPORATE GOVERNANCE CODE 2018	BOARD LEADERSHIP AND COMPANY PURPOSE	DIVISION OF RESPONSIBILITIES
The Company is subject to the principles and provisions of the UK Corporate Governance Code 2018 (the Code), a copy of which is available at www.frc.org.uk. For the year ended 31 December 2022, the Board considers that it has applied the principles and complied in full with the provisions of the Code.	Our Governance Report provides examples of our leadership and our Strategic Report sets out how we have engaged with our key stakeholders during the year, including case studies (see pages 50 to 55).	We clearly define the roles of the Chair and the Chief Executive and fully support the separation of the two roles. The Board believes it operates effectively with the appropriate balance of independent Non-Executive Directors and Executive Directors (see pages 62 to 63). The Board regularly considers the time commitments of our Directors. Prior Board approval is required for Directors' external appointments to ensure there is no compromise on their time (see page 70). The quality of information and resources available to the Board has enabled us to operate effectively and efficiently throughout the year.
COMPOSITION, SUCCESSION AND EVALUATION	**AUDIT, RISK AND INTERNAL CONTROL**	**REMUNERATION**
The appointment process for our new Chief Executive was led by the Nominations & Governance Committee. Further information on the appointment timeline and process can be found on page 72. Our Board comprises a combination of broad skills, experience and knowledge (see pages 62 to 63 and 65). We have a clear process when considering appointments to the Board and operate effective succession planning (see pages 70 to 71). In 2022, we carried out an internal evaluation of the Board, supported by Lintstock (see page 69).	We recognise the importance and benefits of ensuring the internal audit function and the external auditors remain independent (see pages 75 and 76). The Board presents a fair, balanced and understandable (FBU) assessment of the Company's position and its prospects (see page 73). Our risk and control environment is reviewed by the Audit Committee. The Board considered both emerging and principal risks during the year and held deep dive sessions where relevant (see pages 74 and 75).	The Remuneration Committee, comprising only Non-Executive Directors, is responsible for developing the policy and determining executive and senior management remuneration. During 2022, the Committee also considered the Chief Executive remuneration package for Tufan Erginbilgic and leaver treatment for Warren East. (see page 77). No Director is involved when deciding their own remuneration outcome.

CHAIR'S INTRODUCTION

As you will see from my statement on page 4, my first full year has largely been focused on the transition of our Chief Executive. We have progressed towards our target to reach gender parity on the Board with recently announced changes.

Leadership and succession planning

There were a number of changes on the Board this year. Warren East stepped down as Chief Executive on 31 December having served eight years on the Board and almost all as Chief Executive. Tufan Erginbilgic was appointed as Chief Executive on 1 January 2023 following an extensive global search conducted by external advisors. Tufan is a proven leader of winning teams within complex multinational organisations, with an ability to drive a high-performance culture and deliver results for investors. Further information on Tufan's extensive experience can be found in Tufan's biography on page 62. Information on his appointment process is set out in detail in the Nominations & Governance Report on page 72.

Irene Dorner stepped down from the Board in May and Lee Hsien Yang stepped down from the Board in December having reached his nine-year term. Mike Manley will not be standing for re-election at the 2023 Annual General Meeting and will step down from the Board on 11 May 2023.

Lord Jitesh Gadhia joined the Board and became Chair of the Remuneration Committee from the conclusion of the 2022 Annual General Meeting on 12 May 2022. Birgit Behrendt will join the Board following the 2023 Annual General Meeting (see page 5).

As a result of these changes, the gender diversity of our Board will be more than 40% women which meets the target confirmed in our Board diversity policy. This is clear recognition of the importance we place as a Board on diversity.

There is a full discussion of these leadership changes and our Board diversity in the Nominations & Governance Report on page 70.

Effectiveness

The Board and Committee evaluation for 2022 showed that good progress had been made following the implementation of the outcomes from the 2021 evaluation. Further details on the effectiveness review are on page 69.

Culture

Throughout my first full year as Chair I have endeavoured to promote continued Board engagement with our people. Following the 2022 Annual General Meeting we held an in-person Meet the Board event where around 100 employees from across Rolls-Royce were able to interact with Board members and share experiences, discuss concerns and swap insights. Topics discussed included work life balance, the personal experiences of our Board Directors and other cultural topics including imposter syndrome. The event was a great success and the level of engagement from both our employees and the Board was highly motivating.

In September, the Board visited Friedrichshafen, Germany. The visit included a site visit which allowed the Board to meet with employees and learn more about the operations of the site. Wendy Mars, one of our Non-Executive Directors and an Employee Champion, talks about the value of site visits in her interview on page 64. These site visits give us a valuable insight into the day-to-day business which helps shape discussions in the boardroom.

Governance

During the year we continued with our Board Apprentice programme. The purpose of the programme is to provide coaching and board experience to a diverse group of emerging leaders selected from the Group's talent pool, whilst also demonstrating our commitment to participants' career progression and development as leaders.

The work of our Employee Champions continued this year. Wendy Mars assumed the role of Employee Champion alongside Bev Goulet and Lee Hsien Yang. Information on how they connected with our people during the year can be found in the Section 172(1) Statement on page 51. Wendy also discusses her role as Employee Champion in her induction interview on page 64.

During the year, the Board and Audit Committee were kept appraised of the developments in relation to the BEIS consultation 'restoring trust in audit and corporate governance'. The BEIS response, which was published in May 2022, emphasised the importance of balancing much-needed reform with maintaining the UK as a key financial centre where businesses can grow. We continued to keep close to both BEIS and the FRC throughout 2022 as communications and related consultations and guidance were and continue to be published.

Annual General Meeting

I look forward to engaging with shareholders at the Annual General Meeting on 11 May 2023. Following the success of the hybrid meeting during the 2022 Annual General Meeting, we are similarly encouraging shareholders to join, participate and vote virtually. I look forward to seeing many of you and to answering any questions that you may have.

Looking forward

Our priority is, of course, to build a strong rapport with Tufan and maintain open and transparent communications with him on Board expectations.

We will, as a Board, maintain focus on employee sentiment and culture during 2023, recognising the importance of the success of our transformation programme.

Dame Anita Frew
Chair

CORPORATE GOVERNANCE

THE BOARD

THE ROLE OF THE BOARD

The Board is ultimately responsible to shareholders for the direction, management, performance and long-term sustainable success of the Company. It sets the Group's strategy and objectives and oversees and monitors internal controls, risk management, principal risks, governance and viability of the Company. In doing so, the Directors comply with their duties under section 172 of the Companies Act 2006 (see pages 50 to 55).

The Board has established certain principal committees to assist it in fulfilling its oversight responsibilities, providing dedicated focus on particular areas, as set out below. The chair of each committee reports to the Board on the committee's activities after each meeting.

In addition to the Board's principal committees, it has established a sub-committee of Directors who each hold an appropriate level of UK national security clearance for the purpose of receiving and considering, on behalf of the Board, any UK classified information relating to the Group's programmes and activities.

Beverly Goulet, a US national and independent Non-Executive Director, also sits on the board of Rolls-Royce North America Holdings, Inc. to create a link between the Board and the Group's North American governance structure.

KEY MATTERS RESERVED FOR THE BOARD

- The Group's long-term objectives, strategy and risk appetite
- The Group's organisation and capability
- Stakeholder engagement
- Overall corporate governance arrangements, including Board and committee composition, committee terms of reference, Directors' independence and conflicts of interest
- Internal controls, governance and risk management frameworks
- Changes to the corporate or capital structure of the Company
- Annual Report and financial and regulatory announcements
- Significant changes in accounting policies or practices
- Annual budgets and financial expenditure and commitments above levels set by the Board
- Overview of the speak-up programme and cases reported through the speak up line

Roles and responsibilities

The roles of the Chair and Chief Executive are clearly defined and the Board supports the separation of the two roles. The Chair is responsible for the leadership and effectiveness of the Board. The Chief Executive is responsible for the running of the Group's business and leads the Executive Team which comes together to review, agree and communicate issues and actions of Group-wide significance.

Non-Executive Directors support the Chair and provide objective and constructive challenge to management. The Senior Independent Director (SID) provides a sounding board for the Chair and serves as an intermediary for the Chief Executive, other Directors and shareholders when required.

The Chief Governance Officer ensures that appropriate and timely information is provided to the Board and its committees and is responsible for advising and supporting the Chair and the Board on all governance matters. All Directors have access to the Chief Governance Officer and may take independent professional advice at the Company's expense in conducting their duties.

Directors' independence

We continue to monitor and note potential conflicts of interest that each Director may have and recommend to the Board whether these should be authorised and if any conditions should be attached to such authorisations. The Directors are regularly reminded of their continuing obligations in relation to conflicts and are required to review and confirm their external interests at least annually. This helps us to consider whether each of them continues to be independent.

Following due consideration, the Board determined that all Non-Executive Directors continued to be independent in both character and judgement. Furthermore, it was determined that the Chair was independent on her appointment.

THE BOARD COMMITTEES

NOMINATIONS & GOVERNANCE COMMITTEE — See page 70

AUDIT COMMITTEE — See page 73

REMUNERATION COMMITTEE — See page 77

SAFETY, ETHICS & SUSTAINABILITY COMMITTEE — See page 96

SCIENCE & TECHNOLOGY COMMITTEE — See page 98

MEMBERSHIP OF EACH COMMITTEE

The membership of each Board Committee has been set out below. The Directors' biographies are on pages 62 to 63 and meeting attendance is on page 66.

A more detailed overview of the responsibilities of each Committee is outlined in its terms of reference, available at www.rolls-royce.com. We review these annually and refer them to the Board for approval.

Board committee membership (at 23 February 2023)	Nominations & Governance	Audit	Remuneration	Safety, Ethics & Sustainability	Science & Technology
Dame Anita Frew	■			▢	
Paul Adams	▢			▢	■
George Culmer	▢	▢	▢		
Lord Jitesh Gadhia	▢	▢	■		
Beverly Goulet	▢	▢	▢		
Nick Luff	▢	■			
Mike Manley	▢				▢
Wendy Mars	▢				▢
Sir Kevin Smith	▢		▢		
Dame Angela Strank	▢			■	▢

■ indicates that the Director is Chair of the Board or Committee
▢ indicates that the Director is a member of the Committee
☐ indicates that the Director is not a member of the Committee

ROLE OF EACH COMMITTEE

NOMINATIONS & GOVERNANCE

Lead the process for appointments to the Rolls-Royce Board

Ensure plans are in place for orderly succession for the Board and senior executive positions

Oversee the development of a diverse pipeline for succession

Ensure the composition of the Board is appropriate and relevant so that the Board is in the best position to oversee operational performance and drive the Group's strategy

Keep the Board's corporate governance arrangements under review

Ensure arrangements are consistent with best corporate governance standards

Principal risks:
— talent and capability

AUDIT

Assist the Board in monitoring the integrity of the Company's financial statements and any formal announcements relating to financial performance

Oversight of climate change reporting

Review the internal financial controls and the risk management and internal control systems and review any concerns of financial fraud

Recommend to the Board the financial reporting, focusing on accounting policies, judgements and estimates; disclosures; compliance with regulations; and that the Annual Report is fair, balanced and understandable

Monitor and review the effectiveness of the internal audit function

Oversee the Company's relations with the external auditor and approve their terms of engagement and fees

Principal risks:
— business continuity
— cyber threat
— financial shock

ROLE OF EACH COMMITTEE CONTINUED

REMUNERATION

Determine a policy for executive director remuneration capable of attracting and retaining individuals necessary for business success

Set remuneration for the Chair of the Board, Executive Directors and senior executives

Determine the design, conditions and coverage of incentives for senior executives and approve total and individual payments under the plans

Determine targets for any performance-related pay plans and the issue and terms of all-employee share plans

Oversee any major changes in remuneration

Review workforce remuneration and related policy and the alignment of incentives and rewards with culture, taking these into account when setting the policy for executive director remuneration

SCIENCE & TECHNOLOGY

Provide oversight and assurance of the Company's scientific and technological strategy, processes and investments

Provide dedicated focus to the research and technology part of the Group's research and development investment to enable the Group to conceive, design and deliver world-class technology to meet our customers' current and future needs

Principal risks:
- climate change (future technologies)
- competitive environment (disruptive technologies)

SAFETY, ETHICS & SUSTAINABILITY

Provide oversight and assurance in respect of:
- product safety
- HS&E (occupational health and safety, process safety, maintenance of facilities, asset integrity and personnel security)
- environment and sustainability, including progress and delivery against agreed climate change metrics, targets and objectives
- ethics and compliance

Monitor the operation of the Group's product safety governance frameworks, scrutinising the development and implementation of changes in process and practice

Review, challenge and support the Group's sustainability strategy, track progress towards sustainability targets and review the environmental impacts of products and operations

Monitor the Group's compliance with legislative, regulatory and ethical standards

Principal risks:
- safety (people)
- safety (product)
- climate change (delivery of strategy)
- compliance

BOARD OF DIRECTORS

	Position	Board skills and competencies	Key external appointments
	DAME ANITA FREW **Chair of the Board** Chair, Nominations & Governance Committee Appointed to the Board on 1 July 2021 and as Chair on 1 October 2021	Dame Anita brings a wealth of extensive leadership and global experience from more than two decades of board appointments in industrial manufacturing and financial services companies, both in the UK and internationally. Together, with her skills and reputation with investors and government institutions, her broad knowledge of strategic management across a range of sectors is invaluable to the Board and the Group as a whole.	**Current** — Croda International plc, chair — Prime Minister's Business Council, member **Past** — BHP Group plc, NED
	TUFAN ERGINBILGIC **Chief Executive** Appointed to the Board on 1 January 2023	Tufan is a proven leader of winning teams within complex multinational organisations, with over six years as CEO of BP's downstream business. He drives a high-performance culture and delivers results for investors. He has extensive strategic and operational experience and a firm understanding of safety critical industries as well as the challenges and commercial opportunities presented by the drive for low carbon technologies. He has a strong track record for execution and delivery and the creation of significant value.	**Current** — Iveco Group NC, NED — Global Infrastructure Partners (GIP), senior adviser **Past** — GIP, partner — BP p.l.c., various executive roles — DCC plc, NED — Turkiye Petrol Rafinerileri A.S, NED — GKN plc, NED
	PANOS KAKOULLIS **Chief Financial Officer** Appointed to the Board on 3 May 2021	Panos has over 30 years' experience working with a wide range of significant multinational corporations across multiple sectors, leading audits and advising on M&A transactions and turnarounds. Delivering significant transformation programmes throughout his career at Deloitte, he brings strong leadership and an appetite for innovation, collaboration and simplification.	**Past** — Deloitte LLP, various partner & leadership roles
	PAUL ADAMS **Independent Non-Executive Director** Chair, Science & Technology Committee Appointed to the Board on 11 March 2021	Paul has extensive industry experience, specifically in engine manufacturing. He has a passion for engineering and has broad, sector-specific operational and safety experience. His industry focus is undoubtedly a great asset to both our Science & Technology Committee and our Safety, Ethics & Sustainability Committee.	**Current** — Aclara Resources, Inc., board member — OC Oerlikon Corporation AG, Pfäffikon, board member **Past** — Aerion Corporation, board member — Pratt & Whitney, various executive roles
	BIRGIT BEHRENDT **Independent Non-Executive Director** To be appointed to the Board and as a member of the Nominations & Governance and Safety, Ethics & Sustainability Committees on 11 May 2023	Birgit brings deep experience across global procurement and supply chain management to the Board. Alongside this, she has significant insights into the development and management of international joint ventures (JV), having led Ford's key European JV's. She also has a strong track record and an ongoing interest in developing, mentoring and coaching key talent and encouraging women in particular to consider a career in STEM. She has worked in the US and Germany and brings profound experience of working with unions and works councils.	**Current** — Umicore SA, NED — Thyssenkrupp AG, NED — KION Group AG, NED — Ford-Werke GmbH, NED — Infinium Holdings, Inc, NED **Past** — Ford, various executive roles
	GEORGE CULMER **Senior Independent Director** Appointed to the Board on 2 January 2020	George has a strong track record as a senior finance professional with significant experience gained in large, international, highly regulated groups and has proven business leadership credentials. With this experience, together with his strengths in change leadership and transformation gained from within complex groups, George makes a significant contribution to the Board.	**Current** — Aviva plc, chairman **Past** — Lloyds Banking Group plc, CFO — RSA Insurance Group plc, group financial officer
	LORD JITESH GADHIA **Independent Non-Executive Director** Chair, Remuneration Committee Appointed to the Board on 1 April 2022	Jitesh brings a wealth of complex advisory and transactional experience to the Board, having spent nearly 25 years in the banking and private equity sector. He has extensive remuneration experience, earned from both listed companies and UK Government Investments and UK Financial Investments, where he played a key role in compensation discussions about the Government's investments in some of the UK's biggest companies. This, together with his broad industry experience, is an asset to the Board and the Remuneration Committee.	**Current** — Taylor Wimpey plc, NED — Compare the Market Limited, NED — Accord Healthcare Limited, NED — Court of Directors of the Bank of England, NED **Past** — UK Government Investments, NED — Blackstone Group, senior MD

	Position	Board skills and competencies	Key external appointments
	BEVERLY GOULET **Independent Non-Executive Director** Rolls-Royce North America Holdings, Inc., board member Lead Employee Champion Appointed to the Board on 3 July 2017	Having spent a considerable amount of her career in the airline industry, Bev brings valuable knowledge and operational experience to the Board. She has significant expertise in finance, treasury, strategy, legal and governance matters. She has the expertise and experience to be able to confidently contribute to decision-making and actively take part in developing and strengthening our businesses.	**Current** — Atlas Air Worldwide Holdings, Inc., NED — Xenia Hotels & Resorts, Inc., NED **Past** — American Airlines, Inc., various executive roles
	NICK LUFF **Independent Non-Executive Director** Chair, Audit Committee Appointed to the Board on 3 May 2018	Nick is an experienced finance executive having been chief financial officer of a number of listed companies across a variety of industries. He has broad financial skills and a track record of driving business performance. His extensive non-executive and audit committee experience, together with both financial and accounting expertise and a passion for engineering, is crucial in his role as Chair of the Audit Committee and is invaluable to the Board.	**Current** — RELX plc, CFO **Past** — Centrica plc, CFO — Lloyds Banking Group plc, NED — QuinetiQ Group plc, NED
	MIKE MANLEY **Independent Non-Executive Director** Appointed to the Board on 1 July 2021 To step down from the Board on 11 May 2023	Mike has extensive international experience having led businesses in Europe, Asia and the US. Moreover, his expertise from the automobile industry and insights into electrification and power management serves as an asset to the Board and the Science & Technology Committee.	**Current** — AutoNation, Inc., CEO & director — Dover Corporation, NED **Past** — Stellantis N.V., head of Americas — DaimlerChrysler, various executive roles
	WENDY MARS **Independent Non-Executive Director** Employee champion Appointed to the Board on 8 December 2021	Wendy brings insight across hardware, software and services with technological transformation of complex global organisations at her core. Wendy remains connected to both the need to foster innovation in a technology company as well as the implementation challenges. Technology can play a significant role in helping businesses to achieve their sustainability objectives; Wendy brings this experience to the Board.	**Current** — Cisco Systems, Inc., president Europe, Middle East and Africa region (EMEA) **Past** — ThruPoint, Inc., various executive roles
	SIR KEVIN SMITH **Independent Non-Executive Director** Appointed to the Board on 1 November 2015	Sir Kevin has extensive industrial leadership experience and a deep knowledge of global engineering and manufacturing businesses, as well as the aerospace industry. Sir Kevin has been able to draw on his extensive experience and make a significant contribution to development and growth of key strategies.	**Current** — L.E.K. Consulting LLC, European advisory board member **Past** — Unitas Operating Partners, partner & chairman — GKN plc, group chief executive
	DAME ANGELA STRANK **Independent Non-Executive Director** Chair, Safety, Ethics & Sustainability Committee Appointed to the Board on 1 May 2020	Dame Angela brings a wealth of corporate experience to the Board and a proven track record in managing engineering operations and driving technology and digital research programmes. Having actively worked in climate research and pioneering women in STEM careers, sustainability and corporate ethics are key areas of interest. As Chair of the Safety, Ethics & Sustainability Committee, Dame Angela draws on her experience as a member of two other listed companies' sustainability committees which is invaluable to the Group as it develops its sustainability strategy.	**Current** — Mondi plc, NED — SSE plc, NED **Past** — Severn Trent plc, NED — BP p.l.c., various executive roles
	PAMELA COLES **Chief Governance Officer** Appointed on 1 October 2014	Pamela is an expert in corporate governance and company law with a pragmatic approach to how the governance team supports the business. Pamela is instrumental in supporting the Chair and the Non-Executive Directors to build strong relationships with the Executive Team and has been able to offer advice and guidance on a wide range of topics.	**Current** — E-Act, NED

Board induction and development

The Chair and Chief Governance Officer arrange a comprehensive, tailored induction programme for newly-appointed Non-Executive Directors, which includes dedicated time with the Executive Team and senior management and scheduled trips to business operations. The programme is tailored based on experience and background of the individual and the requirements of the role. All Directors visit the Group's main operating sites as part of their induction and are encouraged to make at least one visit to other sites every year. Site visits are an important part of the induction process, as well as for continuing education. They help Directors understand the Group's activities through the direct experience of seeing our facilities and operations and by having discussions with a diverse group of our people.

It is important that the Directors continue to develop and refresh their understanding of the Group's activities. The Board's engagement with its stakeholders is set out on pages 50 to 55. It is also important that the Directors regularly refresh and update their skills and knowledge and receive relevant training when necessary. During 2022, the Directors received tailored training on climate-related matters. In addition, several deep dives on specific topics are scheduled throughout the year, see page 66. Members of the Board also attend relevant seminars, conferences and training events to keep up-to-date on developments in key areas.

AN INTERVIEW WITH WENDY MARS

Non-Executive Director and Employee Champion, joined the Board in December 2021

Q During 2022, you were able to complete your induction programme. How was the programme for you as a Board member of Rolls-Royce and how did it support you to get up to speed with the business?

A My induction was really thorough and gave me a good understanding of the main areas of the business, providing me with a very solid foundation to build on, both as a Board member and as an Employee Champion. The programme itself introduced me to key areas of the business and I have been given the space and opportunity to go and explore these in greater detail.

Q What does it mean to you to be an Employee Champion?

A I really enjoy spending time with our people, to better understand the views of the workforce globally allowing me to better represent their voice in the boardroom. This is important, not just to me on a personal level, but to the Board, as it provides vital context and reality to discussions and allows me to shape conversations, influenced by the perspectives of the workforce.

Q In September you visited Friedrichshafen in Germany. What is the importance of site visits to you personally?

A This visit left me feeling extremely proud of Rolls-Royce, having met with a range of great talent, including several apprentices. I found it very impressive to see how the apprentices, at such a young age, managed to become so embedded into the Company.

Site visits allow me to see what is really going on in the business and on the shop floor. As Directors, we have the opportunity to see the operational detail, adding a sense of reality to the information we receive in the boardroom. These visits allow us to make connections with our people which is crucial for me as an Employee Champion and I can then take these real-life conversations and reflect on these during board discussions. Of course, equally important is for the employees to be able to meet with the Board members in person and see us for who we are.

Q You have also visited Indianapolis, US and Washington, UK in your role as an Employee Champion. What were your key take-aways from these trips?

A In Washington, UK, after the tour of the site facilities, we held a roundtable where employees were very friendly and engaging. I saw and heard first-hand how employees drive innovation and automation of key shop floor processes and the key role they play in driving change.

In Indianapolis, the focus was on safety, talent and the work with the unions. This was supported by a tour of the test facilities and, again, a roundtable with employees who each shared their perspective on the key topics and their experiences.

D&I is undoubtedly an important area which is very clearly acknowledged across all of Rolls-Royce

Q Having now completed your formal induction programme and been able to visit the businesses, how would you describe the culture in Rolls-Royce? And how important do you think diversity and inclusion is across the Group?

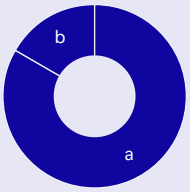
A The Rolls-Royce culture is one of immense importance in both the Company and in the Group's legacy and achievements. This can be felt across all key sites and there is an overwhelming common theme of pride in all the businesses. Wearing both my Employee Champion and Director hat, D&I is undoubtedly an important area which is very clearly acknowledged across all of Rolls-Royce. This is complimented by a constant focus on further action – taking D&I beyond being simply a scorecard exercise.

BOARD COMPOSITION

The Board brings a wide range of experience, skills and backgrounds which complement the Group's strategy.

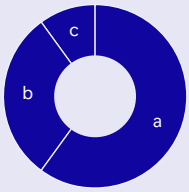
COMPOSITION OF THE BOARD AT 23 FEBRUARY 2023

BALANCE OF THE BOARD



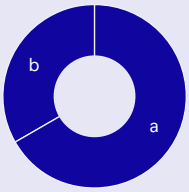
a. Non-Executive Directors 10
b. Executive Directors 2

NON-EXECUTIVE DIRECTORS' TENURE



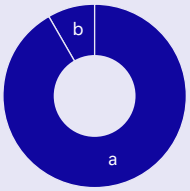
a. 0–3 years 6
b. 3–6 years 3
c. 6–9 years 1

BOARD MEMBERS BY GENDER



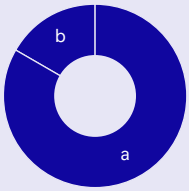
a. Male 8
b. Female 4

BOARD MEMBERS BY ETHNICITY



a. White 11
b. Asian 1

BOARD MEMBERS BY NATIONALITY *



a. British 10
b. American 2

* According to the Company's Articles, at least 50% of our Directors must be British citizens

Non-Executive Directors' skills and experience at 23 February 2023

	Business experience											Global experience		
Non-Executive Director	Health & safety Product safety	Climate change & sustainability	Engineering, science & technology	Company leadership	Finance	Audit & risk management	Remuneration	Transformation	Legal & regulation	Sector specific	Geopolitics	Europe	USA	Asia & Middle East
Dame Anita Frew	▪	▪	▪	▪	▪	▪	▪	▪	▪		▪			
Paul Adams	▪	▪	▪	▪						▪		▪	▪	▪
George Culmer				▪	▪	▪	▪	▪	▪			▪		
Beverly Goulet					▪	▪	▪	▪	▪	▪			▪	
Lord Jitesh Gadhia					▪	▪	▪	▪	▪		▪			▪
Nick Luff		▪		▪	▪	▪		▪	▪			▪	▪	
Mike Manley	▪		▪	▪				▪				▪	▪	▪
Wendy Mars		▪	▪					▪				▪		▪
Sir Kevin Smith	▪	▪	▪	▪				▪		▪	▪	▪	▪	▪
Dame Angela Strank	▪	▪	▪				▪	▪				▪	▪	▪

Board and Committee attendance in 2022

	Board 9 meetings	Nominations & Governance 5 meetings	Audit 9 meetings	Remuneration 7 meetings	Safety, Ethics & Sustainability 4 meetings	Science & Technology 3 meetings
Dame Anita Frew	9/9	5/5				
Warren East	9/9					
Panos Kakoullis	9/9					
Paul Adams	8/9	4/5			3/4	3/3
George Culmer	9/9	5/5	8/9	7/7		
Beverly Goulet	9/9	5/5	9/9	7/7		
Lord Jitesh Gadhia (joined on 1 April 2022)	6/6	4/4	5/5	3/3		
Lee Hsien Yang	9/9	5/5	9/9		4/4	
Nick Luff	9/9	5/5	9/9			
Mike Manley	9/9	5/5				3/3
Wendy Mars	7/9	4/5				0/1
Sir Kevin Smith	9/9	5/5		7/7		2/2
Dame Angela Strank	9/9	5/5			4/4	3/3
Past Directors						
Irene Dorner (stepped down on 12 May 2022)	3/4	2/2		4/4	2/2	

The table above sets out the Directors' attendance at Board and committee meetings throughout 2022. During the year, we made changes to the committees' memberships. Lord Jitesh Gadhia joined the Board in April and assumed the role of Chair of the Remuneration Committee in May following Irene Dorner stepping down. In addition, in May, Paul Adams became chair of the Science & Technology Committee following Sir Kevin Smith stepping down as chair and Wendy Mars was appointed to the Science & Technology Committee.

Most scheduled meetings end with a private discussion of the Non-Executive Directors led by the Chair of the Board or Committee, without the Executive Directors or members of the Executive Team or management present.

Additional meetings and sub-committee meetings

The Board held one additional meeting in 2022, for the approval of the new Chief Executive.

In support of the committees' work, where there is a requirement for greater, in-depth discussion, we hold deep dives into specific areas of focus outside the meeting schedule:

- in May, the Audit Committee held two deep dives to discuss our internal controls framework and the hedging policy;
- in July, the Safety, Ethics & Sustainability Committee held a deep dive on the HSE accountability framework; and
- in December, a training session on climate change was held where all members of the Board were invited to join.

Non-attendance

Board members' attendance was once again high in 2022. However, Directors are sometimes unable to participate in certain Board and Committee meetings due to other business commitments. In this situation, they communicate their responses to the matters for consideration to the Chair of the Board and the committees' chairs, where relevant.

As part of her executive role, Wendy Mars had a global Cisco leadership event which had been arranged prior to her joining Rolls-Royce. This commitment meant Wendy was unable to attend the Board and committee meetings during November.

BOARD FOCUS THROUGH 2022

IN-YEAR PRIORITIES

Deliver on our commitments

In September, we completed our £2bn programme of disposals with the sale of ITP Aero for €1.6bn and immediately repaid our £2bn UK Export Finance backed loan due in 2025. Further information can be found in the Strategic Report on page 11.

Financial momentum recovery

Given that demand for our products and services is growing, the Board continued to focus on operational and commercial drivers to drive better performance with strategic partnerships and key suppliers. Further information can be found in the Strategic Report on page 14.

Focus on operational and commercial discipline

The Board continued to consider the external environment which remains challenging, with the Russia-Ukraine conflict, inflationary pressures and supply chain constraints all impacting our business. Regular discussion took place to manage our business to address and minimise the impact. The Board recognise that the issues will persist into 2023. Further information can be found in the Strategic Report on page 13.

FINANCIAL

Group budget and five-year plan

The Board considered performance against the 2022 Group budget.

In January 2023, the Board considered an early draft of the 2023 budget noting that it was subject to further review by the newly appointed Chief Executive and the Executive Team. The Board approved the 2023 budget and five-year plan in February 2023 and noted that further work would be carried out to update the five-year plan as part of the programme focused on the priorities (see page 12).

Viability statement

The Board agreed the viability statement period to be reported in the Annual Report and Accounts. The Audit Committee assessed the Group's viability, with scenarios created based on the principal risks and modelled by the businesses as part of the five-year forecasts. Read more on page 49.

Reports and regulatory reporting

On the recommendation of the Audit Committee, the Board reviewed and approved the half year and full year results announcements and Annual Report and Accounts.

RISK MANAGEMENT

Review of effectiveness of risk management and internal controls

The Audit Committee and Board assessed the effectiveness of the risk management and internal controls in place across the Group. The Board confirms that where weaknesses in the Group's internal control environment were identified, plans for remediation were implemented and aligned to an appropriate time frame. Read more on page 75.

Climate change risk

The Board has oversight of climate-related risks and opportunities impacting the Group and all Board Committees have climate-related issues as part of their remit. In particular, the Safety, Ethics & Sustainability Committee has delegated responsibility to review the principal risk relating to climate change. For 2022, we have taken the decision to detail our climate-related disclosures in a supplementary Climate Review, in particular the approach to managing climate-related risks and scenario planning. For Climate Review and Transition Plan, see www.rolls-royce.com

Principal risk review

To discharge their responsibilities under the UK Corporate Governance Code, throughout the year the Board reviewed the principal risks. The Audit Committee reported to the Board that a robust assessment of the principal risks and emerging risks facing the Group had been undertaken.

Key stakeholders:

- People
- Customers
- Suppliers and partners
- Communities
- Governing bodies and regulators
- Investors

BOARD FOCUS THROUGH 2022 (CONTINUED)

SUSTAINABILITY AND ENVIRONMENTAL

TCFD and climate change
The Board received a climate change teach-in, led by the head of sustainability, during December.

Board strategy session
The Board held a two-day strategy session with the Executive Team in June. The Board discussed the relationship between business strategy, net zero strategy and the climate transition plan.

Sustainability overview
The Safety, Ethics & Sustainability Committee receive regular updates from the environment & sustainability committee which covers science-based targets, ESG assessments and sustainability communications and engagement.

WORKFORCE AND CULTURE

Talent and capability
The Nominations & Governance Committee held a principal risk deep dive on talent pool diversity by 2025.

Employee engagement
Work undertaken by our Employee Champions and Board is set out on page 51 in the s172(1) statement. A one-off payment was made to employees given the cost of living crisis. Information can be found on page 40. The Board continued to review the flexible working policy and an update to the policy was made for 2023. See page 40. During the year the Board received updates on the speak up campaign, see page 41. The Committee discussed the principal risk of people safety and retained TRI as the crucial metric.

Diversity and Inclusion
The Nominations & Governance Committee reviewed progress against the four strategic pillars of the diversity & inclusion strategy: leadership and governance; attract and recruit; retain and engage; and develop. The Committee continued to review performance against the 2025 targets. The focus on inclusion links to the 'Being' campaign which can be found on page 52.

GOVERNANCE, LEGAL AND REGULATORY

Board succession planning
On the recommendation of the Nominations & Governance Committee, the Board oversaw the arrangements for Board succession planning and approved the appointments of Tufan Erginbilgic as Chief Executive and Lord Jitesh Gadhia as Non-Executive Director and Chair of our Remuneration Committee and Birgit Behrendt as Non-Executive Director. In addition, the Board approved the re-appointments of Sir Kevin Smith for a further one-year term and George Culmer for his second three-year term.

Chief Executive succession
On the recommendation of the Nominations & Governance Committee, the Board unanimously approved the appointment of Tufan Erginbilgic as Chief Executive with effect from 1 January 2023.

Board effectiveness evaluation
The effectiveness evaluation was led by the Chair and the Chair's evaluation was led by the Senior Independent Director.

Further information can be found on page 69.

BOARD EFFECTIVENESS

Review of Board and Committees

This year we again decided to carry out an internal review of our Board's effectiveness, supported by Lintstock, having undertaken three externally facilitated board effectiveness reviews in 2018, 2019 and 2020. The internal review provided the platform and some input for the basis of our questionnaire-based approach. We continued to focus on the themes highlighted in our previous reviews: Board composition and dynamics; the Board's role; and the Board at work, with specific focus on those areas identified in the 2021 review.

We worked with Lintstock in 2021 and again in 2022. They have no other connection with the Company or its Directors.

The review took the form of an online questionnaire, designed with assistance from Lintstock, with input from the Chair and the governance team. Lintstock provided an anonymised report and the Chair and Chief Governance Officer, in discussion with the Board, have agreed an action plan for 2023. In addition, the Chair held individual meetings with each Non-Executive Director.

In addition to this review, during a private meeting of the Non-Executive Directors, the Senior Independent Director led an initial review of the Chair's performance without the Chair present. They also discussed and agreed her objectives for 2023. The Nominations & Governance Committee also met without any management present to discuss the performance of the Chief Executive.

Each Committee chair considers feedback for the Committees for which they are responsible.

AREA OF FOCUS	2022 FOCUS IDENTIFIED IN 2021	PROGRESS IN 2022	FOCUS FOR 2023
Board composition and dynamics	Review of the remit and membership of the Committees. Continued focus on succession planning, including the diversity of the Board and Executive Team.	Changes to the Board, one new Non-Executive Director and the Chief Executive, during the year. Three long-serving members of the Board stepped down including the Chief Executive (see pages 4 to 5). The Nominations & Governance Committee reviewed the succession plans for executive leadership.	Board to review executive governance and its own committee structure. Continue to work towards our diversity & inclusion ambitions.
The Board's role	Execution of strategy, prioritising investments and the oversight of cost management.	Focus on the impact of external challenges on operational performance (see pages 18 to 19).	Focus on strategic choices.
The Board at work	Strengthening relationships with our stakeholders, conscious of the external environment.	Strong focus on engagement with stakeholders (see page 50), including a large and successful Meet the Board event for employees.	Continued focus on stakeholder engagement, ensuring Board sponsorship of the transformation programme.

STAGES OF THE BOARD EFFECTIVENESS REVIEW

NOVEMBER	NOVEMBER	DECEMBER	JANUARY 2023	FEBRUARY 2023
Decision reached to undertake an internal Board effectiveness review and providers approached to support the process	Lintstock appointed to support internal effectiveness review	Questionnaire drafted and Chair's input sought Questionnaire issued	Responses received. Report reviewed by Chair and Chief Governance Officer and draft action plan for 2023 prepared	Board reviewed the report and approved the action plan for 2023

NOMINATIONS & GOVERNANCE COMMITTEE REPORT

KEY AREAS OF FOCUS IN 2022

- Chief Executive appointment
- Executive succession planning
- Diversity & inclusion

Board and committees' composition

The Committee is responsible for keeping the structure, size and composition of the Board and its committees under review. During 2022, the Committee, led by the Chair, oversaw the search and appointment of a new Chief Executive to replace Warren East following the announcement in February 2022 that Warren would step down at the end of 2022 having served eight years on the Board, almost all as Chief Executive. The Company used MWM Consulting which has no connection with individual directors. Information on the appointment search and process can be found on page 72.

The Committee oversaw a number of changes to the Non-Executive Directors. One new Non-Executive Director, Birgit Behrendt, will join the Board in May 2023. Lee Hsien Yang stepped down at the end of 2022, having completed his nine-year term on the Board. Mike Manley will also step down from the Board in May 2023 and will not stand for re-election at the AGM. In April, Lord Jitesh Gadhia joined the Board and became Chair of the Remuneration Committee from the conclusion of the 2022 AGM in May. Prior to this appointment, Jitesh had been a member of the remuneration committee at Taylor Wimpey since March 2021. Also following the AGM in May 2022, George Culmer replaced Sir Kevin Smith as Senior Independent Director and Paul Adams became Chair of the Science & Technology Committee.

Furthermore, during the year, the Committee considered the re-appointment terms of George Culmer and Sir Kevin Smith. It was agreed previously that all Non-Executive Directors would be appointed annually once they reached their third term.

Prior to making any new appointments to the Board, the Committee considers the skills and attributes required and agrees a profile. The Committee also provides input into a shortlist of candidates and is involved in the interview process for all appointments. The Committee recommends the appointments to the Board for approval. All Non-Executive Directors are appointed to the Nominations & Governance Committee and to other Board committees, depending on the skills they bring. See page 60 for our current Board committee membership.

The Chief Governance Officer ensures that new Directors have a thorough and appropriate induction programme. More detail about inductions and continuing development can be found on page 64.

The Committee has also considered the following changes to the Board and its committees during 2022 and up to the date of this report. I joined the Safety, Ethics & Sustainability Committee during December and Birgit Behrendt will join the Nominations & Governance and Safety, Ethics & Sustainability Committees in May.

Summary biographies for the Directors can be found on pages 62 to 63. Full biographies can be found at www.rolls-royce.com

Directors' conflicts of interest

As required under the Code, any additional external appointments taken up by Directors during the year are considered by the Committee and approved by the Board prior to the Directors accepting such appointments. The Committee considers any conflicts that may arise as a result of any external appointments taken up by the Directors and the Board monitors the extent of those interests and the time commitment required to fulfil them to ensure that effectiveness is not compromised. As part of the Committee's discussions, external appointments are considered against the parameters set by ISS. The Committee has found this to be a useful gauge when discussing whether there is potentially any impact on Directors' time commitments when taking on additional external appointments.

In 2022, the Directors demonstrated a strong commitment to the Company, as shown by their very high levels of attendance at all our meetings (see page 66). During the year, the Board considered the external appointment of Lord Jitesh Gadhia to the Court of Directors of the Bank of England. Other external appointments were also considered during the year and were not considered significant for reporting purposes. The Board concluded that none of the external appointments were considered time restrictive.

Succession planning

As part of our succession planning, the Committee considers the current skills, experience and tenure of the Directors and assesses future needs against the longer-term strategy of the Group.

The Committee regularly reviews succession planning at Board, Executive Team and senior management levels. The Board considered the principal risk relating to talent and capability.

The Committee plays a vital role in promoting effective Board and leadership succession, making sure it is fully aligned to the Group's strategy. Following the announcement that Warren East would step down as Chief Executive, the Committee continued to regularly discuss succession. A more detailed overview of the Chief Executive's appointment process can be found on page 72.

Diversity & inclusion

In 2022, the Committee continued to oversee the development of a diverse pipeline for succession. Diversity and inclusion (D&I) continues to be an area of focus for the Board and for the Group as a whole. We support and monitor Group activities to increase the percentage of senior management roles held by women and other under-represented groups across the organisation.

The Board diversity policy maintains a balance so that, as a minimum, 40% of the Directors should be women. It is the Board's longer-term ambition to reach gender parity. We have met the Board's intention that at least one senior Board member will be a woman and that at least one Board member will be from a non-white ethnic minority background. The Board diversity policy is available at www.rolls-royce.com. We have always recognised that there may be changes to the Board where we may fall short of our stated aim for periods of time while the Board is refreshed.

As at the date of this report, 33% of the Directors are women and that includes myself as Chair. As noted above, Mike Manley will be stepping down from the Board and Birgit Behrendt will be joining the Board in May 2023, at which time over 41% of the Board will be women. The Committee will continue its work to maintain a balance on the Board of individuals representing a wide cross-section of experience, cultural backgrounds and specialisms.

Diversity in our Executive Team has improved but we recognise that there is still more to do. The Committee continues to support and monitor Group activities to increase the percentage of women and other under-represented groups in the senior management population (see page 40).

Improving D&I across the Group remains a priority and we continue to track progress. We are particularly pleased to note that the number of females in the enterprise leadership group has increased year-on-year (see People and Culture on page 40).

More on our progress against our D&I targets can be found on page 40. Voluntary disclosures under Listing Rule 9.8.6 can be found on page 209.

Principal risk review

The principal risk of talent and capability was considered throughout 2022. The Board met in full to review talent and capability as the development of our leaders is critical to ensuring the right culture and behaviours are embedded across the Group and to ensure we maintain the right skills and capability for future growth.

Corporate governance

We strive to take an innovative approach in all that we do and that includes our approach to governance. Throughout 2022, we have continued to keep up-to-date by ensuring agendas were reflective of the current issues and information provided to the Board was always current and timely.

We continue to follow the UK BEIS consultation on restoring trust in audit and corporate governance. The extracts from the Group's governance framework, which is also applied to our subsidiary companies and is our response to the Wates principles, are available at www.rolls-royce.com.

Engagement with shareholders

For information on how the Board has engaged with stakeholders during the year, see pages 50 to 55.

Dame Anita Frew
Chair of the Nominations & Governance Committee

Members	All Non-Executive Directors
	Biographies are on pages 62 to 63
Remit	See page 60

CHIEF EXECUTIVE APPOINTMENT PROCESS

Succession planning for all Directors, including the Executive Directors, is an ongoing cycle of work. The Committee has oversight of the senior leadership development and succession plans, ensuring they are aligned to the long-term strategic ambitions and the diverse leadership needs of the Group. After eight years on the Board and almost all as Chief Executive, Warren East retired as Chief Executive and stepped down from the Board at the end of 2022.

The Committee, led by the Chair, oversaw the search and appointment of a new Chief Executive. The process was thorough and inclusive. An extensive internal and external search was followed by an interview process which gave the Non-Executive Directors the opportunity to meet the shortlisted candidates. There was good communication throughout the process and the Chair received support from the Chief Governance Officer.

Set out below are the milestone steps that culminated in our announcement in July 2022 of the appointment of Tufan Erginbilgic as our Chief Executive:

Further detail on the key stages are outlined below:

Identify

A detailed job specification and preferred attributes of the new Chief Executive were agreed in February. A thorough review of potential internal and external candidates was undertaken, including a long list of external candidates proposed by MWM Consulting. These candidate profiles were made available to Committee members. The Chair, the Senior Independent Director, Sir Kevin Smith and Nick Luff considered the long list of candidates and reduced it to a short list in discussion with MWM Consulting. This included a number of diverse candidates.

Interview

All members of the Board met with and interviewed all candidates on the short list.

Select

Tufan Erginbilgic was identified as the preferred candidate during a Board session attended by the Non-Executive Directors only. Tufan Erginbilgic had met with all Board directors and extensive references had been taken and were available to the Committee.

Consider

The Board discussed Tufan Erginbilgic's background in engineering, noting also that he built his career in international business, leading multi-cultural teams and operations within complex multinational organisations. It was recognised that he would bring strategic and operational capabilities and had experience of safety critical industries and an understanding of the challenges and commercial opportunities presented by the energy transition.

The Remuneration Committee approved the terms and conditions relating to Tufan Erginbilgic's remuneration.

Appoint

The Board unanimously approved the appointment of Tufan Erginbilgic and the appointment was announced on 26 July 2022.

AUDIT COMMITTEE REPORT

KEY AREAS OF FOCUS IN 2022

- Understanding and external presentation of results, ensuring that business performance is fairly presented in financial reporting
- Impact of climate change on accounting assumptions, financial reporting and disclosures, including in relation to TCFD recommendations
- Financial risk management including changes to foreign exchange hedging policy
- Oversight of effectiveness of risk management and progress on internal controls improvement programmes

I am pleased to present the 2022 report of the Audit Committee which describes how the Committee has carried out its responsibilities during the year.

At the end of 2022, Lee Hsien Yang stepped down from the Board and as a member of the Audit Committee, having completed his full nine-year term. I would like to thank him for his commitment and contribution to the Committee. The Committee membership is set out on page 60.In accordance with the Code and DTR 7.1, George Culmer, Beverly Goulet and I have recent and relevant financial experience. The Board has confirmed that it believes that the Committee as a whole has competence relevant to the Company's sector.

In 2022, we were pleased to have the opportunity to meet with several shareholders in person as well as hearing virtually from shareholders at our 2022 AGM, where we were able to answer questions both in person and via the live stream of the meeting.

This report sets out the work of the Committee in 2022. It has been another busy year for the Committee as we continued to focus on the issues relevant to the Group's financial reporting, considering how business performance is reflected in financial reporting, assessing key accounting judgements and ensuring ongoing quality of the related disclosures. We have ensured, as the commitments the Group made in 2020 were delivered, in particular with the disposal of ITP Aero, that the appropriate accounting judgements and assessments were made. We reviewed changes to the foreign exchange hedging policy. In our meetings, we have robust conversations to ensure management are challenged, to satisfy ourselves that the judgements taken and the disclosures made are appropriate for the Group.

We have continued to support the Board in its considerations of climate change risk and opportunity and, together with the Safety, Ethics & Sustainability Committee, we have overseen the reporting against the TCFD recommendations. We also reviewed the impact of the Group's climate strategy on the 2022 financial statements including the assumptions used in the forecasts for the assessment of going concern and viability, long-term contract accounting, impairment testing and deferred tax asset recognition.

We undertook deep dives of the principal risks we oversee, particularly in relation to business continuity. The Committee continued to receive regular reports from internal audit, overseeing delivery of the 2022 audit plan and approving the 2023 plan. The Data Security sub-committee, comprising myself and George Culmer, met three times in the year, to focus on the cyber threat principal risk.

The Committee received a briefing on the UK BEIS consultation on 'restoring trust in audit and corporate governance' following BEIS announcing that it intends to take forward a number of the proposed reforms. We have continued to monitor the Group's internal control framework and its effectiveness across the business throughout 2022 with the appropriate lens so that any final recommendations by BEIS are incorporated in our processes. Over the coming months, we will review communications from both BEIS and the FRC and we will also consider related consultations and guidance. As the landscape becomes clearer, most likely in 2023, work will begin particularly in the areas of assurance and non-financial controls, to ensure the Group is able to meet the new requirements and the directors have sufficient support to enable them to provide the enhanced statements and disclosures.

During the year, the Committee received individual business presentations focused primarily on business governance, including risk management and internal control systems.

Financial reporting

The Group has complex long-term contract accounting and every year the Committee spends much of its time reviewing the accounting policies and judgements implicit in the Group's financial results. In 2022, in addition to our scheduled workload, we have focused on the impact of the Russia-Ukraine conflict and the ongoing macro-economic challenges that exist globally. In particular, we have considered the implications of these circumstances on our assumptions and key accounting judgements, including the recovery of Civil Aerospace engine flying hours, inflationary assumptions and discount rates. We have also reviewed the accounting judgements associated with the disposal of ITP Aero in September 2022. In addition, during 2022, the Committee considered the impact of the Group's climate strategy on the assumptions and scenarios used by management.

We have ensured that the disclosures, in respect of all key areas of judgement, are appropriate and balanced. We assess and consider the sensitivity of the estimates to changes in key assumptions which are summarised in note 1 of the Consolidated Financial Statements on page 113.

Fair, balanced and understandable

As part of its review of the 2022 Annual Report, the Committee considered whether the report, taken as a whole, was fair, balanced and understandable and that it provided the information necessary for shareholders to assess the Company's position, performance, business model and strategy. In so doing, the Committee considers the processes and controls involved in preparing the report. There is a robust governance framework to ensure the report is critically reviewed and signed off by key business and function teams. The Committee was satisfied that the process was effective and confirmed to the Board that, when taken as a whole, the Annual Report is fair, balanced and understandable.

Significant issues relating to the 2022 financial statements:
A summary of the principal matters we considered in respect of the 2022 Consolidated Financial Statements is set out below.

AREA OF FOCUS	CONSIDERATIONS
Alternative Performance Measures (APMs)	Consistent with previous years, the Committee reviewed the clarity of the definitions and the reconciliation of each APM to its statutory equivalent. The Committee concluded that there was no undue prominence of the APMs in the Annual Report. See page 203 for a reconciliation of APMs to their statutory equivalents.
Long-term contract accounting	The Committee considered the assessment of estimates of future revenue and costs on the Group's complex, long-term contractual arrangements. This has continued to be a particular focus for the Committee due to the impact of changing macro-economic conditions, in particular on our Civil Aerospace business. As part of our considerations, we reviewed onerous contracts and the carrying value and recoverability of tangible and intangible assets. We reviewed the disclosures and concluded these, together with the assessments, were appropriate. See note 1 in the Consolidated Financial Statements.
Deferred tax assets	The Committee discussed the recoverability of deferred tax assets and the forecasts, assumptions and sensitivities applied in order to ascertain the recoverability of the deferred tax assets. The Committee discussed the basis for the recognition of the UK deferred tax assets and considered the judgements and estimates necessary to assess the recoverability of the UK deferred tax assets. We confirmed the approach, which remained consistent with that taken in 2021, together with the disclosures set out in note 1 to the Consolidated Financial Statements.
Impact of climate change	The approach taken by management to assess the impact of climate change, the conclusions reached and the disclosures presented have been reviewed by the Committee, including considering the related TCFD recommendations. This included understanding and challenging the assumptions in the climate scenarios used by management to sensitise forecasts in respect of going concern, viability, long-term contract accounting, impairment assessments and deferred tax asset recognition. See note 1 in the Consolidated Financial Statements.
Sales of spare engines	Throughout the year, the Committee kept under review the assessment of whether the sales of spare engines, either to related or third parties, represented a sale and was at fair value. The Committee challenged management on the approach, the accounting and the reporting of these transactions.
Accounting for complex treasury instruments	The Committee considered numerous topics in relation to the complex treasury instruments including the GBP : USD hedge book and associated hedge book rates, the long term planning rate used by management beyond the hedge book period, and the deal contingent forward foreign exchange contracts entered into to hedge the proceeds from the ITP disposal. This included understanding and challenging management on the assumptions, the approach, the accounting and reporting.

Risk management and the internal control environment

Our risk management and internal control framework is described on page 42. During the year, we focused on the effectiveness of risk mitigation, understanding our appetite for taking risk as described on pages 42 to 43, including in respect of business continuity activities following consideration of the lessons learned as a result of COVID-19 and more recent challenges caused by the Russia-Ukraine conflict. We will continue to focus on risk mitigation effectiveness and risk appetite in 2023, embedding these more firmly as part of our routine processes and decision making, including in relation to strategic planning.

We also satisfied ourselves that the processes for identifying and managing risks are appropriate and that all principal risks and mitigating actions had been subject, during the year, to a detailed review by the Board or an appropriate Board Committee. Based on this and on our other activities, including consideration of the work of internal and external audit and attendance at the Committee by business and functional risk owners, we reported to the Board that a robust assessment of the principal risks and emerging risks facing the Group had been undertaken. Details of our principal risks are set out on pages 43 to 47. The Board allocated certain principal risks to the Committee and we considered these in detail throughout the year, as described below. From our discussions, we are satisfied that the principal risks that we oversee have received appropriate management attention during the year:

- Business Continuity: the Committee received updates on the status of the continuity risk management of each business, including the impact of the Russia-Ukraine conflict on both our supply chain and operations in particular for the Power Systems business.
- Cyber: at each meeting of our data security committee, cyber security risks are considered together with lessons learnt from incidents and assessment of risk management effectiveness. The cyber security strategy was kept under review during the year.
- Financial Shock: the Committee has reviewed the Group's policies, procedures and controls for identifying, managing and mitigating financial shock. The Group is exposed to a number of financial risks, some of which are of a macroeconomic nature (for example, foreign currency, oil price, interest rates) and some of which are more specific to the Group (for example, liquidity and credit risks).

Internal financial control

The Committee specifically reviews the Group's internal financial controls (see page 42). During 2022, we reviewed the results of self-attestation and testing performed by the internal control and internal audit teams to confirm the effective operation of key financial controls across the Group. We monitored progress against the 2022 financial controls programme to strengthen the financial reporting and compliance controls. We confirmed completion of identified key activities. We also considered the external auditor's observations on the financial control environment.

Effectiveness of risk management and internal control systems

The Committee has conducted a review of the effectiveness of the Group's risk management and internal control systems, including those relating to the financial reporting process. We consider that our review of the risk management and internal control systems, in place throughout 2022 and up to the date of this report, satisfies the requirements of the Code, the DTR and the FRC's guidance on risk management. To support this:

- we monitor changes to regulatory requirements with respect to risk management on an ongoing basis;
- we review relevant policies and procedures and update where necessary, in line with regulatory changes and our perspective on effective approaches to risk management;
- our risk management team and relevant assurance functions, such as internal audit, review key business processes, including long-term contract pack reviews and the budgeting process with periodic reforecasting, identifying key risks and opportunities;
- we assess and monitor management responses to key audit findings, including the design of mitigations and developments to existing controls;
- a defined Anti-Bribery and Corruption policy has been implemented; and
- where necessary, we report to the Board and its committees on key risk and regulatory matters.

During the course of the financial year, any control weaknesses identified through the operation of our risk management and internal control processes were subject to monitoring and resolution in line with our normal business operations.

To further support the enhancement of the existing internal control environment:

- risk management specialists have been assigned to review and monitor the implementation of actions, to ensure these remain appropriate and aligned to the risks to which they relate;
- policies and procedures are subject to review and are updated to align to changes in the underlying control environment; and
- risk owners remain informed of the risks they are accountable for, and their key responsibilities with regards to managing these risks.

In addition, and on an ongoing basis, the Board review the effectiveness of the Group's risk management and internal control system and continues to:

- monitor reports from the Executive Team, relating to their assessment of risks and internal control systems;
- monitor assurance received from the Executive Team regarding compliance to relevant policies;
- monitor assurance received on the effectiveness of the Company's internal control environment;
- review reports from the Audit Committee, Internal Audit function and the external auditor;
- review the Company's response to incidents and threats, including those related to cybersecurity and safety; and
- review information gathered from the Company's formal whistleblowing process.

Where opportunities for improvement were identified, action plans have been put in place and progress is monitored by the Audit Committee.

Going concern and viability statements

Having regard to the net liabilities of £6,016m on the Group's 2022 balance sheet, we paid particular attention to these assessments. With consideration to the available information, the Audit Committee confirms it maintains a reasonable expectation that the Company is able to continue to meet its liabilities as these fall due, over the five year period to 31 December 2027.

We reviewed the processes and assumptions underlying the going concern and viability statements set out on pages 48 to 49, considering in particular:

- the Group's forecast funding position over the next five years;
- the forecasts for material subsidiaries making up this position;
- an analysis of impacts of severe but plausible risk scenarios, ensuring that these included relevant principal risks;
- the impact of multiple risks occurring simultaneously;
- additional mitigating actions that could be taken in extreme circumstances; and
- the current borrowing facilities in place and the availability of future facilities.

As a result, we are satisfied that the going concern and viability statements have been prepared on an appropriate basis.

Internal audit

The director of risk and internal audit regularly attends and reports to the Committee on risk and internal audit matters including:

- identifying key trends and headline findings from internal audit reports issued in the period;
- details of any specific significant findings raised by internal audit that warrant the Committee's attention;
- status of agreed actions arising from internal audit work;
- the plan of internal audit work for the following year; and
- progress against the current year's internal audit plan and any changes to the plan.

I meet the director of risk and internal audit regularly throughout the year to discuss risk matters and the nature of internal audit findings in more depth. We continue to focus on the nature of issues raised by internal audit and the timescales to complete the related actions. The future work plan is risk-based, including risks to both short and longer-term objectives and balancing focus on principal risk areas and on business-as-usual transactional activity where controls are understood to be mature and established. Internal audit also incorporates the activities of our second line assurance functions in their approach. We considered and reviewed the

effectiveness of the Group's internal audit function, including resources, plans and performance as well as the function's interaction with management. Based on the reports and discussion, we are satisfied that the scope, extent and effectiveness of internal audit work are appropriate for the Group and that there is an appropriate plan in place to sustain this.

External audit

PwC were appointed as the Group's external auditor for the financial year, commencing on 1 January 2018, following a formal tender process in 2016. As required by auditor rotation rules, Ian Chambers, who has been the lead audit partner since PwC were appointed, is required to rotate after five years. He will be replaced by Ian Morrison following the completion of the 2022 audit. Other key audit partners are also required to rotate every five years.

The external audit contract will be put out to tender at least every ten years. Any future audit tenders will be carried out in line with the FRC's practice aid for audit committees.

Other than the services detailed below, PwC have no other connection with the Company or its Directors.

2022 audit

The Committee reviewed the quality of the external audit throughout the year and considered the performance of PwC. This year, to support this, the Committee members and senior finance personnel have undertaken an internal evaluation, focusing on a range of factors we consider relevant to audit quality. The findings from this evaluation and agreed actions were reviewed and approved by the Committee in February 2023. Feedback was also received from the auditors on their performance against their own objectives.

Based on these reviews, the Committee concluded that there had been appropriate focus and challenge by PwC on the primary areas of the audit and that they had applied robust challenge and scepticism throughout the audit. Consequently, the Committee has recommended to the Board that they be reappointed at the 2023 AGM.

In November, PwC presented its formal audit plan, which identified its assessment of the key audit risks and the proposed scope of audit work. Reflecting on findings from the half-year review and the developments in the Group, we agreed the approach and scope to be undertaken. Key risks and the audit approach to these risks are discussed in the Independent Auditor's Report (pages 185 to 198), which also highlights the other risks that PwC drew to our attention.

As part of the reporting of the half-year and full-year results, in August 2022 and February 2023, PwC reported to the Committee on its assessment of the Group's judgements and estimates in respect of these risks and the adequacy of the reporting. Where effective to do so, PwC also reported on its assessment of the Group's controls.

I meet with the lead partner regularly throughout the year and the whole Committee has a private meeting with PwC at least once a year.

Members	Nick Luff (Chair) George Culmer Lord Jitesh Gadhia Beverly Goulet
	Biographies are on page 62 to 63
Remit	See page 60

Non-audit services

To safeguard the auditor's independence and objectivity, and in accordance with the FRC's ethical standard, we do not engage PwC for any non-audit services, except where it is work that they must, or are clearly best-suited to, perform. Accordingly, our policy for the engagement of the auditor to undertake non-audit services broadly limit these to audit-related services such as reporting to lenders and grant providers, where there is a requirement by law or regulation to perform the work. All other non-audit services are considered on a case-by-case basis in light of the requirements of the ethical standards and in compliance with our own policy.

Fees paid to PwC are set out in note 7 to the Consolidated Financial Statements on page 137. All proposed services must be pre-approved in accordance with the policy which is reviewed and approved annually. Above defined levels, my approval is also required before PwC is engaged. We also review the non-audit fees charged by PwC on a quarterly basis. Our non-audit services policy can be found at www.rolls-royce.com.

Non-audit related fees paid to the auditor during the year were £1.5m (2021: £1.9m), representing 11% (2021: 14%) of the audit fee. This included £0.7m (2021: £0.7m) relating to the review of the half-year results. Our annual review of the external auditor takes into account the nature and level of all services provided.

Based on our review of the services provided by PwC and discussion with the lead audit partner, we concluded that neither the nature nor the scale of the non-audit services gave any concerns regarding the objectivity or independence of PwC.

Compliance

During 2022, the Company complied with the relevant provisions of The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014, as disclosed within the external audit section.

Nick Luff
Chair of the Audit Committee

REMUNERATION COMMITTEE REPORT

KEY AREAS OF FOCUS IN 2022

- Remuneration of new Chief Executive
- Review of base salaries and incentive metrics
- Global inflationary pressures and cost of living crisis and the impact on wider workforce remuneration

I am pleased to present my first report as Chair of the Committee having joined the Board at an important moment of transition for the Group. I would like to thank my predecessor, Irene Dorner, for her hard work and dedication during her time as Chair of the Committee and for the time and effort that she put in to ensure a smooth handover of responsibilities.

This letter outlines the key decisions taken by the Committee during 2022, both in relation to policy and changes in leadership, with the retirement of Warren East in December 2022 and the appointment of our new Chief Executive, Tufan Erginbilgic, in January 2023. The letter also sets out the impact that the external challenges have had on the Group, with global inflationary pressures and the cost of living crisis leading to several extraordinary reward interventions for the wider workforce.

Business context for 2022

Although our results improved year-on-year there is still much to do to strengthen the balance sheet and achieve our ambition of returning to an investment grade credit rating in the medium term.

In 2022 we faced significant external headwinds including global inflationary pressures, supply chain disruption and the impact of the Russia-Ukraine conflict. Despite this, the management team delivered on their commitments and we consider that this should be fairly recognised. The foundations have been laid for the transformation and recovery to accelerate in 2023 and beyond, as we aim to deliver greater, sustainable value to our shareholders. The external challenges faced in 2022 in turn led to internal challenges with higher than anticipated wage inflation for all of our employee groups. This has had an impact on Group-level operating costs and this is reflected in the 2022 Incentive Plan outturn.

Retirement of Warren East

In February 2022, Warren announced that he would retire from the Board and step down as Chief Executive at the end of the year. I would like to take this opportunity to personally thank Warren for helping me pick up my duties as Chair of the Committee. I would also like to commend Warren on his achievements during his tenure, in particular his leadership during the pandemic.

As a good leaver, the Committee has agreed that the incentive award made to Warren in respect of the 2021 annual Incentive Plan will be fully preserved and that Warren will be eligible to receive the annual Incentive Plan award for 2022 in full. In line with the remuneration policy, the 2021 and 2022 incentives are awarded entirely in deferred shares. Under the current remuneration policy, Warren received 30% of his salary deferred into shares each month. This arrangement started in June 2021 and ended in December 2022. In line with the policy, these awards will vest on a monthly basis starting in June 2023 and end in December 2024. Warren has received no payments for loss of office.

The performance conditions for the LTIP award granted to Warren in 2020 have not been met and this award will formally lapse on the five-year anniversary of the grant in March 2025.

Appointment of new Chief Executive

A key focus for the Committee in 2022 was agreeing the remuneration for the new Chief Executive, Tufan Erginbilgic. The search to replace Warren was international and focused on leaders with proven experience of operating in a global industrial organisation. The global talent pool for potential chief executives is small and consequently very competitive in terms of reward. Tufan's remuneration package was subject to much consideration, with inputs received from our external advisers Willis Towers Watson (WTW), and I am pleased that our policy gave us the necessary flexibility to design a compensation package that is both competitive and strongly aligned to shareholder interests. The reward package for the Chief Executive is in line with the policy, with a maximum total incentive opportunity of 385% of salary, all of which will be paid as deferred shares; 30% of salary paid as shares which will be deferred for two years; and a pension cash allowance of 12%, in line with the wider workforce.

Tufan's base salary is at the upper quartile when benchmarked against other chief executives in the FTSE 100, reflecting his background in private equity and his proven track record for leadership and delivery in complex global industrial organisations. The Committee feels that this salary reflects the complexity of the markets that we operate in, the technology and the ongoing transformation needed to restore the balance sheet and to return Rolls-Royce to an investment grade credit rating. The Committee also considered that the circumstances during Warren's tenure led to him receiving only one pay increase in the last five years of his tenure, resulting in his salary not moving with the market.

Recognising the compensation which Tufan will forego as a result of leaving his previous employment, he will receive two tranches of Rolls-Royce shares, each worth £3.75m at the date of grant, which will be in March 2023. The shares will vest equally in March 2027 and March 2028 and will be subject to malus and clawback conditions. To further strengthen the link between executive remuneration and the interests of shareholders, the Chief Executive's shareholding requirement has increased from 250% to 400% of salary.

The Committee agreed that for 2023 the incentive targets for the Chief Executive will be based solely on in-year targets agreed in early 2023, ensuring that his reward reflects business performance from the start of his tenure. The targets focus on the key drivers of transformational performance which will underpin future strategy.

Remuneration decisions related to 2022

Compliance with the policy

The current remuneration policy was agreed by shareholders at the AGM in 2021 and runs until the end of 2023. Key features of the policy can be found on page 80 and how it operated during 2022 on pages 80 to 81.

Alignment with the wider workforce

To ensure alignment with the wider workforce, the Incentive Plan metrics were cascaded to the wider Group, with c.60% of the global population in scope of an incentive plan that replicated these metrics. When the annual results are announced each year, we communicate directly with colleagues, confirming how business performance has impacted their incentive and how the Incentive Plan structure for Executive Directors flows through to the wider workforce. Regular updates on performance against incentive targets are also shared across the Group during the year.

Incentive outturn in respect of 2022

The Incentive Plan was designed to incentivise the execution of business strategy, and the achievement of personal objectives, weighted 80% towards business objectives and 20% towards personal performance. Incentive metrics for 2022 represent an evolution of the policy, transitioning from a focus on short-term performance in 2021, reflecting the importance of restoring financial stability at the time, to measures which balance short-term and longer-term performance. Our 2022 priorities were cash generation and achievement of targeted disposals to strengthen the balance sheet (aligned with our ambition to return to investment grade credit rating) and profit improvement targeting improved margins, enabled partly through cost base control. The cost base control targets were set to ensure that costs taken out of the business in 2021 endured as load recovered in 2022. The 2022 Incentive Plan metrics can be found on page 86, with 90% of the metrics relating to financial targets which reflects the priority for the Group at this time.

The Executive Team has delivered on its commitments in 2022, despite significant headwinds, achieving business performance in line with budget.

At Group level, adjusted free cash flow was £546m, which was above the maximum target set by the Committee, therefore generating a maximum outturn.

Operating profit for 2022 was above target, led by growth in Civil Aerospace and Power Systems.

Maintaining control over operating costs in an environment of high inflation, including wage inflation, was challenging in 2022. The Group achieved an outturn of between base and target, driven by higher than budgeted pay and benefits in Civil Aerospace and Defence, plus higher indirect costs.

Our key non-financial metric is people engagement, measured by our annual engagement survey delivered by Gallup. I am delighted to see that positive progress was made for the third successive year and that the Group is on-track to achieve top quartile status for manufacturing companies by the end of 2023. In 2022, we achieved 75% participation and a score of 3.85, which was marginally above target.

The Incentive Plan in 2022 comprised two longer-term metrics set at the start of 2021. Cumulative free cash flow was above target, driven primarily by Civil Aerospace cash flow being ahead of target. Net debt reduction was also ahead of target, driven by the completion of four disposals since 2020, including the sale of ITP Aero in 2022, the proceeds from which were used to repay a £2bn loan.

In agreeing the Incentive Plan outturns, the Committee gave consideration to the experience of both internal and external stakeholder groups, in particular our colleagues and our shareholders. These results have been delivered in a year which has seen higher than budgeted wage settlements and a number of extraordinary reward interventions to support colleagues with the cost of living crisis.

In line with our established approach, and as emphasised during the consultation with shareholders in 2021, the formulaic outturns have been carefully reviewed and discretion applied to adjust for items which do not appropriately reflect underlying business performance and to ensure that the incentive target and outturn are comparable. We also make adjustments for disposals and business structure changes.

Once these adjustments were made, this resulted in an Incentive Plan outturn of 131% (75% of maximum). When personal performance was taken into account, this led to a weighted outturn of 129% for Warren. The Committee believes that this outturn is deserving and recognises Warren's steadfast focus to deliver throughout a turbulent and demanding period, as well as an excellent handover of executive responsibility to Tufan. The weighted outturn for Panos Kakoullis was 129%. The Committee took into account the fact that the incentive will be delivered fully in shares with vesting dates in 2026 and 2027 and the deferral of salary into shares on a monthly basis, therefore aligning the interests of the Executive Directors with the interests of the shareholders. Incentive payments will also be made to all eligible employees across the Group, reflecting the achievements of 2022.

Wider workforce

Global inflationary pressures created cost of living pressures for our people across many of our global locations. We have also observed extremely competitive talent markets. These factors have led to some specific reward interventions during 2022.

In the early part of 2022, the annual salary review process took place for our global leadership population, with an average increase of 3%. Towards the end of the first quarter, as inflation started to rise, it became clear that salary budgets would need to be revised upwards. The UK negotiated increase was settled at 6.5% and the UK average salary increased by 5.7% during 2022. This has impacted operating costs across the Group but was appropriate given the circumstances.

To help balance a need to support colleagues and to protect the financial position of Group, one-off payments have been paid to supplement consolidated pay increases: £1,500 payment was made to UK represented colleagues in October 2022, along with a 6.5% increase to base pay, and £2,000 was made to the most junior level of leaders in our UK population.

In Germany, a tariff deal was agreed which covered the period from October 2022 to September 2024 and provides an increase of 5.2% from June 2023 and 3.3% from May 2024. It also provides two one-off payments of €1,500 each, paid over two years.

As an organisation we continue to have a strong focus on diversity and inclusion, believing that having a diverse, equitable and inclusive workforce makes us a stronger company. We have voluntarily published our UK ethnicity pay gap for the second time in 2022, following the gender pay gap reporting methodology and I am pleased to report that both our gender and ethnicity pay gaps have reduced in 2022. We continue to focus on increasing diverse talent and have structured development programmes in place to help retain and develop diverse talent. Over time these strategies will reduce our pay gap further as we increase representation, particularly in senior roles.

Incentive targets for the three-year period to 2025

Incentive targets for the three-year period to 2025 will be set following the strategic review. These targets will align with our transformation programme and will support the delivery of a high quality and competitive business, focused on profitable performance and operational efficiency; improving sustainable cash flows; and a strong balance sheet and growing shareholder returns.

Summary implementation of the remuneration policy in 2023

Salary review

The Committee has reviewed the salary for the Chief Financial Officer and has concluded to make an award of 4% from 1 March 2023. This is below the average annual base pay increase for the wider management population and reflects prevailing wage inflation in the UK for this role. The Committee also considered the fact that Panos Kakoullis received a 2.5% increase in 2022 in line with the UK management population, while increases for the wider workforce were substantially higher than this. Base pay increases for the wider UK workforce are subject to negotiation and increases for 2023 have not yet been agreed.

Incentive Plan operation

The targets set in respect of the Incentive Plan for 2023 are set out in the Remuneration report. The 2023 incentive for Panos Kakoullis as set out in the policy comprises a 50%/50% combination of short and long-term metrics. The Committee agreed that Tufan Erginbilgic should be incentivised only on business performance during his tenure and so will be 100% based on in-year metrics.

Remuneration Committee advisers

During 2022, the Committee had access to advice from WTW. Total fees for the advice provided to the Committee during the year by WTW were £108,200 (2021: £26,000 by WTW and £47,800 by Deloitte). Fees are based on a time and materials basis. WTW also provided human capital and benefits services to the Company. No Directors have a connection to WTW.

The Committee requests that WTW attend meetings periodically during the year. The Committee is exclusively responsible for reviewing, selecting and appointing its advisers and is satisfied that the advice it has received has been objective and independent and that there is no conflict of interest associated with any advice provided. WTW is a member of the remuneration consulting group and, as such, voluntarily operates under the code of conduct in relation to executive remuneration consulting in the UK.

Members	Lord Jitesh Gadhia (Chair) George Culmer Beverly Goulet Sir Kevin Smith
	Biographies are on pages 62 to 63
Remit	See page 61

Summary

I have been delighted to join the Board as Chair of the Committee this year and am energised by the agenda that is being laid out for the future.

We are now in the third year of the remuneration policy and I am pleased that it has allowed us to support the business through the challenges of COVID-19, in particular the ability to align the interests of our management team with those of our shareholders. I look forward to engaging with shareholders during the course of 2023 to discuss a new policy in support of our 'winning together' transformation programme and our future priorities.

Lord Jitesh Gadhia
Chair of the Remuneration Committee

Remuneration at a glance

This section provides a summary of the remuneration policy (and its implementation) that was approved by a binding shareholder vote at the 2021 AGM on 13 May 2021 (see page 95). The policy is designed to attract, retain and incentivise our leaders within a framework that is aligned to our strategy and the interests of our stakeholders. The full policy can be found at www.rolls-royce.com

Summary of our remuneration policy

Fixed pay

- Base salary
- Benefits
- Pension

Variable pay

Rolls-Royce Incentive Plan

80% Group performance			20% personal performance
Annual financial metrics 2022 – profit, cash, cost base control 2023 – profit, cash, operating cost, operating profit margin	Long-term metrics 2022 – cumulative cash (two-year), net debt reduction 2023 – cumulative cash (three-year), TSR, CO_2 sustainability	Annual non-financial metric: people	Goals and leadership behaviours

All awards to be made at the end of the performance period in shares
40% settled after three years and 60% after four years

Malus and clawback – incentive awards are subject to malus and clawback provisions where there has been a material misstatement of audited results; serious financial irregularity; material financial downturn or an event causing a material negative impact on the value of the Group; material failure of risk management; a serious breach of Our Code; individual misconduct or actions that materially damage the Group; a breach of or inadequate response to a significant HSE or other environmental issue; failure to adequately manage/supervise others which in turn led to one of the above triggers; and/or materially incorrect calculation of an award. These provisions apply from the start of the performance period to three years after date of grant or the settlement date, if later.

Shareholding requirement – in line with the Rolls-Royce shareholding requirements policy, Executive Directors are required to establish and maintain a level of share ownership in proportion to a percentage of base salary. The share-holding requirement is 400% for the Chief Executive (250% before 1 January 2023) and 200% for the Chief Financial Officer. Executive Directors are also required to retain the lower of their shareholding requirement or their actual shareholding at the date of leaving for 12 months after leaving and then half of that amount for the following 12 months.

Executive Directors summary policy and implementation table

Base salary	
Purpose and link to strategy	To attract and retain individuals of the right calibre to develop and execute the business strategy.
Key features	Salaries are reviewed annually but not necessarily increased. Decisions on salary are informed but not led by reference to companies of a similar size, complexity and international reach. 30% of salary for the Chief Executive and 20% for the Chief Financial Officer is delivered in deferred shares.
Implementation in 2022	A salary increase of 2.5% was awarded to both Executive Directors. This is in line with the average increase for the UK management population, and significantly lower than the average increase for wider workforce. Throughout 2022, 30% of salary for the Chief Executive and 20% for the Chief Financial Officer was deferred into shares for two years.
Planned implementation in 2023	Given the recent appointment of the Chief Executive, no salary adjustment is proposed in 2023. A salary increase of 4% for the Chief Financial Officer is proposed, effective 1 March 2023, lower than the increase for the wider management population.
Benefits	
Purpose and link to strategy	To attract and retain individuals of the right calibre to develop and execute the business strategy.
Key features	Benefits may include car allowance and related costs, financial planning assistance, private medical insurance, life assurance and other appropriate benefits at the discretion of the Committee.
Implementation in 2022	No changes to benefits.
Planned implementation in 2023	No changes to benefits.

Executive Directors summary policy and implementation table (continued)

Pension

Purpose and link to strategy	To attract and retain individuals of the right calibre to develop and execute the business strategy.
Key features	Executive Directors are offered membership of a defined contribution plan. A cash allowance may be payable in lieu of pension contributions. The maximum contribution is 12% of base salary only, in line with the rate offered to the wider UK workforce.
Implementation in 2022	Pension contribution/allowance of 12%, in line with the rate for the wider UK workforce.
Planned implementation in 2023	No changes to pension contribution/allowance of 12%.

Rolls-Royce Incentive Plan

Purpose and link to strategy	To incentivise the execution of the business strategy, delivery of financial targets and the achievement of personal objectives.
Key features	Maximum opportunity is 385% (220% target) for the Chief Executive and 333% (190% target) for the Chief Financial Officer. Targets are set based on Group financial performance and individual performance and may include both annual and long-term metrics. Non–financial metrics may also be included. All of the incentive is deferred into shares, 40% for three years and 60% for four years. The Committee may apply discretion to any formulaic outturn. The Incentive Plan is subject to malus and clawback.
Implementation in 2022	An outturn of 129% of target for the Chief Executive and 129% of target for the Chief Financial Officer. All deferred into shares, 40% held for three years and 60% for four years.
Planned implementation in 2023	The incentive for the newly appointed Chief Executive will be weighted 80% towards annual Group metrics, and 20% on personal performance. The incentive for the Chief Financial Officer will be weighted 80% based on Group metrics, of which 50% is weighted toward annual metrics and 50% long-term metrics. The remaining 20% of incentive is based on personal performance.

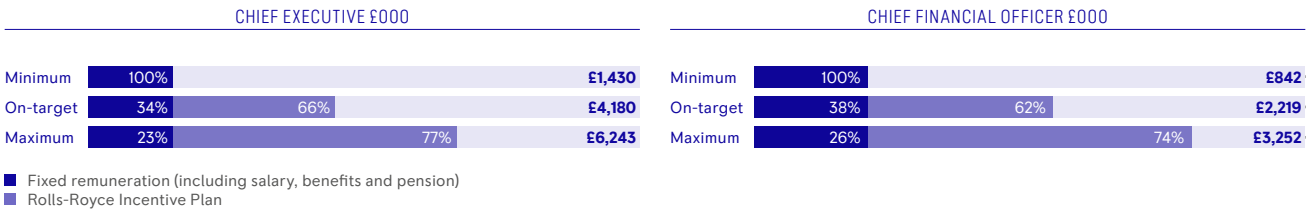
Annual metric	Chief Executive weighting	Chief Financial Officer weighting
Free cash flow	40%	20%
Operating profit	20%	10%
Key strategic objectives [1]	30%	15%
People	10%	5%
Weighting for 12 month targets	**100%**	**50%**
Long-term metrics		
Cumulative cash (three-year)		20%
Total shareholder return		25%
CO_2 sustainability [2]		5%
Weighting for longer-term three year metrics		**50%**

Shareholding requirement

Purpose and link to strategy	To align the interests of Executive Directors to those of shareholders by requiring Executive Directors to build a high level of personal shareholding in the Company during their employment and for a specified post-employment holding period.
Key features	Shareholding requirement of: Chief Executive – 250% (400% from 1 January 2023) Chief Financial Officer – 200%
Implementation in 2022	Shareholdings as a % of salary as at 31 December 2022: Chief Executive – 281% Chief Financial Officer – 97%

[1] The key strategic objectives will align to the wider transformation programme and will be weighted 50% to operating cost and 50% to operating profit margin
[2] CO_2 sustainability will be an average of the individual business targets, which are mainly based on product compatibility with sustainable fuels

Remuneration policy – performance scenarios for 2023



Minimum – fixed remuneration (salary including salary deferred into shares, pension, benefits), no incentive award
On-target – fixed remuneration, on-target incentive award (57% of maximum)
Maximum – fixed remuneration, maximum incentive award (100% of maximum)
There is no share price impact as incentive awards are granted following the end of the performance period

Alignment with strategy and business performance

Executive Directors' remuneration is strongly linked to strategic performance and in particular the commitments made to shareholders as part of the recapitalisation in 2020. Incentive metrics for 2022 represent an evolution of the policy, transitioning from focusing on short-term performance in 2021, which reflected the importance of restoring financial stability at that time, to measures which balance short and longer-term performance. The key measures which reflect our 2022 priorities of cash generation and a strengthened balance sheet are shown below, together with their impact on 2022 incentive outturns:

Annual metrics and weighting:

Underlying operating profit/(loss) (20%) *	Free cash flow (20%) *	Operating costs (10%) *
£618m	£546m	£(5,355)m
152% of target incentive	175% of target incentive	62% of target incentive

Long-term metrics (set at the start of 2021) and weighting:

Cumulative free cash flow (2 year) (20%) *	Net debt reduction (20%) *
£(1,203)m	£(1,404)m
118% of target incentive	124% of target incentive

* Adjusted performance metrics (see page 87)

In addition, the people score is measured as part of the incentive, which delivered 108% of target incentive (see page 86 for further detail).

The overall Group outturn of 131% after discretion was applied by the Committee (see page 78). The Committee considers this a fair outcome given the challenging business context.

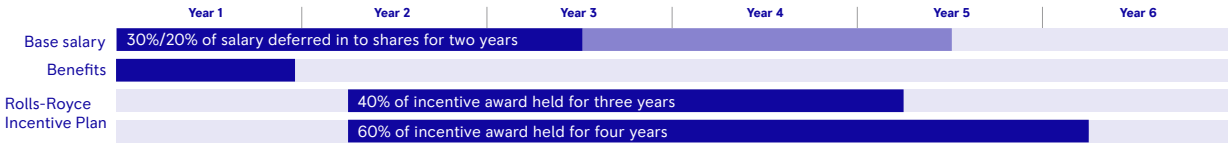
Looking forward, we plan to continue to tailor the incentive metrics to align with the strategic focus of the business. For 2023, our hybrid incentive structure includes in-year performance measures and longer-term three-year performance measures. The long-term metrics are cash, TSR and product related CO_2 sustainability. All of these targets were agreed in 2021, and were intended to form 50% of the weighted outturn for any incentive payable in 2023. This structure will apply to the Chief Financial Officer in 2023, but the incentive targets for the Chief Executive will be based solely on in-year targets agreed in January 2023. The in-year targets have been reviewed and will focus on the key drivers of transformational performance, which will underpin future strategy and which have been agreed by the Committee. Operating cost and operating profit margin will be included as key strategic performance measures, each with a relative 15% weighting in respect of the in-year performance measures for the Chief Executive and 7.5% for the Chief Financial Officer.

Alignment with shareholders

The policy has been designed to ensure alignment with shareholders through a significant part of the overall reward package being delivered in shares with long holding periods:

— 30% of salary for the Chief Executive and 20% for the Chief Financial Officer is deferred into shares for two years; and

— all incentive awards are delivered in shares in March following the performance year, 40% held for three years and 60% for four years. No cash incentive has been awarded for 2022 and this will continue for the life of the policy.



Alignment with the wider workforce

The Remuneration Committee considers a range of factors when deciding upon the remuneration for Executive Directors, one of which is the alignment with reward practices across the wider workforce. In implementing the current policy, the Committee took the opportunity to ensure a cascade of the policy down the organisation, in particular the incentive design and metrics and the alignment of UK pension contribution rates.

	Base salary	Benefits	Pension	Rolls-Royce Incentive Plan
Executive Directors	Base salary is typically set with reference to the market and wider workforce considerations. In 2022, annual increases were significantly lower than those which were negotiated for the wider workforce, particularly in the UK.	Benefits are set according to local market practice in that country. In many countries, voluntary benefits are also offered to all employees.	Pension contributions (or equivalent cash allowances) are set at 12% across the UK workforce.	Incentive Plan linked 80% to business performance and 20% to individual performance. Delivery of all or part of the incentive awards into deferred shares. All incentive awards delivered in deferred shares for Executive Directors. Longer-term metrics in addition to annual metrics in the plan from 2022 onwards.
Executive Team				
Enterprise Leadership Group				
Management				Incentive Plan linked to both business and personal performance (weighting varies by level). Same annual metrics as the Incentive Plan. Some groups may also receive a long-term incentive grant for market or retention purposes.
Wider workforce	In some jurisdictions, base salary levels are subject to negotiation with recognised trade unions and/or are set in line with market require-ments. Annual increases are also subject to negotiation.			The majority of employees globally participate in an annual incentive plan, for which the Incentive Plan plan metrics and targets are usually applied.

The Company engaged with its workforce on the changes to the Executive Directors' policy in 2021 and provided opportunities to give feedback via existing communication channels. The Company also communicated how the Incentive Plan metrics for the Chief Executive and the Chief Financial Officer cascade to the wider workforce, therefore providing alignment throughout the vast majority of the organisation. More context is provided in the Committee Chair's letter on pages 78 to 79.

Provision 40 factors

When developing the remuneration policy and considering its implementation for 2022, the Committee was mindful of the Code and considers that the executive remuneration framework appropriately addresses the following factors:

Clarity	We provide open and transparent disclosures regarding our executive remuneration arrangements. We made these arrangements transparent through disclosure in the 2020 Annual Report, before the policy was implemented, as well as consulting with our largest shareholders and proxy agencies.
Simplicity	Remuneration arrangements for our senior leadership and our wider workforce are simple in nature and well understood by both participants and shareholders. Consultations with our shareholders enabled us to explain the context for the bespoke approach to executive remuneration and why it was appropriate for Rolls-Royce in the challenging circumstances. Our shareholders gave us valuable feedback to enable us to finalise the policy and we have received a good level of support for both the overall approach and the detailed policy.
Risk	The Committee considers that our variable pay structure does not encourage inappropriate risk-taking. The incentive structure introduced in 2021 reduced the maximum award and resulted in the incentives being delivered fully in shares. All awards are ultimately determined by the Committee after the end of the performance period and discretion may be applied.
Predictability	Our remuneration policy contains details of maximum opportunity levels for each component of pay, with actual incentive outcomes varying depending on the level of performance achieved against specific measures.
Proportionality	The metrics used to measure performance for incentive awards drive behaviours that are closely aligned to our vision and strategy. In particular, our variable pay arrangements continue to focus on delivering the Group's priorities. The incentives are subject to the achievement of stretching performance targets and the Committee's holistic assessment of performance that can result in the application of discretion. The use of holding periods, the deferral of a proportion of salary into shares with holding periods and our shareholding requirements (including after leaving employment with Rolls-Royce) provide a clear link to the ongoing performance of the business and, therefore, alignment with shareholders. Malus and clawback provisions also apply to the Incentive Plan.
Alignment to culture	The devastating impact of COVID-19 on the aerospace sector forced the Committee to review the remuneration policy in 2020 to ensure that it was right for the circumstances and supported the necessary restructure and recovery required to secure future growth. As such, a bespoke solution was developed and tailored to the specific challenges facing the Group. The policy was aimed at retaining talent, placing emphasis on short-term performance turning into longer-term growth, emphasising shares and long-term holding of those shares and ensuring alignment between Executive Directors and the wider organisation. To ensure alignment to the wider organisation, we introduced a new Incentive Plan, reduced maximum potential awards and reduced pension contributions. To ensure alignment to shareholders, we delivered incentives fully in shares and deferred salary into shares.

REMUNERATION REPORT FOR 2022

Executive Directors' remuneration

The following pages show how we have applied our remuneration policy during 2022 and disclose all elements of remuneration received by our Executive Directors. Details of remuneration received by our Non-Executive Directors during 2022 can be found on page 94.

Executive Directors' single figure of remuneration (audited)

	Salary (a) £000		Salary as deferred shares £000		Benefits (b) £000		Incentive Plan (c) £000		Long-Term Incentive Plan (d) £000		Pension (e) £000		Total remuneration £000		Total fixed remuneration £000		Total variable remuneration £000	
	2022	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Warren East	**674**	760	**289**	165	**17**	16	**2,739**	2,896	**–**	–	**116**	113	**3,835**	3,950	**1,096**	1,054	**2,739**	2,896
Panos Kakoullis *	**555**	374	**139**	79	**26**	11	**1,705**	1,200	**–**	–	**83**	54	**2,508**	1,718	**803**	518	**1,705**	1,200

* Panos Kakoullis was appointed on 3 May 2021

a) Salary (audited)

The Company provides suitable competitive salaries to attract and retain individuals of the right calibre to develop and execute the business strategy.

Discrepancies between single figure of remuneration salary and base salary:

- from June 2021, 30% of Warren East's salary and 20% of Panos Kakoullis' salary is deferred into shares for two years. The shares are not subject to performance conditions, nor conditional on continued employment. However, if the Executive Director is summarily dismissed as a result of their actions or the result of actions of others acting under their instruction, the shares will immediately lapse; and
- in 2021, Warren East took five days' unpaid leave, in line with employees in Head Office.

In February 2023, the Committee reviewed the base salary of Panos Kakoullis and agreed an increase of 4% which will be lower than the wider workforce, with effect from 1 March 2023.

	Base salary as at 1 March 2023	Base salary as at 1 March 2022
Warren East	**n/a**	£967,088
Panos Kakoullis	**£724,880**	£697,000

b) Benefits (audited)

Benefits are provided to ensure that remuneration packages remain sufficiently competitive to attract and retain individuals of the right calibre to develop and execute the business strategy and to enable them to devote themselves fully to their roles. The taxable value of all benefits paid to Executive Directors is shown below.

	Car or car allowance £000		Medical insurance £000		Travel and subsistence £000		Tax benefit £000		Total £000	
	2022	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Warren East	**15**	15	**1**	1	**–**	–	**–**	–	**16**	16
Panos Kakoullis	**15**	10	**1**	1	**8**	–	**2**	–	**26**	11

c) Rolls-Royce Incentive Plan (audited)

The Rolls-Royce Incentive Plan is designed to incentivise the execution of the business strategy, delivery of financial targets and the achievement of personal objectives. Incentive Plan awards are made in March each year, following the performance period. All of the incentive is deferred into shares, 40% for three years and 60% for four years, and include the right to receive an amount equal in value to the C Shares issued during the deferral period. The shares are conditional on continued employment but do not have further performance conditions. The annual maximum for the Chief Executive is 385% of salary and 333% for the Chief Financial Officer.

- 80% of the award is based on Group performance; and
- 20% of the award is based on individual performance.

The Committee reviewed the 2022 outturn against the performance measures.

2022 Rolls-Royce Incentive Plan performance outturn

	Weighting	Threshold [1] (50% outturn)	Target (100%)	Maximum [1] (175%)	Performance pre-discretion	Performance [2] post-discretion	% of target	% of maximum
Annual Targets								
Free cash flow	20%	£2m	£227m	£452m	£505m	£546m	175%	100%
		Actual £546m						
Operating profit	20%	£279m	£479m	£679m	£652m	£618m	152%	87%
		Actual £618m						
Cost base control	10%	£(5,403)m	£(5,203)m	£(5,003)m	£(5,439)m	(£5,355m)	62%	35%
		Actual (£5,355m)						
People	10%	3.73	3.84	3.93	3.85	3.85	108%	62%
		Actual 3.85						
Weighting for 12 month targets	**60%**							
Longer-term targets								
Cumulative free cash flow (2 year)	20%	£(1,950)m	£(1,350)m	£(750)m	£(917)m	(£1,203m)	118%	68%
		Actual (£1,203)						
Net debt reduction	20%	£(2,325)m	£(1,625)m	£(925)m	£(1,404)m	(£1,404m)	124%	71%
		Actual (£1,404)						
Weighting for 2 year targets	**40%**							
Total scorecard outcome								

[1] Payout between threshold and target, and target, and maximum, is calculated on a straight line sliding scale
[2] Discretion applied to underlying performance metrics to ensure that incentive target and outcome are comparable

The Committee applied discretion to adjust the formulaic outturn for a number of items which they felt were not reflective of underlying business performance. As a result of these adjustments, the overall Group outturn is 131% of target, 75% of the maximum.

	Warren East	Panos Kakoullis
Group performance (% of maximum) – weighting 80%	75%	75%
Individual performance (% of maximum) – weighting 20%	69%	69%
Actual award – % of maximum	74%	74%
Actual award – % of salary	283%	245%
Actual award – £000	£2,739	£1,705

All of the incentive outturn was delivered in deferred shares, 40% for three years and 60% for four years, and for Panos Kakoullis, and will vest subject to continued employment. No further performance conditions are attached.

Definitions used for performance measures:

Profit – adjusted underlying operating profit before tax for 2022.

Cash – adjusted free cash flow.

Operating cost – adjusted Group operating costs (which exclude direct procurement of parts and components).

People – measured through our annual Gallup Q12 survey. 75% of employees completed the survey and we achieved a Group score of 3.85 exceeding our target of 3.84. This was a meaningful improvement and we remain on track to achieve top quartile in 2023.

Individual performance

Subject to achievement of a minimum financial threshold, the Executive Directors have 20% of their incentive based on the achievement of their personal objectives. The financial threshold for 2022 was to ensure that Group operating costs did not exceed £5,403m. Personal performance objectives are set at the beginning of the year and are aligned with the Group's priorities.

For Executive Directors, these have included:

- deliver on cash and profit targets;
- support customers by meeting delivery and quality targets;
- drive simplicity and efficiency, measured by tracking resource level against external benchmarks;
- drive diversity through inclusivity, aiming for a Gallup Q12 score of 3.84;
- drive sustainability roadmap by transitioning investment towards net zero technologies;
- deliver health and safety targets and change the focus from lagging to leading indicators;
- support the Board on Chief Executive succession; and
- strengthen risk management and internal controls.

The Committee assesses performance against the objectives. The overall assessed percentage is based on the Committee's judgement and may include other factors and achievements in the year.

Both Warren East and Panos Kakoullis led the Group to deliver on financial commitments, navigating inflationary pressures and supply chain challenges. Key achievements include:

- delivery of financial commitment, including growth in revenue and profitability and a return to positive cash flow despite slower than planned engine flying hour recovery, global inflationary pressures and supply chain disruptions;
- completion of the programme of disposals, achieving £2bn in total proceeds which was used to repay debt;
- completion of the internal restructuring programme ahead of schedule;
- extensive supply chain disruption managed effectively to protect customers wherever possible;
- continued delivery of strong year-on-year improvement on engagement, achieving an above target result on the Gallup Q12 engagement survey;
- health and safety targets met, with a 5% decrease in total recordable injuries when compared to 2021, and the safety index performance showing improvements; and
- exceptionally professional and diligent handover of responsibility to the incoming Chief Executive by Warren East.

d) Rolls-Royce Long-Term Incentive Plan (audited)

Prior to 2021, conditional share awards were made to Warren East under the LTIP to reward the execution and development of the business strategy over a three-year performance period. The conditional shares are then subject to a further two-year holding period.

2020 LTIP awards

The following sets out details in respect of the March 2020 LTIP award for which the final year of performance was the 2022 financial year. The performance conditions were assessed to the end of 2022 and were not met. The performance adjustment will be made on the three-year anniversary of the grant, in March 2023, and the award will formally lapse on the original vesting date in March 2025.

	Weighting	Threshold (20% vesting)	Mid (50% vesting)	Maximum (100% vesting)	Performance achieved	Vesting as a % of maximum
CPS	60%	162p	203p	244p	(68p)	0%
EPS	20%	85p	106p	127p	(65p)	0%
Relative TSR v FTSE 100 constituents	10%	Median		Upper quartile	Below median	0%
Relative TSR v constituents of the S&P Global Industrials index	10%	Median		Upper quartile	Below median	0%
						Total vesting of 0%

e) Pensions (audited)

Executive Directors are offered membership of a defined contribution plan. A cash allowance may be payable in lieu of pension contributions. From 1 January 2021, all Executive Directors are offered a maximum employer contribution of 12% of salary into the defined contribution pension plan (or cash allowance of equivalent value). This aligns to the average rate for the UK workforce. Executive Directors do not have a prospective entitlement to a defined benefit pension.

In 2022, Both Warren East and Panos Kakoullis received a cash allowance in lieu of pension contributions.

Payments to past directors (audited)

Jasmin Staiblin stepped down as a Non-Executive Director from the Board on 13 May 2021. She was appointed as a member of the supervisory board of Rolls-Royce Power Systems AG on 10 June 2021 and chair of the supervisory board, executive committee, audit committee and mediation committee of Rolls-Royce Power Systems AG on 11 June 2021. Payments of £300,200 have been made to Jasmin in 2022 in relation to her appointment (2021: £109,300). No other payments have been made to past directors during the year.

Payments for loss of office (audited)

Warren East stepped down from the Board and retired from the Group on 31 December 2022. He received no payments for loss of office.

Implementation of remuneration policy for 2023

Base salary

Base salaries are: Tufan Erginbilgic – £1,250,000; Panos Kakoullis – £724,880.

30% of Tufan Erginbilgic's salary and 20% of Panos Kakoullis' salary is deferred into shares for two years.

Benefits

There will be no change to our approach to benefits in 2023, which includes car allowance, financial planning assistance, insurances and other benefits.

Pensions

The pension cash allowance for Tufan Erginbilgic and Panos Kakoullis is 12% of salary, in line with the rate applied to the wider UK workforce.

Rolls-Royce Incentive Plan

In line with the policy, since 2021, the Rolls-Royce Incentive Plan has been implemented in place of the previous bonus and LTIPs in operation over the last policy period. This will continue in 2023 and any awards will be made based on 80% Group performance and 20% individual performance. The maximum incentive opportunity for Tufan Erginbilgic will be 385% of salary and for Panos Kakoullis will be 333% of salary. Any incentive payable will be delivered in shares. If shareholding requirements are not met at the point of vesting, Executive Directors may only dispose of up to 50% of shares vesting.

In 2021, the Incentive Plan focused on short-term measures which incentivised pace of action at a time of market uncertainty, but incorporated longer-term cumulative measures in 2022 and 2023. For 2022, the Group's measures and weightings were:

- annual targets:
  - free cash flow (20%)
  - operating profit (20%)
  - cost base control (10%)
  - people (10%)
- long-term targets:
  - cumulative cash flow (two year) (20%)
  - net debt reduction (20%)

For 2023, the Incentive Plan metrics will combine annual and longer-term metrics for the Chief Financial Officer and annual metrics only for the Chief Executive. The Committee agreed that it was appropriate for the Chief Executive's 2023 incentive to be measured only on business performance during his tenure.

Implementation of remuneration policy for 2023 continued

Rolls-Royce Incentive Plan

Where targets are set with a one-year performance period, these are considered to be commercially sensitive and will be disclosed following the end of the performance period, along with performance against targets and the details and context for the assessment of performance. The Committee can disclose the following:

2023

Metrics	Weighting Chief Executive	Weighting Chief Financial Officer	Threshold (50% outturn)	Target (100%)	Maximum (175%)
Annual targets (50%)					
Free cash flow	40%	20%	Performance targets will be disclosed following the end of the performance period		
Operating profit (£)	20%	10%			
People	10%	5%			
Key strategic objectives [1]	30%	15%			
Long-term targets (50%)					
Cumulative cash (three-year) [2]	n/a	20%	£(1,670)m	£(770)m	£(130)m
Relative TSR (50% versus the FTSE 100 constituents and 50% versus the S&P global industrials index constituents)	n/a	25%	Median triggers threshold vesting and upper quartile maximum		
CO_2 sustainability [3]	n/a	5%	An average of the individual business targets, which are based in the main on product compatibility with sustainable fuels		

[1] The key strategic objectives will align to the wider transformation programme and will be weighted 50% to operating cost and 50% to operating profit margin
[2] The targets were set in early 2021 based on the business forecasts at that time
[3] CO_2 sustainability will be an average of the individual business targets, which are mainly based on product compatibility with sustainable fuels

2023 is the third year of our policy and so we will be consulting with shareholders during 2023 on a new policy which will be effective 1 January 2024 and subject to shareholder approval at the Annual General Meeting in May 2024. Although the construct of this policy is not known at this time, performance metrics with a three-year performance period (ending 31 December 2024) have been set to enable continuity of reward for rolling periods of long-term performance. The extent to which these targets will apply to the Chief Executive will form part of the policy consultation. These targets are illustrated below.

2024

Metrics	Weighting	Minimum	Targets	Maximum
Long-term targets (45%)				
Cumulative cash (three-year) *	10%	£874m	£1,774m	£2,674m
Cumulative operating profit	10%	£1,705m	£2,305m	£2,905m
Relative TSR (three-year)	25%	Median triggers threshold vesting and upper quartile maximum		

* The targets were set in early 2022 based on the business forecasts at that time

The Committee may make appropriate adjustments and use judgement in assessing performance outcomes. It retains its overriding ability to apply discretion to adjust any formulaic outcome to ensure that the final outcome is fair and justified in the context of the overall performance of the business.

The Incentive Plan opportunities and time horizons will operate as per the remuneration policy.

Compensation for remuneration forfeited from previous employment

Tufan Erginbilgic became Chief Executive on 1 January 2023 and in line with the remuneration policy will be compensated for remuneration forfeited from previous employment. This compensation will be in the form of a grant of Rolls-Royce Holdings plc shares to the value of £7.5m. The award of shares will be made in March 2023 and the number of shares subject to the award will be calculated using the average closing share price during the month prior to joining (December 2022); 50% of the award will vest in March 2027 and 50% in March 2028, subject to continued employment. The award will be subject to the Rolls-Royce malus and clawback policy. In recognition of the award of shares, the shareholding requirement for the Chief Executive has increased to 400% of salary.

Executive Directors' shareholdings and share interests

Executive Directors' share interests (audited)

The Directors and their connected persons hold the following interests in the ordinary shares of the Company:

	Ordinary shares owned outright		Conditional shares not subject to performance conditions (salary as deferred shares)		Conditional shares not subject to performance conditions (Incentive Plan)		Conditional shares subject to performance conditions (LTIP)	
	23 February 2023	31 December 2022	**23 February 2023**	31 December 2022	**23 February 2023**	31 December 2022	**23 February 2023**	31 December 2022
Warren East	**1,339,905**	1,339,905	**466,859**	466,859	**3,177,200**	3,177,200	**–**	2,976,113 *
Panos Kakoullis	**–**	–	**234,167**	223,931	**1,316,606**	1,316,606	**–**	–

* All LTIP awards will lapse on the five-year anniversary of the award date, see LTIP 2018, 2019 and 2020 section below for further explanation

Executive Directors' share awards (audited)

The following sets out details of share awards that were granted, outstanding and vested during the year:

Warren East	Balance at 31 December 2021	Granted during the year	Vested during the year	Lapsed during the year	Balance at 31 December 2022	Date of grant	Market price at date of grant (p)	Date of vest/lapse	Market price at date of vest/lapse (p)	Face value of award (£000)
Salary as deferred shares	137,969	328,890	–	–	466,859	22/12/22	various	22/12/24	–	289
2021 Incentive Plan	–	3,177,200	–	–	3,177,200	08/03/22	91.15	08/03/26	–	2,896
LTIP 2017	435,426	–	435,426	–	–	05/05/17	820.17	05/05/22	83.78	–
LTIP 2018	801,536	–	–	–	801,536	08/03/18	857.47	08/03/23	–	–
LTIP 2019	770,793	–	–	–	770,793	15/03/19	891.67	15/03/24	–	–
LTIP 2020	1,403,784	–	–	–	1,403,784	16/03/20	489.60	16/03/25	–	–
Deferred share bonus 2019 award	210,230	–	210,230	–	–	16/03/20	489.60	16/03/22	95.71	–

Panos Kakoullis	Balance at 31 December 2021	Granted during the year	Vested during the year	Lapsed during the year	Balance at 31 December 2022	Date of grant	Market price at date of grant (p)	Date of vest/lapse	Market price at date of vest/lapse (p)	Face value of award (£000)
Salary as deferred shares	65,900	158,031	–	–	223,931	22/12/22	various	22/12/24	–	139
2021 Incentive Plan	–	1,316,606	–	–	1,316,606	08/03/22	91.15	08/03/26	–	1,200

Salary as deferred shares

30% of Warren East's salary and 20% of Panos Kakoullis' salary was deferred into shares for two years. During 2022, shares were awarded on a monthly basis from January to December at market price under the rules of the Incentive Plan (the date of grant in the table above is the last grant made in 2022). These shares will vest on a monthly basis from January 2024 (the date of vest/lapse in the table above is the vest date of the last grant made in 2022). The face value has been determined using the market price of each monthly award in 2022 (see below). The shares are not subject to performance conditions, nor conditional on continued employment. However, if the Executive Director is summarily dismissed as a result of their actions or the result of actions of others acting under their instruction, the shares will immediately lapse.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
115.5p	106.08p	110.14p	82.38p	86.44p	81.81p	87.37p	80.53p	69.23p	76.34p	90.85p	91.12p

2021 Incentive Plan

Both Warren East and Panos Kakoullis were granted an award of shares under the Incentive Plan in March 2022 in respect of the 2021 financial year. Warren East's award represented 306.9% of his salary and Panos Kakoullis' award represented 176.4% of his salary. 40% of each award is deferred for three years (vesting on 8 March 2025) and 60% for four years (vesting on 8 March 2026). The face value of each award has been determined using the three-day average closing share price to 8 March 2022. The shares are conditional on continued employment but are not subject to performance conditions. The performance outturn was assessed before the award was granted.

LTIP 2018, 2019 and 2020

Warren East was granted LTIP awards in 2018, 2019 and 2020. The performance conditions of each award were assessed to the end of 2020, 2021 and 2022 respectively and were not met. The performance adjustment has been/will be made on the three-year anniversary of the grant and the awards will formally lapse on the five-year anniversary of the grant (8 March 2023, 15 March 2024 and 16 March 2025 respectively).

Executive Directors' shareholding requirements (audited)

In line with the Rolls-Royce shareholding requirements policy, Executive Directors are required to establish and maintain a level of share ownership in proportion to a percentage of base salary. The shareholding requirement is 400% for the Chief Executive (250% before 1 January 2023) and 200% for the Chief Financial Officer. Share interests that are included in the shareholding requirements are as follows: shares vested from Company share plans; shares held in the individual's own name or by a nominee; shares held by a person closely associated (PCA) (as defined by UK Market Abuse Regulation) where the PCA has given express permission; shares held as part of the SharePurchase Plan; and, the estimated net-of-tax shares held in trust as part of unvested awards under the Rolls-Royce Incentive Plan where the awards are not subject to any performance conditions.

Individuals are expected to meet the shareholding requirement within five years of becoming subject to the policy. Where the shareholding requirements are not met, individuals may only dispose of shares in the following circumstances: to cover taxation; to cover any costs associated with the vesting or exercise of a share award; up to 50% of any shares acquired following the vesting of an award under the Incentive Plan; in connection with the operation of the malus and clawback policy; or where the Committee determines there are exceptional circumstances.

At 31 December 2022, Warren East's shareholding represented 281% of his base salary and Panos Kakoullis' shareholding represented 97% of his base salary (having been subject to the policy since May 2021). This has been calculated by reference to the three-month average share price to 30 December 2022, being the last working day of the year.

Executive Directors are also required to retain the lower of their shareholding requirement or their actual shareholding at the date of leaving for 12 months after leaving and then half of that amount for the following 12 months. Warren East has agreed to hold shares in accordance with the shareholding requirements policy until January 2025.

Executive Directors' contractual arrangements

Each Executive Director has a service agreement that sets out their contract with the Company.

	Effective date of contract	Notice period from Company	Notice period from individual
Tufan Erginbilgic	1 January 2023	12 months *	12 months *
Panos Kakoullis	3 May 2021	12 months	12 months

* Neither party can give notice that would expire before 1 January 2025

Pay across the organisation

This section of the report enables our remuneration arrangements to be seen in context by providing:

— a comparison of the percentage change in our Directors' remuneration with the change in our UK employees average remuneration over two years;

— a ten-year history of our Chief Executive's remuneration;

— our TSR performance over the same period;

— an indication of the ratio between our Chief Executive's remuneration and the remuneration of employees; and

— a year-on-year comparison of the total amount spent on employment costs across the Group and shareholder payments.

Percentage change in Directors' remuneration

The following table compares the percentage change in each of the Director's salary/fees, benefits and incentive to the average percentage change in salary, benefits and incentive for all UK employees for the past three years.

	2021–2022			2020–2021			2019–2020		
	Salary/fees %	Benefits %	Incentive award %	Salary/fees %	Benefits %	Incentive award %	Salary/fees %	Benefits %	Incentive award %
Dame Anita Frew [1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Warren East	4.11	6.25	(5.42)	5.96	–	∞ [7]	(7.5)	(8.03)	(100)
Panos Kakoullis [1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paul Adams [1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
George Culmer [2]	14.29	150	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lord Jitesh Gadhia [1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Beverly Goulet [3]	14.29	1,633.33	n/a	7.69	–	n/a	(7.5)	(72.27)	n/a
Lee Hsien Yang	0	216.67	n/a	7.69	(14.29)	n/a	(7.5)	(82.56)	n/a
Nick Luff [4]	5.56	0	n/a	38.46	–	n/a	(7.5)	–	n/a
Mike Manley [1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wendy Mars [1]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sir Kevin Smith [5]	(20.95)	50	n/a	8.25	∞ [7]	n/a	(7.5)	(79.32)	n/a
Dame Angela Strank [6]	8.43	300	n/a	n/a	n/a	n/a	n/a	n/a	n/a
UK employees average [8,9]	5.71	3.8	3	1.03	(9.13)	1,435	1.96	2.23	(89.94)

[1] Appointed during 2022 or 2021 and therefore unable to provide percentage change for a full year's remuneration
[2] George Culmer was appointed Senior Independent Director (SID) on 12 May 2022 and received an increase in fees
[3] Beverly Goulet was appointed Lead Employee Champion on 12 May 2022 and received an increase in fees
[4] Nick Luff was appointed Chair of the Audit Committee on 13 May 2021 and received an increase in fees
[5] Sir Kevin Smith stepped down as SID and as Chair of the Science & Technology Committee on 12 May 2022 and received a decrease in fees
[6] Dame Angela Strank was appointed Chair of the Safety, Ethics & Sustainability Committee on 13 May 2021 and received an increase in fees
[7] Unable to show percentage change as the increase was from zero
[8] UK employees were chosen as a comparator group in order to avoid the impact of exchange rate movements over the year. UK employees including apprentices, graduates and interns make up 45% of the total employee population and are employed by Rolls-Royce plc or its relevant subsidiaries. Rolls-Royce Holdings plc has no employees
[9] There was an incentive award for only a very small population in 2020, hence the significant increase in 2021

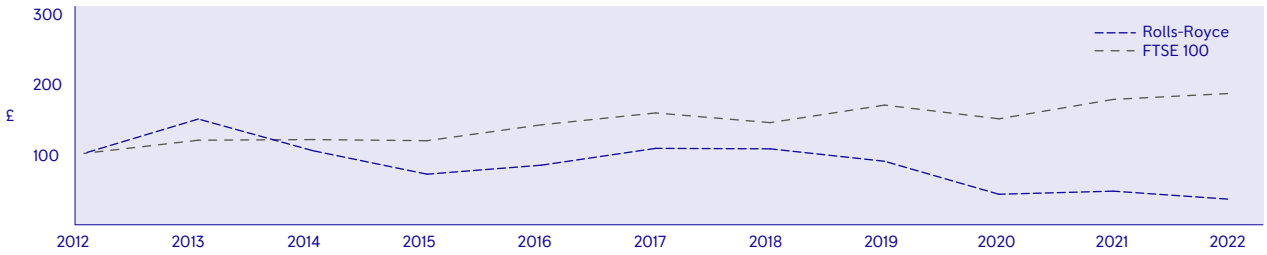
Chief Executive pay

Year	Chief Executive	Single figure of total remuneration £000	Incentive award as a % of maximum	LTIP as a % of maximum
2022	Warren East	3,835	74%	–
2021	Warren East	3,950	79.7	–
2020	Warren East	1,110	–	–
2019	Warren East	2,528	52	53
2018	Warren East	4,075	60	100
2017	Warren East	2,331	68	–
2016	Warren East	2,089	55	–
2015	Warren East	543	–	–
	John Rishton	754	–	–
2014	John Rishton	2,596	–	45
2013	John Rishton	6,228	55	100

John Rishton retired on 2 July 2015 and Warren East was appointed as Chief Executive on 3 July 2015.

TSR performance

The Company's TSR performance over the previous ten years compared to a broad equity market index is shown in the graph below. The FTSE 100 has been chosen as the comparator because it contains a broad range of other UK-listed companies. The graph shows the change in value of a hypothetical £100 holding in the Company's ordinary shares over ten years (prior years adjusted for the rights issue), relative to the FTSE 100 index.



Chief Executive pay ratio

The Committee is mindful of the relationship between the remuneration of the Chief Executive and the wider employee population. This is the fifth year that we have published our Chief Executive pay ratio and we have continued to use option A. We believe that this is the most accurate and robust methodology because it relies on calculating actual full time equivalent remuneration for all relevant employees rather than rely on data collected for other purposes. We have used the full time equivalent total remuneration of all UK employees at 31 December 2022.

Year	Method	25th percentile	Median	75th percentile
2022	Option A	75:1	64:1	55:1
2021	Option A	88.1	76.1	63.1
2020	Option A	26:1	22:1	19:1
2019	Option A	66:1	56:1	48:1
2018	Option A	92:1	77.1	66:1

For 2022, the salary and total remuneration for the three employees identified at the 25th, median and 75th percentiles are as follows:

Year	25th percentile	Median	75th percentile
Salary	£39.9k	£48.4k	£57.4k
Total remuneration	£51.0k	£60.0k	£70.1k

The pay ratio has decreased slightly in 2022 as a result of the reduced Incentive Plan outturn in comparison to 2021, and the increased total remuneration for our UK employees.

The Chief Executive has a larger proportion of his total reward based on variable elements linked to performance than other UK employees. As outlined on page 83, the Committee has considered the wider workforce context in terms of alignment of total reward for the Executive Directors. The majority of employees participate in an incentive plan, with a good degree of alignment of financial measures with the Executive Directors' Incentive Plan. We also encourage all eligible employees to join our all employee share plans, with approximately 50% of our global population enrolling in our most recent ShareSave plan, and approximately 35% of the UK population participating in our SharePurchase Plan.

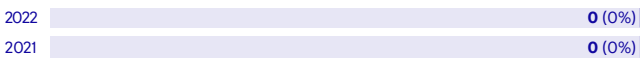
The Remuneration Committee believes that the median pay ratio for 2022 is consistent with the pay and progression policies for the Group's UK employees as a whole.

Relative importance of spend on pay

The following chart sets out the percentage change in payments to shareholders and overall expenditure on pay across the Group.

PAYMENT TO SHAREHOLDERS (£M)

(Consolidated cash flow statement)

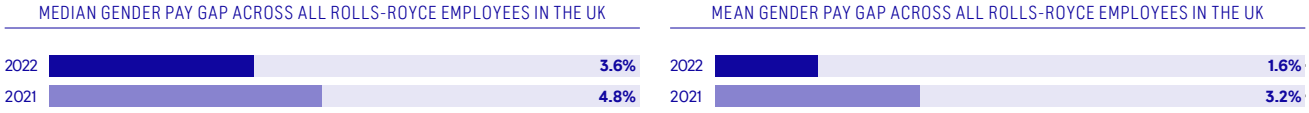


GROUP EMPLOYMENT COSTS (£M)

(Note 8, employee information – see page 138)

Gender pay reporting

The Company is committed to creating a diverse and inclusive place to work where our people can be themselves and be at their best. More information about this can be found on pages 37 to 40. We published our UK gender pay gap in February 2023, which showed:



The reducing pay gap in the UK is explained by the changing distribution of our workforce, with proportionately more women than men in higher paid positions. We continue to pursue diverse and under represented talent, including women, at all levels.

Non-Executive Directors' remuneration

Non-Executive Directors' single figure of remuneration (audited)

	Fees (£000)		Benefits (£000)		Total remuneration (£000)	
	2022	2021	2022	2021	2022	2021
Dame Anita Frew [1]	490	140	13	3	503	143
Paul Adams [2]	83	56	10	3	93	59
George Culmer [3]	80	70	5	2	85	72
Irene Dorner [4]	39	105	–	–	39	105
Lord Jitesh Gadhia [5]	65	–	2	–	67	–
Beverly Goulet [6]	80	70	52	3	132	73
Lee Hsien Yang [7]	70	70	19	6	89	76
Nick Luff [8]	95	90	–	–	95	90
Mike Manley [9]	70	35	7	–	77	35
Wendy Mars [10]	70	5	5	–	75	5
Sir Kevin Smith [2,3]	83	105	3	2	86	107
Dame Angela Strank [11]	90	83	4	1	94	84
Sir Ian Davis [12]	–	319	–	–	–	319
Lewis Booth [13]	–	31	–	–	–	31
Sir Frank Chapman [13]	–	33	–	–	–	33
Jasmin Staiblin [13]	–	26	–	1	–	27
Total	1,315	1,238	120	21	1,435	1,259

[1] Dame Anita Frew was appointed as a Non-Executive Director (NED) on 1 July 2021 and as Chair on 1 October 2021
[2] Paul Adams was appointed as a NED on 11 March 2021 and as Chair of the Science & Technology Committee on 12 May 2022, when Sir Kevin Smith stepped down as Chair
[3] George Culmer was appointed Senior Independent Director (SID) on 12 May 2022, when Sir Kevin Smith stepped down as SID
[4] Irene Dorner stepped down on 12 May 2022
[5] Lord Jitesh Gadhia was appointed as a NED on 1 April 2022 and as Chair of the Remuneration Committee on 12 May 2022
[6] Beverly Goulet was appointed Lead Employee Champion on 12 May 2022
[7] Lee Hsien Yang stepped down on 31 December 2022
[8] Nick Luff was appointed Chair of the Audit Committee on 13 May 2021
[9] Mike Manley was appointed on 1 July 2021
[10] Wendy Mars was appointed on 8 December 2021
[11] Dame Angela Strank was appointed as Chair of the Safety, Ethics & Sustainability Committee on 13 May 2021
[12] Sir Ian Davis stepped down on 30 September 2021
[13] Lewis Booth, Sir Frank Chapman and Jasmin Staiblin stepped down on 13 May 2021

Non-Executive Directors' fees

The Chair's fee is reviewed by the Board as a whole on the recommendation of the Committee. The review of the other Non-Executive Directors' base fees is reserved to the Executive Directors, who consider recommendations from the Chair. No individual may be involved in setting his or her own fee. The Chair and the Non-Executive Directors are not eligible to participate in any of the Group's share schemes, incentive arrangements or pension schemes. A facility is in place which enables Non-Executive Directors (who reside in a permitted dealing territory) to use some or all of their fees, after the appropriate statutory deductions, to make market purchases of shares in the Company on a monthly basis. Lee Hsien Yang and Wendy Mars used this facility.

	2022 £000	2021 £000
Chair	490	490
Other Non-Executive Directors base fee	70	70
Chair of the Audit Committee	25	25
Chair of the Remuneration Committee	20	20
Chair of the Safety, Ethics & Sustainability Committee	20	20
Chair of the Science & Technology Committee	20	20
Senior Independent Director	15	15
Lead Employee Champion	15	15

Non-Executive Directors' benefits (audited)

The benefits for Non-Executive Directors relate predominantly to travel, hotel, and subsistence incurred in attending meetings. For Non-Executive Directors based outside the UK, the Company may also pay towards tax advice and the cost of making tax filings.

Non-Executive Directors' share interests (audited)

The Non-Executive Directors and their connected persons hold the following interests in the ordinary shares of the Company:

	23 February 2023	31 December 2022
Dame Anita Frew	350,000	350,000
Paul Adams	10,000	10,000
George Culmer	37,960	37,960
Lord Jitesh Gadhia	50,000	50,000
Beverly Goulet	40,972	40,972
Nick Luff	120,000	120,000
Mike Manley	–	–
Wendy Mars	23,026	19,546
Sir Kevin Smith	116,540	116,540
Dame Angela Strank	13,780	13,780
Lee Hsien Yang	n/a	76,089

Paul Adams' share interests are held as American Depository Receipts.

Non-Executive Directors' letters of appointment

Our Non-Executive Directors serve two, three-year terms followed by three, one-year terms (nine years in total).

	Original appointment date	Current letter of appointment end date
Dame Anita Frew	1 July 2021	30 June 2024
Paul Adams	11 March 2021	10 March 2024
George Culmer	2 January 2020	1 January 2026
Lord Jitesh Gadhia	1 April 2022	31 March 2025
Beverly Goulet	3 July 2017	2 July 2023
Nick Luff	3 May 2018	2 May 2024
Mike Manley	1 July 2021	30 June 2024
Wendy Mars	8 December 2021	7 December 2024
Sir Kevin Smith	1 November 2015	31 October 2023
Dame Angela Strank	1 May 2020	30 April 2023

Shareholder voting

The remuneration policy was last approved by shareholders at our 2021 AGM held on 13 May 2021 and the remuneration report was last approved by shareholders at our 2022 AGM held on 12 May 2022. Details of voting are shown in the table below.

	For	% For	Against	% Against	Withheld
Approval of the Directors' remuneration policy (2021)	5,662,106,630	97.04	172,496,155	2.96	14,886,550
Approval of the Directors' remuneration report (2022)	5,303,462,164	94.28	320,923,549	5.72	34,999,234

Withheld votes are not counted towards the total percentage of votes cast.

Statutory requirements

The Committee's composition, responsibilities and operation comply with the principles of good governance, as set out in the Code, the Listing Rules (of the Financial Conduct Authority) and the Companies Act 2006. The Directors' remuneration report has been prepared on the basis prescribed in the Large- and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013.

SAFETY, ETHICS & SUSTAINABILITY COMMITTEE REPORT

KEY AREAS OF FOCUS IN 2022

- Reviewed and advised on a simplified product safety performance reporting process across each business
- Oversight of the development of a climate-related governance structure, TCFD reporting and separate Climate Review
- Reviewed the impact of the Government's sanctions regime as a result of the Russia-Ukraine conflict

Activities and overview of 2022

Firstly, I would like to take this opportunity to welcome Dame Anita Frew who formally joined the Committee on 1 January 2023. I would also like to thank Lee Hsien Yang for his valued contribution to the Committee as he stepped down from the Board at the end of 2022.

Throughout 2022, the Committee continued to monitor the Group's product safety management, HSE performance, ethics and compliance programme and our climate and sustainability agenda.

Product safety

One of the Committee's main priorities was to closely review the process for identifying and managing in-service product safety issues. We received a quarterly report from the group chief engineer detailing the status of all open product safety issues across the Group. Monitoring in-service safety issues in this way is, by its nature, a reactive check on the effectiveness of the Group's product safety management system. Therefore, we also reviewed in detail the businesses' proactive analysis of the management of product safety against identified control areas using the safety assurance framework.

The Committee also received detailed reports from the engineering directors responsible for product safety in each of the businesses, providing an update on safety topics, the status and effectiveness of the product safety management system, their priorities for the year and an assessment of their position against the defined risk appetite for the Group. This year, we have given particular focus to product safety management in Rolls-Royce Electrical, given that this is a new market for the Group.

Finally, we scrutinised the planned activities of the product safety assurance team in identifying and introducing improvements to product safety policies, processes, training and the wider product safety management system.

HSE

Another focus for the Committee was HSE performance Group-wide; we received detailed statistics on total reportable injuries and other safety performance indices. We also monitored adherence to our lifesaving rules and our progress against the Group's HSE improvement programmes, offering advice, challenge and insight where necessary.

At the beginning of the year, we analysed the impact of COVID-19 and scrutinised the Group's continuing approach and mitigating actions. I would like to thank our HSE community and our colleagues for their dedication to making our sites safe places to work during the pandemic.

We received a series of reports on asset integrity across the Rolls-Royce estate from the site professional services director, resulting in a review of our capital maintenance budget and the initiation of a footprint rationalisation programme.

We also received regular reports from the operations directors regarding HSE performance and plans and their position against the defined risk appetite in each business.

The Committee held a deep dive into the findings of an internal audit of the Group's HSE accountability framework. We heard from the operations directors in each business about the findings of the audit and their agreed action plans. We then monitored progress against these action plans throughout the rest of the year.

Finally, we reviewed the Group's HSE strategic plan, risk profile and safety targets.

Sustainability

2021 was an important year for sustainability at Rolls-Royce and key highlights included the publication of our decarbonisation pathway and active participation at COP26. In 2022, the Committee continued to monitor and support the delivery of the Group's climate and sustainability agenda.

Climate-related governance was also reviewed during the year. A new climate steering committee was created to support the existing executive-level environment & sustainability committee. The steering committee defined six primary workstreams to prioritise activity in 2022 and its membership includes representatives from each of the businesses and key functions. We advised on the development of the governance model and received regular updates on the progress of the workstreams.

The Science-Based Targets (SBTs) initiative is widely regarded as the gold standard for corporate commitments to decarbonisation so, as a Committee, we have been very close to the Group's progress towards setting SBTs. We have also advised the sustainability team on their work to incorporate emissions from our product testing activities into our climate-related target setting as we transition to validated SBTs.

The Committee also continued to review the Group's preparation for both TCFD reporting and the separate Climate Review. Particular focus was given during 2022 to the assessment of organisational resilience in the face of climate change; metrics and targets; and the review of outputs of climate-related physical risk impact assessments, including making recommendations for further modelling. The Climate Review can be found at www.rolls-royce.com

Looking at sustainability in its broadest sense, the Committee received regular updates on the topic of human rights. In line with increased scrutiny and legislative requirements, a Group-wide human rights development programme has been established to drive and co-ordinate activity. This programme has included revisions to Group policies and the introduction of a human rights impact assessment and due diligence process to mitigate human rights related risk across the Group. The programme also led to the introduction of appropriate escalation frameworks to embed results into business decision-making.

The Committee was kept up to date on a communication and engagement programme to increase employee awareness and involvement in sustainability matters. Finally, we analysed the Group's community investment approach, strategy and impact.

Ethics and compliance

I am pleased to report that in January 2022 the Serious Fraud Office (SFO) filed a notice releasing us from the UK Deferred Prosecution Agreement (DPA). I would like to thank our ethics and compliance team for their work over the past five years towards achieving this outcome. The SFO requested that we conduct an external assurance exercise before being released from the DPA. Forensic Risk Alliance (FRA) were appointed to consider the progress and status of our ethics and compliance programme, since the issue of Lord Gold's report and against the context of significant economic and related challenges, including COVID-19. FRA were asked to consider whether the programme continues to be sustainable and dynamic in the longer term. Throughout the year, we have monitored progress against improvement actions that were identified by the ethics and compliance team to respond to recommendations made by FRA. We also reviewed other areas of the ethics and compliance programme, including the launch of updated Group policies and the rollout of the know-your-partner procedures and portal.

In December 2021, the sanctions and export control team began engagement with the businesses on the impact of possible sanctions on Russia in the event of a Russia-Ukraine conflict. When the conflict began, a Russia sanctions group was created to manage the impact while assisting the businesses to understand the sanctions regime. The UK Government amended the sanctions over time and our sanctions and export control team worked diligently to remain aligned to the changing landscape. As a Committee, we kept very close to these developments and received regular reports from the General Counsel and the director of strategic export control.

We regularly discussed other prosecutorial and regulatory matters with the General Counsel and head of ethics & compliance. In February and July 2022, the Committee assessed and reported to the Board on concerns raised through the speak up line and reviewed detailed reports on significant issues, in line with the Code requirement. An overview of the speak up process is summarised below.

Finally, the Committee received updates on progress against the Group's anti-bullying and harassment campaign. We also received a year-end status report on the Group's mandatory learning completion statistics.

Members	Dame Angela Strank (Chair) Paul Adams Dame Anita Frew
	Biographies are on pages 62 to 63
Remit	See page 61

Principal risks

We undertook a review of the product safety, people safety, compliance and climate change principal risks as well as reviewing emerging risks across the Group relevant to the Committee's remit.

Dame Angela Strank
Chair of the Safety, Ethics & Sustainability Committee

SPEAK UP LINE

Individual raises a concern via one of the following speak up channels: manager; local ethics adviser; appropriate subject matter expert; a member of the ethics and compliance team; or the externally hosted speak up line.	The concern is passed to the speak up team, who review the case information and carry out an initial assessment to determine next steps. Where required, an investigating manager is appointed.	The speak up team provides details of the concern to the investigating manager who carries out an initial fact-finding exercise to determine the scope of the investigation.	The investigating manager investigates the concern and, once completed, submits a fact-finding report and root cause worksheet to the speak up team.	Any follow up actions are tracked until completion and the case is closed by the speak up team.	The Safety, Ethics & Sustainability Committee assesses concerns raised through the speak up channels and reviews reports of significant issues twice a year and reports these matters to the Board.

SCIENCE & TECHNOLOGY COMMITTEE REPORT

KEY AREAS OF FOCUS IN 2022

- Continued to oversee the Group's key technology programmes
- Reviewed the development of the Group's engineering capability in line with our future technology needs
- Reviewed the competitiveness of our products and key programmes against key competitors

Activities and overview of 2022

Throughout 2022, we continued to oversee the Group's key technology programmes to provide support to technologies emerging from the net zero strategy. This enabled us to focus on reviewing the development of the Group's engineering capability in line with our future technology needs.

Sir Kevin Smith stepped down as Committee Chair following the May meeting and I would like to thank Sir Kevin for his commitment and leadership of the Committee. I would also like to thank the work of our technology community and the flexibility, resilience and commitment of our people during these challenging times.

Technology strategy

During the year, we reviewed the strategic direction of the Group's research technology and development activities, with consideration to their environmental impacts amongst other matters, and to ensure investment was appropriately allocated. We reviewed digital, electrical and hybrid-electric technologies and developments in alternative fuels including hydrogen and sustainable aviation fuels. Our review involved the primary net zero milestones across the Group and how this was impacted by the 2022 budget and investment allocation. In November, we received an update on the status of the net zero technology plans for each of the businesses. We discussed progress against the net zero technology plan in Civil Aerospace, Defence, Power Systems, Rolls-Royce Electrical, Rolls-Royce SMR and central technologies. In addition, we discussed what the Group should be doing to tackle test emissions beyond procuring sustainable fuels at our testbeds. A separate discussion will be held with engineering in Civil Aerospace to look at what is being done to reduce the amount of fuel being burnt by reducing the test running time.

We received an update on hydrogen and the Civil Aerospace supersonic technology during May. In addition, we were presented with an overview of hydrogen and collaboration opportunities together with the mitigation of technical risks. We further considered the option of bioderived SAF and whether hydrogen would be cheaper than power to liquid synthetic SAF. Additional discussions continued on the use of hydrogen in large aircraft propulsion.

During November, we reviewed the advanced manufacturing technology infrastructure and how it is aligned to support the businesses, including its role in the gas turbine technology developments within the five-year plan. The Committee discussed medium-term manufacturing technology activities, including technology roadmapping and manufacturing development in our New Markets. Further discussions continued on the granularity behind the identification of the improvement measures.

The Committee discussed time on wing and the process from design to driving down shop visit costs. The Committee received updates on the methods in place to dissemble and assemble engines with parts being re-used and repaired rather than replaced, taking advantage of new technologies such as additive manufacturing.

The Committee reviewed the competitiveness of our products and key programmes against key competitors to ensure we enhance our capability to invest and develop. The review was also carried out with consideration given to the capital re-allocation process.

While receiving updates from the businesses, we assisted the Board in its oversight of major research and development investment and provided assurance on its competitiveness and the adequacy of technology investment. During the year we had an indepth review of the competitiveness of gas turbines. This focused on whether the Group's planned investments were sufficient to ensure that the Group could protect the current business and secure future opportunities.

Throughout the year, we maintained a strong focus on low carbon technologies which underpin the Group's sustainability strategy and leverage our advanced manufacturing and nuclear power design expertise.

Cross-sector technology

We continued to provide oversight of the effectiveness of key engineering and technology processes and operations, including the delivery of major product development and technology programmes.

Technology capabilities and skills

We discussed the processes for ensuring there was effective resourcing and development of required technological capability and skills. We received updates from the group chief engineer including an understanding of how productivity drivers are used to drive efficiency throughout the organisation.

The Committee discussed the consolidated research and technology plan. They received updates on the status of the Group-wide skills programme and how it was intended to support our future strategy. The update on the Group-wide skills programme explained that, following the significant engineering restructure, talent development would be prioritised to enable a skills shift to secure and support future strategy. We reviewed and discussed the global talent pool whilst receiving an update from the science advisory council on the industry-wide difficulties in hiring UK employees with specific software and electrical skills. We acknowledged the challenges with hiring and retention. We recognised that key enablers of the skills-shift included the need to deliver simplified processes and modern, intuitive systems and tools to help reduce any barriers to moving engineers across different disciplines and to support the increase in the number of engineers with system-level skills.

During May, we received an update on the split of the workforce deeply skilled versus those multi-skilled. We discussed the programme that supported the model and advised the Civil Aerospace team that the success of the skills programme would be contingent on good behaviours and culture, with the need for a clear recognition system. In addition, we reiterated the need for positive engagement with the wider workforce.

We further discussed the fellowship programme and the reignited specialist academy.

Technology trends and risks

We provided assurance on the identification and management of key technological risks and reviewed and considered other topics or risks appropriate to the overall remit of the Committee as delegated by the Board.

Principal risk

We continued to monitor disruptive technologies as part of the competitive environment principal risk. The Committee received an update on the potential threats and opportunities arising from disruption through technology. The information presented received valuable input from the science advisory council. The Group remains actively engaged in deriving benefit from sustainability-related technology, such as atmospheric carbon capture and sustainable synthetic fuels that have a high impact across the broader Group.

In addition, in November we reviewed emerging risks across the Group relevant to the Committee's remit.

Paul Adams
Chair of the Science & Technology Committee

Members	Paul Adams (Chair) Dame Angela Strank Mike Manley Wendy Mars
	Biographies are on page 62 to 63
Remit	See page 61

RESPONSIBILITY STATEMENTS

Statement of Directors' responsibilities in respect of the Financial Statements

The Directors are responsible for preparing the Annual Report and the Financial Statements in accordance with applicable law and regulation.

Company law requires the Directors to prepare financial statements for each financial year. Under that law, the Directors have prepared the Group Financial Statements in accordance with UK-adopted international accounting standards and the Company Financial Statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 Reduced Disclosure Framework, and applicable law).

Under company law, Directors must not approve the Financial Statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company and of the profit or loss of the Group for that period. In preparing the Financial Statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- state whether applicable UK-adopted international accounting standards have been followed for the Group Financial Statements and United Kingdom Accounting Standards, comprising FRS 101 have been followed for the Company Financial Statements, subject to any material departures disclosed and explained in the Financial Statements;
- make judgements and accounting estimates that are reasonable and prudent; and
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Group and Company will continue in business.

The Directors are responsible for safeguarding the assets of the Group and Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are also responsible for keeping adequate accounting records that are sufficient to show and explain the Group's and Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and Company and enable them to ensure that the Financial Statements and the Directors' Remuneration Report comply with the Companies Act 2006.

The Directors are responsible for the maintenance and integrity of the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Directors' confirmations

The Directors consider that the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's and Company's position and performance, business model and strategy.

Each of the Directors, whose names and functions are listed in the Directors' Report confirm that, to the best of their knowledge:

- the Group Financial Statements, which have been prepared in accordance with UK-adopted international accounting standards, give a true and fair view of the assets, liabilities, financial position and loss of the Group;
- the Company Financial Statements, which have been prepared in accordance with United Kingdom Accounting Standards, comprising FRS 101, give a true and fair view of the assets, liabilities and financial position of the Company; and
- the Strategic Report includes a fair review of the development and performance of the business and the position of the Group and Company, together with a description of the principal risks and uncertainties that it faces.

In the case of each Director in office at the date the Directors' Report is approved:

- so far as the Director is aware, there is no relevant audit information of which the Group's and Company's auditors are unaware; and
- they have taken all the steps that they ought to have taken as a Director in order to make themselves aware of any relevant audit information and to establish that the Group's and Company's auditors are aware of that information.

By order of the Board
Pamela Coles
Chief Governance Officer
23 February 2023

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Consolidated income statement

Year ended 31 December 2022

	Notes	2022 £m	2021 £m
Continuing operations			
Revenue	2	**13,520**	11,218
Cost of sales [1]		**(10,763)**	(9,082)
Gross profit	2	**2,757**	2,136
Commercial and administrative costs	2	**(1,077)**	(890)
Research and development costs	2, 3	**(891)**	(778)
Share of results of joint ventures and associates	12	**48**	45
Operating profit		**837**	513
Gain arising on disposal of businesses	27	**81**	56
Profit before financing and taxation		**918**	569
Financing income	4	**355**	229
Financing costs [2]	4	**(2,775)**	(1,092)
Net financing costs		**(2,420)**	(863)
Loss before taxation		**(1,502)**	(294)
Taxation	5	**308**	418
(Loss)/profit for the year from continuing operations		**(1,194)**	124
Discontinued operations			
Profit for the year from ordinary activities	27	**68**	36
Costs of disposal of discontinued operations prior to disposal	27	**–**	(39)
Loss on disposal of discontinued operations	27	**(148)**	–
Loss for the year from discontinued operations		**(80)**	(3)
(Loss)/profit for the year		**(1,274)**	121
Attributable to:			
Ordinary shareholders		**(1,269)**	120
Non-controlling interests (NCI)		**(5)**	1
(Loss)/profit for the year		**(1,274)**	121
Other comprehensive income		**522**	41
Total comprehensive (expense)/income for the year		**(752)**	162
(Loss)/earnings per ordinary share attributable to ordinary shareholders:	6		
From continuing operations			
Basic		**(14.24)p**	1.48p
Diluted		**(14.24)p**	1.47p
From continuing and discontinued operations			
Basic		**(15.20)p**	1.44p
Diluted		**(15.20)p**	1.43p

[1] Cost of sales includes a net charge for expected credit losses of £73m (31 December 2021: £78m). Further detail can be found in note 14
[2] Included within financing costs are fair value changes on derivative contracts. Further details can be found in notes 2, 4 and 20

Consolidated statement of comprehensive income

Year ended 31 December 2022

	Notes	2022 £m	2021 £m
(Loss)/profit for the year		**(1,274)**	121
Other comprehensive income/(expense) (OCI)			
Actuarial movements on post-retirement schemes	22	**(156)**	254
Revaluation to fair value of other investments	12	**(4)**	(2)
Share of OCI of joint ventures and associates	12	**2**	1
Related tax movements	5	**89**	(79)
Items that will not be reclassified to profit or loss		**(69)**	174
Foreign exchange translation differences on foreign operations		**452**	(178)
Foreign exchange translation differences reclassified to income statement on disposal of businesses	27	**65**	(1)
Hedging reserves reclassified to income statement on disposal of businesses	27	**111**	–
NCI disposed of on disposal of businesses	27	**1**	–
Movement on fair values charged to cash flow hedge reserve		**(7)**	(32)
Reclassified to income statement from cash flow hedge reserve [1]		**(55)**	39
Costs of hedging		**10**	–
Share of OCI of joint ventures and associates	12	**–**	44
Related tax movements	5	**14**	(5)
Items that will be reclassified to profit or loss		**591**	(133)
Total other comprehensive income		**522**	41
Total comprehensive (expense)/income for the year		**(752)**	162
Attributable to:			
Ordinary shareholders		**(748)**	161
NCI		**(4)**	1
Total comprehensive (expense)/income for the year		**(752)**	162
Total comprehensive (expense)/income for the year attributable to ordinary shareholders arises from:			
Continuing operations		**(673)**	278
Discontinued operations		**(75)**	(117)
Total comprehensive (expense)/income for the year attributable to ordinary shareholders		**(748)**	161

[1] Includes £(52)m loss on the deal contingent forward reclassified to loss on disposal in the same period as the hedged cash flow proceeds. Further detail can be found in note 20 and 27

Consolidated balance sheet

At 31 December 2022

	Notes	2022 £m	2021 £m
ASSETS			
Intangible assets	9	4,098	4,041
Property, plant and equipment	10	3,936	3,917
Right-of-use assets	11	1,061	1,203
Investments – joint ventures and associates	12	422	404
Investments – other	12	36	36
Other financial assets	20	542	361
Deferred tax assets	5	2,731	2,249
Post-retirement scheme surpluses	22	613	1,148
Non-current assets		13,439	13,359
Inventories	13	4,708	3,666
Trade receivables and other assets	14	6,936	5,383
Contract assets	15	1,481	1,473
Taxation recoverable		127	90
Other financial assets	20	141	46
Short-term investments	20	11	8
Cash and cash equivalents	16	2,607	2,621
Current assets		16,011	13,287
Assets held for sale	27	–	2,028
TOTAL ASSETS		29,450	28,674
LIABILITIES			
Borrowings and lease liabilities	17	(358)	(279)
Other financial liabilities	20	(1,016)	(689)
Trade payables and other liabilities	19	(6,983)	(6,016)
Contract liabilities	15	(4,825)	(3,599)
Current tax liabilities		(104)	(101)
Provisions for liabilities and charges	21	(632)	(475)
Current liabilities		(13,918)	(11,159)
Borrowings and lease liabilities	17	(5,597)	(7,497)
Other financial liabilities	20	(3,230)	(2,715)
Trade payables and other liabilities	19	(2,364)	(1,575)
Contract liabilities	15	(7,337)	(6,710)
Deferred tax liabilities	5	(286)	(451)
Provisions for liabilities and charges	21	(1,701)	(1,107)
Post-retirement scheme deficits	22	(1,033)	(1,373)
Non-current liabilities		(21,548)	(21,428)
Liabilities associated with assets held for sale	27	–	(723)
TOTAL LIABILITIES		(35,466)	(33,310)
NET LIABILITIES		(6,016)	(4,636)
EQUITY			
Called-up share capital	23	1,674	1,674
Share premium		1,012	1,012
Capital redemption reserve		166	165
Hedging reserves		26	(45)
Merger reserve		–	650
Translation reserve		861	342
Accumulated losses		(9,789)	(8,460)
Equity attributable to ordinary shareholders		(6,050)	(4,662)
NCI		34	26
TOTAL EQUITY		(6,016)	(4,636)

The Financial Statements on pages 102 to 172 were approved by the Board on 23 February 2023 and signed on its behalf by:

Tufan Erginbilgic
Chief Executive

Panos Kakoullis
Chief Financial Officer

Consolidated cash flow statement

Year ended 31 December 2022

	Notes	2022 £m	2021 £m
Reconciliation of cash flows from operating activities			
Operating profit from continuing operations		837	513
Operating profit/(loss) from discontinued operations	27	86	(43)
Operating profit		923	470
Loss on disposal of property, plant and equipment		18	9
Share of results of joint ventures and associates	12	(48)	(45)
Dividends received from joint ventures and associates	12	73	27
Amortisation and impairment of intangible assets	9	287	290
Depreciation and impairment of property, plant and equipment	10	430	462
Depreciation and impairment of right-of-use assets	11	287	257
Adjustment of amounts payable under residual value guarantees within lease liabilities [1]	18	(3)	(4)
Impairment of and other movements on investments	12	75	7
Decrease in provisions		(197)	(394)
Increase in inventories		(887)	(169)
Movement in trade receivables/payables and other assets/liabilities		(56)	(507)
Movement in contract assets/liabilities		1,753	(134)
Financial penalties paid [2]		–	(156)
Cash flows on other financial assets and liabilities held for operating purposes [3]		(660)	(85)
Interest received		36	9
Net defined benefit post-retirement cost recognised in profit before financing	22	27	23
Cash funding of defined benefit post-retirement schemes	22	(81)	(162)
Share-based payments	24	47	28
Net cash inflow/(outflow) from operating activities before taxation		2,024	(74)
Taxation paid		(174)	(185)
Net cash inflow/(outflow) from operating activities		1,850	(259)
Cash flows from investing activities			
Movement in other investments	12	(5)	(26)
Additions of intangible assets		(237)	(231)
Disposals of intangible assets	9	8	5
Purchases of property, plant and equipment		(359)	(328)
Disposals of property, plant and equipment		48	61
Disposal of businesses	27	1,398	99
Movement in investments in joint ventures and associates	12	(24)	–
Movement in short-term investments		(3)	(8)
Net cash inflow/(outflow) from investing activities		826	(428)
Cash flows from financing activities			
Repayment of loans [4]		(2,024)	(965)
Proceeds from increase in loans		1	2,005
Capital element of lease payments		(218)	(374)
Net cash flow from (decrease)/increase in borrowings and lease liabilities		(2,241)	666
Interest paid		(235)	(206)
Interest element of lease payments		(68)	(63)
Fees paid on undrawn facilities		(49)	(62)
Cash flows on settlement of excess derivative contracts [5]	4	(326)	(452)
Transactions with NCI [6]		57	30
NCI on formation of subsidiary		–	3
Dividends to NCI		(3)	(1)
Redemption of C Shares		(1)	(3)
Net cash outflow from financing activities		(2,866)	(88)

Consolidated cash flow statement – continued

Year ended 31 December 2022

	2022 £m	2021 £m
Change in cash and cash equivalents	**(190)**	(775)
Cash and cash equivalents at 1 January	**2,639**	3,496
Exchange gains/(losses) on cash and cash equivalents	**156**	(82)
Cash and cash equivalents at 31 December [7]	**2,605**	2,639

[1] Where the cost of meeting residual value guarantees is less than that previously estimated, as costs have been mitigated or liabilities waived by the lessor, the lease liability has been remeasured. To the extent that the value of this remeasurement exceeds the value of the right-of-use asset, the reduction in the lease liability is credited to cost of sales
[2] Relates to penalties paid on agreements with investigating bodies
[3] Predominately relates to cash settled on derivative contracts held for operating purposes
[4] Repayment of loans includes repayments of £2,000m relating to the loan supported by an 80% guarantee from UK Export Finance. Further details are provided in note 17
[5] During the year, the Group incurred a cash outflow of £326m (2021: £452m) as a result of settling foreign exchange contracts that were originally in place to sell $2,200m (2021: $3,184m) receipts. Further detail is provided in note 4
[6] Relates to NCI investment received in the year, in respect of Rolls-Royce SMR Limited
[7] The Group considers overdrafts (repayable on demand) and cash held for sale to be an integral part of its cash management activities and these are included in cash and cash equivalents for the purposes of the cash flow statement

In deriving the consolidated cash flow statement, movement in balance sheet items have been adjusted for non-cash items. The cash flow in the year includes the sale of goods and services to joint ventures and associates – see note 26.

	2022 £m	2021 £m
Reconciliation of movements in cash and cash equivalents to movements in net debt		
Change in cash and cash equivalents	**(190)**	(775)
Cash flow from decrease/(increase) in borrowings and lease liabilities	**2,241**	(666)
Less: settlement of related derivatives included in fair value of swaps below	**–**	6
Cash flow from increase in short-term investments	**3**	8
Change in net debt resulting from cash flows	**2,054**	(1,427)
New leases and other non-cash adjustments on borrowings and lease liabilities	**(170)**	(86)
Exchange losses on net debt	**(150)**	(51)
Fair value adjustments	**70**	170
Debt disposed of on disposal of businesses	**53**	8
Reclassifications	**–**	19
Movement in net debt	**1,857**	(1,367)
Net debt at 1 January	**(5,194)**	(3,827)
Net debt at 31 December excluding the fair value of swaps	**(3,337)**	(5,194)
Fair value of swaps hedging fixed rate borrowings	**86**	37
Net debt at 31 December	**(3,251)**	(5,157)

Consolidated cash flow statement – continued

Year ended 31 December 2022

The movement in net debt (defined by the Group as including the items shown below) is as follows:

	At 1 January £m	Funds flow £m	Net funds on disposal £m	Exchange differences £m	Fair value adjustments £m	Reclassifications [1] £m	Other movements £m	At 31 December £m
2022								
Cash at bank and in hand	795	17	–	35	–	–	–	847
Money market funds	49	(15)	–	–	–	–	–	34
Short-term deposits	1,777	(171)	–	120	–	–	–	1,726
Cash and cash equivalents (per balance sheet)	2,621	(169)	–	155	–	–	–	2,607
Cash and cash equivalents included within assets held for sale	25	(26)	–	1	–	–	–	–
Overdrafts	(7)	5	–	–	–	–	–	(2)
Cash and cash equivalents (per cash flow statement)	2,639	(190)	–	156	–	–	–	2,605
Short-term investments	8	3	–	–	–	–	–	11
Other current borrowings	(2)	2	–	(1)	–	–	–	(1)
Non-current borrowings	(6,023)	2,000	–	(125)	72	–	(29)	(4,105)
Borrowings included within liabilities held for sale	(59)	21	40	–	(2)	–	–	–
Lease liabilities	(1,744)	217	–	(179)	–	–	(141)	(1,847)
Lease liabilities included within liabilities held for sale	(13)	1	13	(1)	–	–	–	–
Financial liabilities	(7,841)	2,241	53	(306)	70	–	(170)	(5,953)
Net debt excluding the fair value of swaps	(5,194)	2,054	53	(150)	70	–	(170)	(3,337)
Fair value of swaps hedging fixed rate borrowings [2]	37	–	–	125	(76)	–	–	86
Net debt	(5,157)	2,054	53	(25)	(6)	–	(170)	(3,251)
2021								
Cash at bank and in hand	940	(87)	–	(20)	–	(38)	–	795
Money market funds	669	(620)	–	–	–	–	–	49
Short-term deposits	1,843	–	–	(66)	–	–	–	1,777
Cash and cash equivalents (per balance sheet)	3,452	(707)	–	(86)	–	(38)	–	2,621
Cash and cash equivalents included within assets held for sale	51	(68)	–	4	–	38	–	25
Overdrafts	(7)	–	–	–	–	–	–	(7)
Cash and cash equivalents (per cash flow statement)	3,496	(775)	–	(82)	–	–	–	2,639
Short-term investments	–	8	–	–	–	–	–	8
Other current borrowings	(1,006)	950	–	1	35	18	–	(2)
Non-current borrowings	(4,274)	(2,002)	–	38	136	88	(9)	(6,023)
Borrowings included within liabilities held for sale	–	18	–	1	(1)	(77)	–	(59)
Lease liabilities	(2,043)	370	–	(9)	–	15	(77)	(1,744)
Lease liabilities included within liabilities held for sale	–	4	8	–	–	(25)	–	(13)
Financial liabilities	(7,323)	(660)	8	31	170	19	(86)	(7,841)
Net debt excluding the fair value of swaps	(3,827)	(1,427)	8	(51)	170	19	(86)	(5,194)
Fair value of swaps hedging fixed rate borrowings [2]	251	(6)	–	(35)	(173)	–	–	37
Net debt	(3,576)	(1,433)	8	(86)	(3)	19	(86)	(5,157)

[1] Reclassifications during the year to 31 December 2021 included the transfer of ITP Aero to held for sale and fees of £29m paid in previous periods for the £2,000m loan (supported by an 80% guarantee from UK Export Finance) that have been reclassified to borrowings on the draw down of the facility during the prior period

[2] Fair value of swaps hedging fixed rate borrowings reflects the impact of derivatives on repayments of the principal amount of debt. Net debt therefore includes the fair value of derivatives included in fair value hedges (2022: £38m, 2021: £114m) and the element of fair value relating to exchange differences on the underlying principal of derivatives in cash flow hedges (2022: £48m, 2021: £(77)m)

Consolidated statement of changes in equity

Year ended 31 December 2022

The following describes the nature and purpose of each reserve within equity:

Share capital – The nominal value of ordinary shares of 20p each in issue.
Share premium – Proceeds received in excess of the nominal value of ordinary shares issued, less the costs of issue.
Capital redemption reserve – Amounts transferred from accumulated losses on the repurchase of ordinary shares or the redemption of C Shares. In Rolls-Royce Holdings plc's own Financial Statements, C Shares are issued from the merger reserve. This reserve was created by a scheme of arrangement in 2011. As this reserve is eliminated on consolidation in the Consolidated Financial Statements, the C Shares are shown as being issued from the capital redemption reserve.
Hedging reserves – Cumulative gains and losses on hedging instruments deemed effective in cash flow hedges and cost of hedging reserve.
Merger reserve – The premium on issuing shares to acquire a business where merger relief in accordance with the Companies Act 2006 applies.
Translation reserve – Gains and losses arising on retranslating the net assets of overseas operations into sterling.
Accumulated losses – All other net gains and losses and transactions with owners not recognised elsewhere and ordinary shares held for the purpose of share-based payment plans.
Non-controlling interests – The share of net assets or liabilities of subsidiaries held by third parties.

		Attributable to ordinary shareholders									
	Notes	Share capital £m	Share premium £m	Capital redemption reserve £m	Hedging reserves [1] £m	Merger reserve £m	Trans-lation reserve £m	Accum-ulated losses [2] £m	Total £m	NCI £m	Total equity £m
At 31 December 2021 as previously reported		1,674	1,012	165	(45)	650	342	(8,460)	(4,662)	26	(4,636)
Adoption of amendment to IAS 37 (post-tax)	1	–	–	–	–	–	–	(729)	(729)	–	(729)
At 1 January 2022		1,674	1,012	165	(45)	650	342	(9,189)	(5,391)	26	(5,365)
Loss for the year		–	–	–	–	–	–	(1,269)	(1,269)	(5)	(1,274)
Foreign exchange translation differences on foreign operations		–	–	–	–	–	452	–	452	–	452
Hedging reserves reclassified to income statement on disposal of businesses	27	–	–	–	111	–	–	–	111	–	111
Foreign exchange translation differences reclassified to income statement on disposal of businesses	27	–	–	–	–	–	65	–	65	–	65
NCI disposed of on disposal of business	27	–	–	–	–	–	–	–	–	1	1
Actuarial movement on post-retirement schemes	22	–	–	–	–	–	–	(156)	(156)	–	(156)
Movement on fair value of cash flow hedges		–	–	–	(7)	–	–	–	(7)	–	(7)
Reclassified to income statement from cash flow hedge reserve		–	–	–	(55)	–	–	–	(55)	–	(55)
Costs of hedging		–	–	–	10	–	–	–	10	–	10
Revaluation to fair value of other investments	12	–	–	–	–	–	–	(4)	(4)	–	(4)
OCI of joint ventures and associates	12	–	–	–	–	–	–	2	2	–	2
Related tax movements	5	–	–	–	12	–	2	89	103	–	103
Total comprehensive income/ (expense) for the year		–	–	–	71	–	519	(1,338)	(748)	(4)	(752)
Redemption of C Shares	20	–	–	1	–	–	–	(1)	–	–	–
Share-based payments – direct to equity [3]		–	–	–	–	–	–	46	46	–	46
Dividends to NCI		–	–	–	–	–	–	–	–	(3)	(3)
Transactions with NCI [4]		–	–	–	–	–	–	42	42	15	57
Transfer to realised profit [5]		–	–	–	–	(650)	–	650	–	–	–
Related tax movements		–	–	–	–	–	–	1	1	–	1
Other changes in equity in the year		–	–	1	–	(650)	–	738	89	12	101
At 31 December 2022		1,674	1,012	166	26	–	861	(9,789)	(6,050)	34	(6,016)

Consolidated statement of changes in equity – continued

Year ended 31 December 2022

	Notes	Attributable to ordinary shareholders									
		Share capital £m	Share premium £m	Capital redemption reserve £m	Cash flow hedging reserve £m	Merger reserve £m	Trans-lation reserve £m	Accum-ulated losses [2] £m	Total £m	NCI £m	Total equity £m
At 1 January 2021		1,674	1,012	162	(94)	650	524	(8,825)	(4,897)	22	(4,875)
Profit for the year		–	–	–	–	–	–	120	120	1	121
Foreign exchange translation differences on foreign operations		–	–	–	–	–	(178)	–	(178)	–	(178)
Foreign exchange translation differences reclassified to income statement on disposal of businesses		–	–	–	–	–	(1)	–	(1)	–	(1)
Actuarial movements on post-retirement schemes	22	–	–	–	–	–	–	254	254	–	254
Movement on fair values of cash flow hedges		–	–	–	(32)	–	–	–	(32)	–	(32)
Reclassified to income statement from cash flow hedge reserve		–	–	–	39	–	–	–	39	–	39
Revaluation to fair value of other investments	12	–	–	–	–	–	–	(2)	(2)	–	(2)
OCI of joint ventures and associates	12	–	–	–	44	–	–	1	45	–	45
Related tax movements	5	–	–	–	(2)	–	(3)	(79)	(84)	–	(84)
Total comprehensive income/ (expense) for the year		–	–	–	49	–	(182)	294	161	1	162
Redemption of C Shares	20	–	–	3	–	–	–	(3)	–	–	–
Share-based payments – direct to equity [3]		–	–	–	–	–	–	28	28	–	28
Transactions with NCI [4]		–	–	–	–	–	–	29	29	1	30
Dividends to NCI		–	–	–	–	–	–	–	–	(1)	(1)
NCI on formation of subsidiary		–	–	–	–	–	–	–	–	3	3
Related tax movements		–	–	–	–	–	–	17	17	–	17
Other changes in equity in the year		–	–	3	–	–	–	71	74	3	77
At 31 December 2021		1,674	1,012	165	(45)	650	342	(8,460)	(4,662)	26	(4,636)

[1] Hedging reserves include the cash flow hedge reserve of £26m and the cost of hedging reserve of £nil. During the year, costs of hedging of £10m were recognised and reclassified to the income statement

[2] At 31 December 2022, 11,402,796 ordinary shares with a net book value of £27m (2021: 29,405,191 ordinary shares with a net book value of £65m) were held for the purpose of share-based payment plans and included in accumulated losses. During the year:
- 18,488,558 ordinary shares with a net book value of £39m (2021: 10,667,095 ordinary shares with a net book value of £24m) vested in share-based payment plans; and
- the Company acquired none (2021: none) of its ordinary shares via reinvestment of dividends received on its own shares and purchased 486,163 (2021: none) of its ordinary shares through purchases on the London Stock Exchange

[3] Share-based payments – direct to equity is the share-based payment charge for the year less actual cost of vesting excluding those vesting from own shares and cash received on share-based schemes vesting

[4] Relates to NCI investment received in the year in respect of Rolls-Royce SMR Limited

[5] On disposal of ITP Aero on 15 September 2022, the premium recognised on issue of shares for the previous acquisition became realised on receipt of qualifying consideration. As such, the total merger reserve has been transferred to accumulated losses

1 Accounting policies

The Company and the Group

Rolls-Royce Holdings plc (the 'Company') is a public company limited by shares incorporated under the Companies Act 2006 and domiciled in England in the United Kingdom. The Consolidated Financial Statements of the Company for the year ended 31 December 2022 consist of the audited consolidation of the Financial Statements of the Company and its subsidiaries (together referred to as the Group) together with the Group's interest in jointly controlled and associated entities.

Basis of preparation and statement of compliance

The Company has elected to prepare its individual Company Financial Statements under FRS 101 *Reduced Disclosure Framework*. They are set out on pages 173 to 178 with the associated accounting policies from page 175.

The Consolidated Financial Statements have been prepared in accordance with UK adopted International Accounting Standards (IAS) in conformity with the requirements of the Companies Act 2006 and interpretations issued by the IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under UK adopted IFRS.

The Consolidated Financial Statements have been prepared on a going concern basis as described on page 48. The historical cost basis has been used except where IFRS require the revaluation of financial instruments to fair value and certain other assets and liabilities on an alternative basis, most significantly post-retirement scheme obligations are valued on the basis required by IAS 19 *Employee Benefits*.

The Consolidated Financial Statements are presented in sterling which is the Company's functional currency.

The preparation of the Consolidated Financial Statements requires management to make judgements and estimates that affect the statutory amounts of assets and liabilities at the date of the Consolidated Financial Statements and the statutory amounts of revenue and expenses during the reporting period. Actual future outcomes could differ from those estimates.

Going concern

The Directors have undertaken a comprehensive going concern review. In adopting the going concern basis for preparing these Consolidated Financial Statements, the Directors have undertaken a review of the Group's cash flow forecasts and available liquidity, along with consideration of the principal risks and uncertainties over an 18-month period to August 2024. Recognising the challenges of reliably estimating and forecasting the impact of external factors on the Group, the Directors have considered two forecasts in the assessment of going concern, along with a likelihood assessment of these forecasts, being:

- base case, which reflects the Directors' current expectations of future trading of a steady and ongoing recovery of trading towards pre-pandemic levels; and
- stressed downside forecast, which envisages a 'stress' or 'downside' situation.

The future impact of climate change on the Group has been considered through climate scenarios. The climate scenarios modelled do not have a material impact on the cash flow forecasts over the 18-month period to August 2024.

Further details are given in the going concern review on page 48. After reviewing the current liquidity position and the cash flow forecasts modelled under both the base case and stressed downside, the Directors consider that the Group has sufficient liquidity to continue in operational existence for a period of at least 18 months from the date of this report and are therefore satisfied that it is appropriate to adopt the going concern basis of accounting in preparing the Consolidated Financial Statements.

Climate change

In preparing the Consolidated Financial Statements the Directors have considered the potential impact of climate change, particularly in the context of the disclosures included in the Strategic Report and Climate Review this year and the stated decarbonisation strategy. Based on the Taskforce for Climate-related Financial Disclosures (TCFD) recommendations, the Group assesses the potential impact of climate-related risks which cover both transition risks and physical risks. The eight key risks and the opportunities considered in the climate scenarios prepared include extensive policy, legal, technological, and market changes and physical risks which could include direct damage to assets and supply chain disruption. Two of the assessed key transition risks have been identified as potentially having a high impact on the Group. These relate to the risk that regulatory changes could materially impact demand for our products and that addressing climate change will require shifting investment focus towards more sustainable products and solutions. Both of these risks are being actively addressed through the Group's decarbonisation strategy and the financial implications, as reflected in the quantified climate scenarios, have been considered when preparing the financial statements.

The Group has set its decarbonisation strategy and identified longer-term considerations in response to the climate challenge and is engaging proactively with external stakeholders to advocate for the conditions that society needs to achieve its net zero target. The Group's main short- and longer-term priorities include:

- achieving net zero greenhouse gas (GHG) emissions by 2030 from all energy purchased and consumed in the Group's offices, manufacturing and production activities (with the exception of product testing and development). This will be met through continued investment in onsite renewable energy installations; the procurement of renewable energy; and continued investment in energy efficiency improvements to reduce the Group's overall energy demands and operating costs. An estimate of the investment required to meet these scope 1 and 2 emission improvements is included in the forecasts that support these Consolidated Financial Statements;
- the scale up of sustainable fuels that will play a crucial role in reaching net zero carbon. To accelerate this, the Group are working to demonstrate that all the commercial aero engines produced, and the most popular reciprocating engines, representing 80% of the product portfolio, are compatible with sustainable fuels by the end of 2023 and working with our armed forces customers to achieve the same goals for the Rolls-Royce engines they use; and

1 Accounting policies – continued

Climate change (continued)

– developing breakthrough new technologies, including investment in hybrid-electric solutions in Power Systems, continued development of the more efficient UltraFan aero engine, testing of sustainable aviation fuels, small modular reactors (SMRs) and hybrid and fully electric propulsion. New products will be compatible with net zero operation by 2030 and all products will be compatible with net zero operation by 2050. In the year, R&D costs of £(108)m (2021: £(68)m) within New Markets included design development to ready the SMRs to progress through the UK generic design assessment (GDA) process and investment in electrical propulsion technology. Future investment required to deliver these technologies is included in the forecasts that support the Consolidated Financial Statements.

The climate change scenarios previously prepared to assess the viability of our business strategy, decarbonisation plans and approach to managing climate-related risk have continued to develop over the last year as set out in our Climate Review. There remains inherent uncertainty over the assumptions used within these and how they will impact the Group's business operations, cash flows and profit projections. The Directors assess the assumptions on a regular basis to ensure that they are consistent with the risk management activities and the commitments made to investors and other stakeholders.

Assumptions used within the Consolidated Financial Statements in relation to areas such as revenue recognition for long-term contracts, impairment reviews of non-current assets and the carrying amount of deferred tax assets consider the findings from the climate scenarios prepared. Key variables include carbon pricing based on the International Energy Agency (IEA) Net Zero scenario, which assumes an increase from $46 per tonne of carbon in 2022 to $250 per tonne in 2050, and commodity price, temperature rise and GDP information from the Oxford Economics Global Climate Service Net Zero scenario aligned to IPCC SSP1-19.

As details of what incremental specific future intervention measures will be taken by governments are not yet available, carbon pricing has been used to quantify the potential impact of future policy changes on the Group. To ensure revenue recognition or the carrying value of assets is not overstated it has been assumed that carbon pricing falls on our own manufacturing facilities and those of our supply chain. The Group will be able to mitigate an element of the financial impact as it reduces the scope 1 and 2 emissions from its offices, manufacturing and production activities, the costs of which have been incorporated into forecasts. The Group has made estimates in relation to decarbonisation in its external supply chain and the impact this may have on the Group's costs, whilst acknowledging in its financial modelling that this is complex and will therefore take some time. The financial modelling performed recognises the extent to which the Group's current supplier contracts offer protection from cost increases in the short to medium term where pricing is fixed or subject to capped escalation clauses. The Group has made a cautious assessment of whether higher costs would be passed on to customers in the short and medium term that considers the markets operated in and the pricing mechanisms in place. For example, in Civil Aerospace it is recognised that escalation caps within a number of its long-term service agreements (LTSA) contracts would be triggered, meaning additional costs could remain within the business under current commercial arrangements until the end of existing contract periods.

When determining the amount of cumulative revenue recognised on long-term contracts, and the obligation in relation to onerous contracts, the assumptions above have been used to reflect the climate uncertainties. Changes in estimates have not had a significant impact on revenue catch-ups in the year (2021: £(17)m) or on contract loss provisions (2021: £(20)m). Increases in carbon and commodity price estimates over the term of the current contracts are estimated to be around 1% (2021: 1%). A sensitivity is presented within the key sources of estimation uncertainty (page 116) to disclose the impact of a further 1% cost increase that might arise from further unmitigated increases in carbon and/or commodity pricing.

Impairment testing of non-current assets including goodwill and programme assets has considered the above risks as well as assessing how the Group's 1.5°C and 3.6°C scenarios may change the demand for products over the medium and longer term. Given the headroom, the climate scenarios modelled do not indicate any potential impairment. Further information is provided in note 9.

Deferred tax assets are recognised to the extent it is probable that future taxable profits will be available, against which the unused tax losses and deductible temporary difference can be utilised. The weighted downside forecast includes the climate-related estimates and assumptions. Whilst carbon pricing illustrates pressure on costs, decarbonisation and new supplier and customer contracts offer the opportunity to receive value for more efficient and sustainable products. Further details are included in note 5 together with sensitivity analysis in the key sources of estimation uncertainty section below.

The climate-related estimates and assumptions that have been considered to be key areas of judgement or sources of estimation uncertainty for the year ended 31 December 2022 are those relating to the recoverable amount of non-current assets including goodwill, capitalised development costs, recovery of deferred tax assets, recognition and measurement of provisions and recognition of revenue on long-term contracts. These items are included within the key areas of judgement and key sources of estimation uncertainty summarised on page 113 and explained in detail throughout the significant accounting policies.

Items that may be impacted by climate-related risks, but which are not considered to be key areas of judgements or sources of estimation uncertainty in the current financial year are outlined on page 112.

1 Accounting policies – continued

Climate change (continued)

Useful lives of assets – The useful lives of property, plant and equipment and right-of-use assets could be reduced by climate-related matters, for example, as a result of physical risks, obsolescence or legal restrictions. The change in useful lives would have a direct impact on the amount of depreciation or amortisation recognised each year from the date of reassessment. The Directors' review of useful lives has taken into consideration the impacts of the Group's decarbonisation strategy and has not had a material impact on the results for the year. The Directors have also considered the remaining useful economics lives of material intangible assets, including the £1,826m and £250m capitalised development spend associated with the Trent and business aviation programmes disclosed in note 9. Given the measures the Group is taking, including the testing of engines for sustainable aviation fuels (SAF) compatibility and that all the commercial aero-engines and the most popular reciprocating engines that are currently produced will be compatible with sustainable fuels by the end of 2023, the Directors judge that no adjustment is required to the useful economic lives.

Inventory valuation – Climate-related matters may affect the value of inventories as a result of a decline in selling prices or could become obsolete due to a reduction in demand. After consideration of the typical stock-turns of the inventory in relation to the rate of change in the market the Directors consider that inventory is appropriately valued.

Recoverability of trade receivables and contract assets – The impact of climate-related matters could have an impact on the Group's customers in the future, especially those customers in the Civil Aerospace business. No material climate-related issues have arisen during the year that have impacted the assessment of the recoverability of receivables. The Group's expected credit loss (ECL) provision uses credit ratings which inherently will include the market's assessment of the climate change impact on credit risk of the counter parties. Given the maturity time of trade receivables and the majority of contract assets, climate change is unlikely to cause a material increase on counter party credit risk in that time.

Share-based payments – Remuneration packages will be impacted and measured against a new sustainability metric from the 2023 financial year. This could impact the future amount and timing of the recognition of the share-based payment expense in the income statement once these metrics are included within the performance condition criteria of the share-based payment plans. This change has had no impact on the 2022 Consolidated Financial Statements and is unlikely to have a material impact on the charge recognised in the next 12 months.

Defined benefit pension plans – Climate-related risks could affect the financial position of defined benefit pension plans. As a result, this could have implications on the expected return on plan assets and measurement of defined benefit liabilities in future years. The Trustee of the Rolls-Royce UK Pension Fund meet the climate-related regulatory requirements. When making decisions about the plan, its analysis is carried out in a way consistent with Taskforce on Climate-Related Financial Disclosures (TCFD). The Trustee has set a net zero target for the plan assets by 2050. Having assessed the risks and opportunities of climate change and considered the nature of the assets of the fund, climate change is unlikely to have a material impact on the position in the Consolidated Financial Statements.

Presentation of underlying results

The Group measures financial performance on an underlying basis and discloses this information as an alternative performance measure (APM). This is consistent with the way that financial performance is measured by the Directors and reported to the Board in accordance with IFRS 8 *Operating Segments*. The Group believes this is the most appropriate basis to measure the in-year performance, as underlying results reflect the substance of trading activity, including the impact of the Group's foreign exchange forward contracts, which economically hedge net foreign currency cash flows at predetermined exchange rates. In addition, underlying results exclude the accounting impact of business acquisitions and disposals, impairment charges where the reasons are outside of normal operating activities, exceptional items, and certain other items which are market driven and outside of the control of management. Further details are given in note 2. A reconciliation of APMs to the statutory equivalent is provided on pages 203 to 206.

Revisions to IFRS applicable in 2022

The Group adopted the amendment to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* for Onerous Contracts – Cost of Fulfilling a Contract on 1 January 2022. The amendment clarifies the meaning of 'costs to fulfil a contract', explaining that the direct cost of fulfilling a contract comprises the incremental costs of fulfilling that contract (for example, direct labour and materials) and also an allocation of other costs that relate directly to fulfilling contracts. As a result of the amendment, the Group now includes additional allocated costs when determining whether a contract is onerous and in the quantification of the provision recognised in the event of a contract being onerous. These additional allocated costs primarily relate to (a) fixed overheads in our operational areas that are incurred irrespective of manufacturing load, (b) fixed overheads of providing services, including engine health monitoring and IT costs, and (c) depreciation of spare engines that the Group owns are used to support the delivery of our contractual commitments to customers under LTSAs. The Group has assessed the impact of this amendment on its contracts and has included additional allocated costs that increased the total contract loss provision by £723m, as at 1 January 2022 (see note 21). All material elements impact Civil Aerospace contracts. Of this increase, £38m relates to current provisions and £685m to non-current provisions. A tax credit has not been recognised on the increase in the provision relating to the UK (see note 5 for details). As required by the transition arrangement in relation to the amendment, comparative information has not been restated. The cumulative effect of initially applying the amendment has been recognised as an adjustment to the opening balance of retained earnings as at 1 January 2022. It is estimated that the impact of the IAS 37 amendment has had a favourable immaterial impact on the 2022 income statement. Further information can be found in note 21.

There are no other new standards or interpretations issued by the IASB that had a significant impact on the Consolidated Financial Statements.

1 Accounting policies – continued

Key areas of judgement and sources of estimation uncertainty

The determination of the Group's accounting policies requires judgement. The subsequent application of these policies requires estimates, and the actual outcome may differ from that calculated. The key judgements and key sources of estimation uncertainty at the balance sheet date, that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial year, are summarised below. Further details, together with sensitivities for key sources of estimation uncertainty where appropriate and practicable, are included within the significant accounting policies section of this note.

Area	Key judgements	Key sources of estimation uncertainty	Page ref
Revenue recognition and contract assets and liabilities	— Whether Civil Aerospace OE and aftermarket contracts should be combined. — How performance on long-term aftermarket contracts should be measured. — Whether any costs should be treated as wastage. — Whether sales of spare engines to joint ventures are at fair value. — When revenue should be recognised in relation to spare engine sales.	— Estimates of future revenue and costs of long-term contractual arrangements, including the impact of climate change.	115
Risk and revenue sharing arrangements	— Determination of the nature of entry fees received.		116
Taxation		— Estimates necessary to assess whether it is probable that sufficient suitable taxable profits will arise in the UK to utilise the deferred tax assets recognised.	118
Discontinued operations and business disposals	— The assets, liabilities and associated consolidation adjustments of the ITP Aero business recognised on disposal.		118
Research and development	— Determination of the point in time where costs incurred on an internal programme development meet the criteria for capitalisation. — Determination of the basis for amortising capitalised development costs.		120
Impairment of non-current assets	— Determination of cash-generating units for assessing impairment of goodwill.		122
Leases	— Determination of the lease term.	— Estimates of the payments required to meet residual value guarantees at the end of engine leases.	122
Provisions	— Whether any costs should be treated as wastage.	— Estimates of the time to resolve the technical issues on the Trent 1000, including the development of the modified high pressure turbine (HPT) blade and estimates of the expenditure required to settle the obligation relating to Trent 1000 long-term contracts assessed as onerous. — Estimates of the future revenues and costs to fulfil onerous contracts. — Assumptions implicit within the calculation of discount rates.	123
Post-retirement benefits		— Estimates of the assumptions for valuing the net defined benefit obligation.	124

Significant accounting policies

The Group's significant accounting policies are set out below. These accounting policies have been applied consistently to all periods presented in these Consolidated Financial Statements.

Basis of consolidation

The Consolidated Financial Statements include the Company Financial Statements and its subsidiary undertakings together with the Group's share of the results in joint arrangements and associates made up to 31 December.

A subsidiary is an entity controlled by the Company. Control exists when the Company has power over an entity, exposure to variable returns from its involvement with an entity and the ability to use its power over an entity so as to affect the Company's returns. Subsidiaries are consolidated in accordance with IFRS 10 *Consolidated Financial Statements*.

1 Accounting policies – continued

Basis of consolidation (continued)

A joint arrangement is an entity in which the Group holds a long-term interest and which is jointly controlled by the Group and one or more other investors under a contractual arrangement. Joint arrangements may be either joint ventures or joint operations. Joint ventures are accounted for using the equity method of accounting and joint operations are accounted for using proportionate accounting.

An associate is an entity that is neither a subsidiary nor a joint arrangement, in which the Group holds a long-term interest and where the Group has a significant influence. The results of associates are accounted for using the equity method of accounting.

All intra-group transactions, balances, income and expenses are eliminated on consolidation. Adjustments are made to eliminate the profit or loss arising on transactions with joint arrangements and associates to the extent of the Group's interest in the entity. Transactions with non-controlling interests are recorded directly in equity.

Any subsidiary undertaking, joint arrangement or associate sold or acquired during the year are included up to, or from, the date of change of control. Details of transactions in the year are set out in note 27.

Revenue recognition and contract assets and liabilities

Revenue recognised comprises sales to the Group's customers after discounts and amounts payable to customers. Revenue excludes value added taxes. The transaction price of a contract is typically clearly stated within the contract, although the absolute amount may be dependent on escalation indices and long-term contracts that require the key estimates highlighted below to be made. Refund liabilities, where sales are made with a right of return, are not typical in the Group's contracts. Where they do exist, and consideration has been received, a portion based on an assessment of the expected refund liability is recognised within other payables. The Group has elected to use the practical expedient not to adjust revenue for the effect of financing components where the expectation is that the period between the transfer of goods and services to customers and the receipt of payment is less than a year. Consideration is received in the form of deposits and payments for completion of milestones or performance obligations. LTSA cash receipts are typically received based on EFHs.

Sales of standard OE, spare parts and time and material overhaul services are generally recognised on transfer of control to the customer. This is generally on delivery to the customer, unless the specific contractual terms indicate a different point. The Directors consider whether there is a need to constrain the amount of revenue to be recognised on delivery based on the contractual position and any relevant facts, however, this is not typically required.

Sales of OE and services that are specifically designed for the contract (most significantly in the Defence business) are recognised by reference to the progress towards completion of the performance obligation, using the cost method described in the key judgements, provided the outcome of contracts can be assessed with reasonable certainty.

The Group generates a significant portion of its revenue on aftermarket arrangements arising from the installed OE fleet. As a consequence, in particular in the Civil Aerospace large engine business, the Group will often agree contractual prices for OE deliveries that take into account the anticipated aftermarket arrangements. Sometimes this may result in losses being incurred on OE. As described in the key judgements, these contracts are not combined. The consideration in the OE contract is therefore allocated to OE performance obligations and the consideration in the aftermarket contract to aftermarket performance obligations.

Key areas of the accounting policy are:

- Future variable revenue from long-term contracts is constrained to take account of the risk of non-recovery of resulting contract balances from reduced utilisation e.g. EFHs, based on historical forecasting experience and the risk of aircraft being parked by the customer.
- A significant amount of revenue and cost related to long-term contract accounting is denominated in currencies other than that of the relevant Group undertaking, most significantly USD transactions in sterling and euro denominated undertakings. These are translated at estimated long-term exchange rates.
- The assessment of stage of completion is generally measured for each contract. However, in certain cases, such as for CorporateCare agreements, where there are many contracts covering aftermarket services each for a small number of engines, the Group accounts for a portfolio of contracts together, as the effect on the Consolidated Financial Statements would not differ materially from applying the standard to the individual contracts in the portfolio. When accounting for a portfolio of LTSAs, the Group uses estimates and assumptions that reflect the size and composition of the portfolio.
- A contract asset/liability is recognised where payment is received in arrears/advance of the revenue recognised in meeting performance obligations.
- Where material, wastage costs (see key judgements on page 115) are recorded as an exceptional non-underlying expense.

If the expected costs to fulfil a contract exceed the expected revenue, a contract loss provision is recognised for the excess costs.

The Group pays participation fees to airframe manufacturers, its customers for OE, on certain programmes. Amounts paid are initially treated as contract assets and subsequently charged as a reduction to the OE revenue when the engines are transferred to the customer.

The Group has elected to use the practical expedient to expense as incurred any incremental costs of obtaining or fulfilling a contract if the amortisation period of an asset created would have been one year or less. Where costs to obtain a contract are recognised in the balance sheet, they are amortised over the performance of the related contract (two to 13 years).

1 Accounting policies – continued

Key judgement – Whether Civil Aerospace OE and aftermarket contracts should be combined
In the Civil Aerospace business, OE contracts for the sale of engines to be installed on new aircraft are with the airframers, while the contracts to provide spare engines and aftermarket goods and services are with the aircraft operators, although there may be interdependencies between them. IFRS 15 *Revenue from Contracts with Customers* includes guidance on the combination of contracts, in particular that contracts with unrelated parties should not be combined. Notwithstanding the interdependencies, the Directors consider that the engine contract should be considered separately from the aftermarket contract. In making this judgement, they also took account of industry practice.

Key judgement – How performance on long-term aftermarket contracts should be measured
The Group generates a significant proportion of its revenue from aftermarket arrangements. These aftermarket contracts, such as TotalCare and CorporateCare agreements in the Civil Aerospace business, cover a range of services and generally have contractual terms covering more than one year. Under these contracts, the Group's primary obligation is to maintain customers' engines in an operational condition. This is achieved by undertaking various activities, such as maintenance, repair and overhaul, and engine monitoring over the period of the contract. Revenue on these contracts is recognised over the period of the contract and the basis for measuring progress is a matter of judgement. The Directors consider that the stage of completion of the contract is best measured by using the actual costs incurred to date compared to the estimated costs to complete the performance obligations, as this reflects the extent of completion of the activities to be performed.

Key judgement – Whether any costs should be treated as wastage
In rare circumstances, the Group may incur costs of wasted material, labour or other resources to fulfil a contract where the level of cost was not reflected in the contract price. The identification of such costs is a matter of judgement and would only be expected to arise where there has been a series of abnormal events which give rise to a significant level of cost of a nature that the Group would not expect to incur and hence is not reflected in the contract price. Examples include technical issues that: require resolution to meet regulatory requirements; have a wide-ranging impact across a product type; and cause significant operational disruption to customers. Similarly, in these rare circumstances, significant disruption costs to support customers resulting from the actual performance of a delivered good or service may be treated as a wastage cost. Provision is made for any costs identified as wastage when the obligation to incur them arises – see note 21.

Key judgement – Whether sales of spare engines to joint ventures are at fair value
The Civil Aerospace business maintains a pool of spare engines to support its customers. Some of these engines are sold to, and held by, joint venture companies. The assessment of whether the sales price reflects fair value is a key judgement. The Group considers that based upon the terms and conditions of the sales, and by comparison to the sales price of spare engines to other third parties, the sales made to joint ventures reflect the fair value of the goods sold. See note 26 for the value of sales to joint ventures during the year.

Key judgement – When revenue should be recognised in relation to spare engine sales
Revenue is recognised at the point in time when a customer obtains control of a spare engine. The customer could be a related party, an external operator or a spare engine service provider. Depending on the contractual arrangements, judgement is required on when the Group relinquishes control of spare engines and, therefore, when the revenue is recognised. The point of control passing has been concluded to correspond to the point of legal sale, even for instances where the customer is contracted to provide some future spare engine capacity to the Group to support its installed engine base. In such cases, the customer has responsibility for generating revenue from the engines and exposure to periods of non-utilisation; exposure to risk of damage or loss, risk from residual value movements, and will determine if and when profits will be made from disposal. The spare engine capacity that will be made available to the Group in the future does not consist of identified assets and the provider retains a substantive right to substitute the asset through the Group's period of use. It is, therefore, appropriate to recognise revenue from the sale of the spare engines at the point that title transfers. During 2022, of the total 44 (2021: 36) large spare engine sales delivered, 20 (2021: six) engines were sold to customers where contractual arrangement allows for some future spare engine capacity to be used by the Group. These sales contributed £454m (2021: £111m) to revenue for the year.

1 Accounting policies – continued

Key estimate – Estimates of future revenue and costs on long-term contractual arrangements
The Group has long-term contracts that fall into different accounting periods and which can extend over significant periods (generally up to 25 years), the most significant of these are LTSAs in the Civil Aerospace business, with an average remaining term of around ten years. The estimated revenue and costs are inherently imprecise and significant estimates are required to assess: EFHs, time-on-wing and other operating parameters; the pattern of future maintenance activity and the costs to be incurred; lifecycle cost improvements over the term of the contracts; and escalation of revenue and costs (that includes the impact of inflation). The impact of climate change on EFHs and costs is also considered when making these estimates. Industry and customer data on expected levels of utilisation is included in the forecasts used. Across the length of the current Civil Aerospace LTSA contracts, allowance has been made for around a 1% (2021: 1%) projected cost increase resulting from carbon pricing and commodity price changes.

The sensitivities below demonstrate how changes in assumptions (including as a result of climate change) could impact the level of revenue recognised were assumptions to change. The Directors believe that the estimates used to prepare the Consolidated Financial Statements take account of the inherent uncertainties, constraining the expected level of revenue as appropriate.

Estimates of future LTSA revenue within Civil Aerospace are based upon future EFH forecasts, influenced by assumptions over the recovery of the civil aviation industry. Finally, many of the revenues and costs are denominated in currencies other than that of the relevant group undertaking. These are translated at an estimated long-term exchange rate, based on historical trends and economic forecasts.

During the year, changes to the estimate in relation to the Civil Aerospace LTSA contracts resulted in favourable catch-up adjustments to revenue of £360m (2021: £214m).

Based upon the stage of completion of all LTSA contracts within Civil Aerospace as at 31 December 2022, the following reasonably possible changes in estimates would result in catch-up adjustments being recognised in the period in which the estimates change (at underlying rates):

- A change in forecast EFHs of 1% over the remaining term of the contracts would impact LTSA income and to a lesser extent costs, resulting in an in-year impact of around £20m. This would be expected to be seen as a catch-up change in revenue or, to the extent it impacts onerous contracts, within cost of sales.
- A 2% increase or decrease in our pricing to customers over the life of the contracts would lead to a revenue catch-up adjustment in the next 12 months of around £260m.
- A 2% increase or decrease in shop visit costs over the life of the contracts would lead to a revenue catch-up adjustment in the next 12 months of around £100m.

Risk and revenue sharing arrangements (RRSAs)

Cash entry fees received are initially deferred on the balance sheet within trade payables and other liabilities. They are then recognised as a reduction in cost of sales incurred. Individual programme amounts are allocated pro rata to the estimated number of units to be produced. Amortisation commences as each unit is delivered and then recognised on a 15-year straight-line basis.

The payments to suppliers of their shares of the programme cash flows for their production components are charged to cost of sales when OE sales are recognised or as LTSA costs are incurred.

The Group also has arrangements with third parties who invest in a programme and receive a return based on its performance, but do not undertake development work or supply parts. Such arrangements (financial RRSAs) are financial instruments as defined by IAS 32 *Financial Instruments: Presentation* and are accounted for using the amortised cost method.

Key judgement – Determination of the nature of entry fees received
RRSAs with key suppliers (workshare partners) are a feature of the civil aviation industry business. Under these contractual arrangements, the key commercial objectives are that: (i) during the development phase the workshare partner shares in the risks of developing an engine by performing its own development work, providing development parts, and paying a non-refundable cash entry fee; and (ii) during the production phase the workshare partner supplies components in return for a share of the programme cash flows as a 'life of type' supplier (i.e. as long as the engine remains in service).

The non-refundable cash entry fee is judged by the Group to be a contribution towards the development expenditure incurred. These receipts are deferred on the balance sheet and recognised against the cost of sales over the estimated number of units to be delivered on a similar basis to the amortisation of development costs – see page 120.

1 Accounting policies – continued

Royalty payments
Where a government or similar body has previously acquired an interest in the intellectual property of a programme, royalty payments are matched to the related sales.

Government grants
Government grants received are varied in nature and are recognised in the income statement so as to match them with the related expenses that they are intended to compensate. Where grants are received in advance of the related expenses, they are initially recognised as liabilities within trade payables and other liabilities and released to match the related expenditure. Non-monetary grants are recognised at fair value.

Interest
Interest receivable/payable is credited/charged to the income statement using the effective interest method. Where borrowing costs are attributable to the acquisition, construction or production of a qualifying asset, such costs are capitalised as part of the specific asset.

Taxation
The tax charge/credit on the profit or loss for the year comprises current and deferred tax:

- Current tax is the expected tax payable for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.
- Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of the assets and liabilities for financial reporting purposes and the amounts used for tax purposes and is calculated using the enacted or substantively enacted rates that are expected to apply when the asset or liability is settled. In the UK, the deferred tax liability on the pension scheme surplus is recognised consistently with the basis for recognising the surplus i.e. at the rate applicable to refunds from a trust.

Tax is charged or credited to the income statement or OCI as appropriate, except when it relates to items credited or charged directly to equity in which case the tax is also dealt with in equity.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries and joint arrangements, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax is not recognised on taxable temporary differences arising on the initial recognition of goodwill or for temporary differences arising from the initial recognition of assets and liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profits, which include the reversal of taxable temporary differences, will be available against which the assets can be utilised. Further details on the Group's tax position can be found on page 133.

1 Accounting policies – continued

Key estimate – Estimates necessary to assess whether it is probable that sufficient suitable taxable profits will arise in the UK to utilise the deferred tax assets recognised
Deferred tax assets are only recognised to the extent it is probable that future taxable profits will be available, against which the deductible temporary difference can be utilised. On this basis a deferred tax asset of £2,040m is not recognised in respect of UK tax losses. Further details are included in note 5.

In addition to taking into account a severe but plausible downside forecast (see below), the climate-related estimates and assumptions (set out on pages 110 to 112) have also been considered when assessing the recoverability of the deferred tax assets. Recognising the longer terms over which these assets will be recovered, the Group has considered the risk that regulatory changes could materially impact demand for our products and shifting investment focus towards more sustainable products and solutions. The climate scenarios prepared do not indicate a significant deterioration in demand or profitability for Civil Aerospace programmes given that all commercial aero-engines will be compatible with sustainable fuels by the end of 2023.

While carbon and commodity pricing may put pressure on costs, decarbonisation and new supplier and customer contracts offer the opportunity to receive value for more efficient and sustainable products.

Macro-economic factors continue to result in uncertainty over the recovery of demand across the civil aviation industry. As explained in note 5, a 25% probability of there being a severe but plausible downside forecast in relation to the civil aviation industry has been taken into account in the assessment of the recovery of the UK deferred tax assets.

The estimates take account of the inherent uncertainties constraining the expected level of profit as appropriate. Changes in these estimates will affect future profits and, therefore, the recoverability of the deferred tax assets. The following sensitivities have been modelled to demonstrate the impact of changes in assumptions on the recoverability of deferred tax assets.

— A 5% change in margin in the main Civil Aerospace large engine programmes.

— A 5% change in the number of shop visits driven by EFHs.

— Assumed future cost increases from climate change expected to pass through to customers at 100% are restricted to 90% pass through.

All of these could be driven by a number of factors, including the impact of climate change as explained on pages 110 to 112 and changes in foreign exchange rates.

A 5% change in margin or shop visits (which could be driven by fewer EFHs as a result of climate change) would result in an increase/decrease in the deferred tax asset of around £130m.

If only 90% of assumed future cost increases from climate change are passed on to customers, this would result in a decrease in the deferred tax asset of around £50m, and if carbon prices were to double, this would be £80m.

Foreign currency translation

Transactions denominated in currencies other than the functional currency of the transacting group undertaking are translated into the functional currency at the average monthly exchange rate when the transaction occurs. Monetary assets and liabilities denominated in foreign currencies are translated into the relevant functional currency at the rate prevailing at the year end. Exchange differences arising on foreign exchange transactions and the retranslation of monetary assets and liabilities into functional currencies at the rate prevailing at the year end are included in profit/(loss) before taxation.

The trading results of Group undertakings are translated into sterling at the average exchange rates for the year. The assets and liabilities of overseas undertakings, including goodwill and fair value adjustments arising on acquisition, are translated at the exchange rates prevailing at the year end. Exchange adjustments arising from the retranslation of the opening net assets, and from the translation of the profits or losses at average rates, are recognised in OCI.

Discontinued operations and business disposals

A discontinued operation is defined in IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* as a component of an entity that has been disposed of or is classified as held for sale, represents a separate major line of business or geographical area of operations, is part of a single co-ordinated plan to dispose of such a line of business or is a subsidiary acquired exclusively with a view to resale. The results of discontinued operations are required to be presented separately in the income statement.

Assets and businesses are classified as held for sale when their carrying amounts will be recovered through sale rather than through continuing use.

Key judgement – The assets, liabilities and associated consolidation adjustments of the ITP Aero business recognised on disposal
In identifying the assets and liabilities that form part of the disposal group in relation to the ITP Aero business, the Group has considered whether the associated consolidation adjustments meet the criteria to be classified within the disposal group. The consolidation adjustments allocated to the disposal group are those that relate to the carrying value of the disposal group's assets and liabilities. Further detail can be found in note 27.

1 Accounting policies – continued

Financial instruments – Classification and measurement

Financial assets primarily include trade receivables, cash and cash equivalents, short-term investments, derivatives (foreign exchange, commodity and interest rate contracts), and listed and unlisted investments.

- Trade receivables are classified either as held to collect and measured at amortised cost, or as held to collect and sell and measured at fair value, with movements in fair value recognised through other comprehensive income (FVOCI). The Group may sell trade receivables due from certain customers before the due date. Any trade receivables from such customers that are not sold at the reporting date are classified as 'held to collect and sell'.
- Cash and cash equivalents (consisting of balances with banks and other financial institutions, money-market funds, short-term deposits) and short-term investments are subject to low market risk. Cash balances, short-term deposits and short-term investments are measured at amortised cost. Money market funds are measured at fair value, with movements in fair value recognised in the income statement as a profit or loss (FVPL).
- Derivatives and unlisted investments are measured at FVPL. The Company has elected to measure its listed investments at FVOCI

Financial liabilities primarily consist of trade payables, borrowings, derivatives, financial RRSAs and C Shares.

- Derivatives are classified and measured at FVPL.
- All other financial liabilities are classified and measured at amortised cost.

Financial instruments – Impairment of financial assets and contract assets

IFRS 9 *Financial Instruments* sets out the basis for the accounting of ECLs on financial assets and contract assets resulting from transactions within the scope of IFRS 15. The Group has adopted the simplified approach to provide for ECLs, measuring the loss allowance at a probability weighted amount that considers reasonable and supportable information about past events, current conditions and forecasts of future economic conditions of customers. These are incorporated in the simplified model adopted by using credit ratings which are publicly available, or through internal risk assessments derived using the customer's latest available financial information. The ECLs are updated at each reporting date to reflect changes in credit risk since initial recognition. ECLs are calculated for all financial assets in scope, regardless of whether or not they are overdue.

Financial instruments – Hedge accounting

Forward foreign exchange contracts and commodity swaps (derivative financial instruments) are held to manage the cash flow exposures of forecast transactions denominated in foreign currencies or in commodities respectively. Derivative financial instruments qualify for hedge accounting when: (i) there is a formal designation and documentation of the hedging relationship and the Group's risk management objective and strategy for undertaking the hedge at the inception of the hedge; and (ii) the hedge is expected to be effective.

In general, the Group has chosen to not apply hedge accounting in respect of these exposures.

The Group economically hedges the fair value and cash flow exposures of its borrowings. Cross-currency interest rate swaps are held to manage the fair value or cash flow exposures of borrowings denominated in foreign currencies and are designated as fair value hedges or cash flow hedges as appropriate. Interest rate swaps are held to manage the interest rate exposures of fixed and floating rate borrowings and may be designated as fair value hedges or cash flow hedges as appropriate. If the swaps are not designated as fair value or cash flow hedges, the economic effect is included in the underlying results – see note 2.

Changes in the fair values of derivatives that are designated as fair value hedges are recognised directly in the income statement. The fair value changes of effective cash flow hedge derivatives are recognised in OCI and subsequently recycled to the income statement in the same period or periods during which the hedged cash flows affect profit or loss. Any ineffectiveness in the hedging relationship is included in the income statement.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, exercised, or no longer qualifies for hedge accounting. At that time, for cash flow hedges and, if the forecast transaction remains probable, any net cumulative gain or loss on the hedging instrument recognised in SOCIE is retained until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss is recycled to the income statement.

Financial instruments – Replacement of benchmark interest rates

In August 2020, Phase 2 of IBOR reform was published, effective from 1 January 2021. The amendments address issues that arise from the implementation of the reforms including the replacement of one benchmark with an alternative one. The Phase 2 amendments provide additional temporary reliefs from applying specific IAS 39 *Financial Instruments: Recognition and Measurement* and IFRS 9 hedge accounting requirements to hedging relationships directly affected by IBOR reform.

A number of the Group's lease liabilities are based on a LIBOR index. These are predominantly referencing USD LIBOR, which is not expected to cease until 2023, hence the change in relation to these contracts has not impacted the 2022 financial statements. Amendments to these contracts is in progress at the balance sheet date.

1 Accounting policies – continued

Business combinations and goodwill

Goodwill recognised represents the excess of the fair value of the purchase consideration over the fair value to the Group of the net of the identifiable assets acquired and the liabilities assumed. On transition to IFRS on 1 January 2004, business combinations were not retrospectively adjusted to comply with UK-adopted International Accounting Standards and goodwill was recognised based on the carrying value under the previous accounting policies. Goodwill, in respect of the acquisition of a subsidiary, is recognised as an intangible asset. Goodwill arising on the acquisition of joint arrangements and associates is included in the carrying value of the investment.

Customer relationships

The fair value of customer relationships recognised as a result of a business combination relate to the acquired company's established relationships with its existing customers that result in repeat purchases and customer loyalty. Amortisation is charged on a straight-line basis over its useful economic life, up to a maximum of 15 years.

Certification costs

Costs incurred, in respect of meeting regulatory certification requirements for new Civil Aerospace aero-engine/aircraft combinations, including payments made to airframe manufacturers for this, are recognised as intangible assets to the extent that they can be recovered out of future sales. They are charged to the income statement over the programme life. Individual programme assets are allocated pro rata to the estimated number of units to be produced. Amortisation commences as each unit is delivered and then charged on a 15-year straight-line basis.

Research and development

Expenditure incurred on research and development is distinguished as relating either to a research phase or to a development phase. All research phase expenditure is charged to the income statement. Development expenditure is recognised as an internally generated intangible asset (programme asset) only if it meets strict criteria, relating in particular to technical feasibility and generation of future economic benefits. More specifically, development costs are capitalised from the point at which the following conditions have been met:

- the technical feasibility of completing the programme and the intention and ability (availability of technical, financial and other resources) to complete the programme asset and use or sell it;
- the probability that future economic benefits will flow from the programme asset; and
- the ability to measure reliably the expenditure attributable to the programme asset during its development.

Capitalisation continues until the point at which the programme asset meets its originally contracted technical specification (defined internally as the point at which the asset is capable of operating in the manner intended by the Directors).

Subsequent expenditure is capitalised where it enhances the functionality of the programme asset and demonstrably generates an enhanced economic benefit to the Group. All other subsequent expenditure on programme assets is expensed as incurred.

Individual programme assets are allocated pro rata to the estimated number of units to be produced. Amortisation commences as each unit is delivered and then charged on a 15-year straight-line basis. In accordance with IAS 38 *Intangible Assets*, the basis on which programme assets are amortised is assessed annually.

Key judgement – Determination of the point in time when costs incurred on an internal programme development meet the criteria for capitalisation

The Group incurs significant research and development expenditure in respect of various development programmes. Determining when capitalisation should commence and cease is a key judgement, as is the determination of when subsequent expenditure on the programme assets should be capitalised. During the year, £131m of development expenditure was capitalised.

Within the Group, there is an established Product Introduction and Lifecycle Management process (PILM) in place. Within this process, the technical feasibility, the commercial viability and financial assessment of the programme is assessed at certain milestones. When these are met, development expenditure is capitalised. Prior to this, expenditure is expensed as incurred.

The Group continues to invest in new technologies as a result of its decarbonisation commitments. As these are new technologies, there is a higher level of uncertainty over potential outcomes and, therefore, this could impact the level of expenditure that is capitalised or recognised in the income statement in future years.

Subsequent expenditure after entry into service which enhances the performance of the engine and the economic benefits to the Group is capitalised. This expenditure is referred to as enhanced performance and is governed by the PILM process referred to above. All other development costs are expensed as incurred.

Key judgement – Determination of the basis for amortising capitalised development costs

The economic benefits of the development costs are primarily those cash inflows arising from LTSAs, which are expected to be relatively consistent for each engine within a programme. Amortisation of development costs is recognised on a straight-line basis over the estimated period of operation of the engine by its initial operator.

1 Accounting policies – continued

Software
Software that is not specific to an item of property, plant and equipment is classified as an intangible asset, recognised at its acquisition cost and amortised on a straight-line basis over its useful economic life. The amortisation period of software assets is reviewed annually. In 2022, the amortisation period was changed from a maximum of five years to a maximum of ten years to reflect the expected useful lives of the assets. The change has been accounted for as a change in accounting estimate and has impacted a limited amount of assets with an immaterial impact on the results for the year. The cost of internally developed software includes direct labour and an appropriate proportion of overheads.

Other intangible assets
These principally include intangible assets arising on acquisition of businesses, such as technology, patents and licences, which are amortised on a straight-line basis over a maximum of 15 years, and trademarks which are not amortised.

Property, plant and equipment
Property, plant and equipment are stated at acquisition cost less accumulated depreciation and any provision for impairment in value. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate proportion of overheads and, where appropriate, interest.

Depreciation is provided on a straight-line basis to write off the cost, less the estimated residual value, of property, plant and equipment over their estimated useful lives. No depreciation is recorded on assets in the course of construction. Estimated useful lives are reassessed annually and are as follows:

— Land and buildings, as advised by the Group's professional advisers:
  - freehold buildings – five to 50 years (average 23 years); and
  - no depreciation is provided on freehold land.

— Plant and equipment – two to 27 years (average 11 years).

— Aircraft and engines – five to 20 years (average 16 years).

Leases
Assets and liabilities arising from a lease are initially measured on a present value basis.

Lease liabilities include the net present value of the following lease payments:

— fixed payments less any lease incentive receivable;

— variable lease payments that are based on an index or a rate;

— amounts expected to be payable by the Group under residual value guarantees;

— the exercise price of a purchase option if the Group is reasonably certain to exercise that option; and

— payments of penalties for termination of the lease, if the lease term reflects the Group exercising that option.

Where leases commenced after the initial IFRS 16 *Leases* transition date, the lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the Group's incremental borrowing rate is used, being the rate that the Group would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions. Where appropriate, lease liabilities are revalued at each reporting date using the spot exchange rate.

The Group did not adopt the amendment to IFRS 16 *Leases*, effective in 2022, which provides a practical expedient to not treat COVID-19 rent concessions as lease modifications.

Right-of-use assets are measured at cost comprising the following:

— the amount of the initial measurement of lease liability or a revaluation of the liability;

— any lease payments made at or before the commencement date less any lease incentives received;

— any initial direct costs; and

— restoration costs.

Each right-of-use asset is depreciated over the shorter of its useful economic life and the lease term on a straight-line basis unless the lease is expected to transfer ownership of the underlying asset to the Group, in which case the asset is depreciated to the end of the useful life of the asset.

Short-term leases are leases with a lease term of 12 months or less. Payments associated with short-term leases and low-value leases are recognised on a straight-line basis as an expense in the income statement.

1 Accounting policies – continued

Key judgement – Determination of lease term
In determining the lease term, the Group considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated). Certain land and building leases have renewal options with renewal dates for the most significant property leases evenly spread between 2023–2028 and in 2041. The Group reviews its judgements on lease terms annually, including the operational significance of the site, especially where utilised for manufacturing activities.

Key estimates – Estimates of the payments required to meet residual value guarantees at the end of engine leases
Engine leases in the Civil Aerospace business often include clauses that require the engines to be returned to the lessor with specific levels of usable life remaining or cash payments to the lessor. The costs of meeting these requirements are included in the lease payments. The amounts payable are calculated based upon an estimate of the utilisation of the engines over the lease term, whether the engine is restored to the required condition by performing an overhaul at our own cost or through the payments of amounts specified in the contract and any new contractual arrangements arising when the current lease contracts end. Amounts due can vary depending on the level of utilisation of the engines, overhaul activity prior to the end of the contract, and decisions taken on whether ongoing access to the assets is required at the end of the lease term. During the year, adjustments to return conditions at the end of leases resulted in a credit of £4m to the income statement. The lease liability at 31 December 2022 included £434m relating to the cost of meeting these residual value guarantees in the Civil Aerospace business. Up to £114m is payable in the next 12 months, £175m is due over the following four years and the remaining balance after five years.

Impairment of non-current assets

Impairment of non-current assets is considered in accordance with IAS 36 *Impairment of Assets*. Where the asset does not generate cash flows that are independent of other assets, impairment is considered for the cash-generating unit (CGU) to which the asset belongs. Goodwill, indefinite life intangible assets and intangible assets not yet available for use are tested for impairment annually. Other intangible assets (including programme-related intangible assets), property, plant and equipment and investments are assessed for any indications of impairment annually. If any indication of impairment is identified, an impairment test is performed to estimate the recoverable amount.

If the recoverable amount of an asset (or CGU) is estimated to be below the carrying value, the carrying value is reduced to the recoverable amount and the impairment loss is recognised as an expense. The recoverable amount is the higher of value in use or fair value less costs of disposal, if this is readily available. The value in use is the present value of future cash flows using a pre-tax discount rate that reflects the time value of money and the risk specific to the asset (or CGU). Fair value less costs of disposal (FVLCOD) reflects market inputs or inputs based on market evidence if readily available. If these inputs are not readily available, the fair value is estimated by discounting future cash flows modified for market participants views. The relevant local statutory tax rates have been applied in calculating post-tax to pre-tax discount rates.

Key judgement – Determination of CGUs for assessing impairment of goodwill
The Group conducts impairment reviews at the CGU level. As permitted by IAS 36, impairment reviews for goodwill are performed at the groups of CGUs level, representing the lowest level at which the Group monitors goodwill for internal management purposes and no higher than the Group's operating segments. The main CGUs for which goodwill impairment reviews have been performed are Rolls-Royce Deutschland Ltd & Co KG and at an aggregated Rolls-Royce Power Systems AG level.

Inventories

Inventories are valued on a first-in, first-out basis, at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those direct and indirect overheads, including depreciation of property, plant and equipment, that have been incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling prices less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. All inventories are classified as current as it is expected that they will be used in the Group's operating cycle, regardless of whether this is expected to be within 12 months of the balance sheet date.

Cash and cash equivalents

Cash and cash equivalents include cash at bank and in hand, investments in money-market funds and short-term deposits with a maturity of three months or less on inception. The Group considers overdrafts (repayable on demand) to be an integral part of its cash management activities and these are included in cash and cash equivalents for the purposes of the cash flow statement. Where the Group operates pooled banking arrangements across multiple accounts, these are presented on a net basis when it has both a legal right and intention to settle the balances on a net basis.

The Group offers a supply chain financing (SCF) programme through partnership with banks to enable suppliers, including joint ventures, who are on our standard 75 day or more payment terms to receive their payment sooner. The election to utilise the programme is the sole decision of the supplier. As the Group continues to have a contractual obligation to pay its suppliers under commercial terms which are unaffected by any utilisation of the programme, and it does not retain any ongoing involvement in the SCF, the related payables are retained on the Group's balance sheet and classified as trade payables. Further details are disclosed in note 19.

1 Accounting policies – continued

Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, and it is probable that the Group will be required to settle that obligation. Provisions are discounted to present value where the effect is material.

The principal provisions are recognised as follows:

- Trent 1000 in-service issues when wastage costs are identified as described on page 115;
- contract losses based on an assessment of whether the direct costs to fulfil a contract are greater than the expected revenue;
- warranty and guarantees based on an assessment of future claims with reference to past experience and recognised at the earlier of when the underlying products and services are sold and when the likelihood of a future cost is identified; and
- restructuring when the Group has approved a detailed and formal restructuring plan, and the restructuring has either commenced or has created a valid expectation to those affected.

Key judgement – Whether any costs should be treated as wastage
As described further on page 115, in rare circumstances, the Group may incur costs of wasted material, labour or other resources to fulfil a contract where the level of cost was not reflected in the contract price. The identification of such costs is a matter of judgement and would only be expected to arise where there has been a series of abnormal events which give rise to a significant level of cost of a nature that the Group would not expect to incur and hence is not reflected in the contract price. Provision is made for any costs identified as wastage when the obligation to incur them arises.

Specifically for the Trent 1000 wastage costs, provision has been made as the Group is an owner of an engine Type Certificate under which it has a present obligation to develop appropriate design changes to address certain engine conditions that have been noted in issued Airworthiness Directives. The Group is also required to ensure engine operators can continue to safely operate engines within the terms of their LTSAs, and this requires the engines to be compliant with the requirements of those issued Airworthiness Directives. These requirements cannot be met without the Group incurring significant costs in the form of replacement parts and customer claims. Given the significant activities of the Group in designing and overhauling aero engines it is very experienced in making the required estimates in relation to the number and timing of shop visits, parts costs, overhaul labour costs and customer claims.

Key estimates – Estimates of the time to resolve the technical issues on the Trent 1000, including the development of the modified HPT blade and estimates of the expenditure required to settle the obligation relating to Trent 1000 claims and to settle Trent 1000 long-term contracts assessed as onerous
The Group has provisions for Trent 1000 wastage costs at 31 December 2022 of £179m (2021: £157m). These represent the Directors' best estimate of the expenditure required to settle the obligations at the balance sheet date. These estimates take account of information available and different possible outcomes.

The Group considers that at 31 December 2022 the Trent 1000 contract loss provisions and the Trent 1000 wastage cost provision are most sensitive to changes in estimates. A 12-month delay in the availability of the modified HPT blade could lead to around a £40–70m increase in the Trent 1000 wastage costs provision.

Key estimates – Estimates of the future revenues and costs to fulfil onerous contracts
The Group has provisions for onerous contracts at 31 December 2022 of £1,592m (1 January 2022: £1,568m).

An increase in Civil Aerospace large engine estimates of LTSA costs of 1% over the remaining term of the contracts could lead to around a £100–125m increase in the provision for contract losses across all programmes.

Key estimates – Assumptions implicit within the calculation of discount rates
The contract loss provisions for onerous contracts are sensitive to changes in the discount rate used to value the provisions. The rate used for each contract is derived from bond yields (i.e. risk-free rates) with a similar duration and currency to the contract that they are applied to. The rate is adjusted to reflect the specific inflation characteristics of the contracts. The forecast rates are determined from third-party market analysis and average 4%. A 1% change in the discount rates used could lead to around a £80-100m change in the provision.

Customer financing support

In connection with the sale of its products, the Group will, on occasion, provide financing support for its customers. These arrangements fall into two categories: credit-based guarantees and asset-value guarantees. Credit-based guarantees are disclosed as commitments or contingent liabilities dependent on whether aircraft have been delivered or not. The Group considers asset-value guarantees to be non-financial liabilities and provides for amounts required. As described on page 169, the Directors consider the likelihood of crystallisation in assessing whether provision is required for any contingent liabilities.

The Group's contingent liabilities relating to financing arrangements are spread over many years and relate to a number of customers and a broad product portfolio and are reported on a discounted basis.

1 Accounting policies – continued

Post-retirement benefits

Pensions and similar benefits (principally healthcare) are accounted for under IAS 19 *Employee Benefits*.

For defined benefit plans, obligations are measured at discounted present value, using a discount rate derived from high-quality corporate bonds denominated in the currency of the plan, whilst plan assets are recorded at fair value. Surpluses in schemes are recognised as assets only if they represent economic benefits available to the Group in the future. Actuarial gains and losses are recognised immediately in OCI. The service and financing costs of such plans are recognised separately in the income statement:

— current service costs are spread systematically over the lives of employees;

— past-service costs and settlements are recognised immediately; and

— financing costs are recognised in the periods in which they arise.

UK pension obligations include the estimated impact of the obligation to equalise defined benefit pensions and transfer values for men and women.

Payments to defined contribution schemes are charged as an expense as they fall due.

Key estimate – Estimates of the assumptions for valuing the net defined benefit obligation
The Group's defined benefit pension schemes and similar arrangements are assessed annually in accordance with IAS 19. The valuations, which are based on assumptions determined with independent actuarial advice, resulted in a net deficit of £420m before deferred taxation being recognised on the balance sheet at 31 December 2022 (2021: deficit of £225m). The size of the net surplus/deficit is sensitive to the actuarial assumptions, which include the discount rate, price inflation, pension and salary increases, longevity and, in the UK, the number of plan members who take the option to transfer their pension to a lump sum on retirement or who choose to take the Bridging Pension Option. Following consultation, the UK scheme closed to future accrual on 31 December 2020.

A reduction in the discount rate of 0.25% from 4.80% could lead to an increase in the defined benefit obligations of the RR UK Pension Fund (RRUKPF) of approximately £205m. This would be expected to be broadly offset by changes in the value of scheme assets, as the scheme's investment policies are designed to mitigate this risk.

An increase in the assumed rate of inflation of 0.25% (RPI of 3.50% and CPI of 2.95%) could lead to an increase in the defined benefit obligations of the RRUKPF of approximately £70m.

A one-year increase in life expectancy from 21.9 years (male aged 65) and from 23.2 years (male aged 45) would increase the defined benefit obligations of the RRUKPF by approximately £165m.

Further details and sensitivities are included in note 22.

Share-based payments

The Group provides share-based payment arrangements to certain employees. These are principally equity-settled arrangements and are measured at fair value (excluding the effect of non-market based vesting conditions) at the date of grant. The fair value is expensed on a straight-line basis over the vesting period. The amount recognised as an expense is adjusted to reflect the actual number of shares or options that will vest, except where additional shares vest as a result market-based performance conditions, such as the total shareholder return (TSR) performance condition in the long-term incentive plan (LTIP), where no adjustment is required as allowance for these performance conditions are included in the initial fair value.

Cash-settled share options (grants in the International ShareSave plan) are measured at fair value at the balance sheet date. The Group recognises a liability at the balance sheet date based on these fair values, taking into account the estimated number of options that are expected to vest and the relative completion of the vesting period. Changes in the value of this liability are recognised in the income statement for the year.

The cost of shares of Rolls-Royce Holdings plc held by the Group for the purpose of fulfilling obligations in respect of employee share plans is deducted from equity in the consolidated balance sheet. See note 24 for a further description of the share-based payment plans.

Costs of share issues

The costs of issuing ordinary shares are charged to the share premium account.

Revisions to IFRS not applicable in 2022

Standards and interpretations issued by the IASB are only applicable if endorsed by the UK. Other than IFRS 17 *Insurance Contracts* described on page 125, the Group does not consider that any standards, amendments or interpretations issued by the IASB, but not yet applicable will have a significant impact on the Consolidated Financial Statements.

1 Accounting policies – continued

IFRS 17 Insurance Contracts

IFRS 17 issued in May 2018, establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the Standard. The Standard is effective for years beginning on or after 1 January 2023 with a requirement to restate comparatives.

The Group has reviewed whether its arrangements meet the accounting definition of an insurance contract. While some contracts, including Civil LTSAs, may transfer an element of insurance risk, they relate to warranty and service type agreements that are issued in connection with the Group's sales of its goods or services and therefore will remain accounted for under the existing revenue and provision standards. The Directors have judged that such arrangements entered into after the original equipment sale remain sufficiently related to the sale of the Group's goods and services.

The Group has identified that the Standard will impact the results of its captive insurance company as it issues insurance contracts, however, the impact is expected to largely consolidate out in the Consolidated Financial Statements. The Standard includes a simplified approach and modifications to its general measurement model that can be applied in certain circumstances. Given the coverage period of these insurance policies within the captive insurance company are 12 months or less, it is intended to make use of the 'premium allocation approach' for the recognition of premiums. The confidence level and risk adjustments have been calculated using a weighted average cost of capital calculation with discount rates based on the European Insurance and Occupational Pension Authority (EIOPA) risk-free interest rates. The opening balances on 1 January 2022, as well as the results for 2022, have been run under IFRS 17, and the expected impact on accumulated losses is less than £1m.

The Group is in the process of concluding its analysis of whether there is any further impact as a result of adopting the new Standard. This will conclude in the first half of 2023. At this time there is no further known or reasonably estimatable information to disclose that is relevant to assessing the possible impact that application of the new IFRS will have on the Consolidated Financial Statements.

Post balance sheet events

The Group has taken the latest legal position in relation to any ongoing legal proceedings and reflected these in the 2022 results as appropriate.

2 Segmental analysis

The analysis by business segment is presented in accordance with IFRS 8 *Operating Segments*, on the basis of those segments whose operating results are regularly reviewed by the Board (who acts as the Chief Operating Decision Maker as defined by IFRS 8). The Group's four businesses are set out below.

Civil Aerospace	development, manufacture, marketing and sales of commercial aero engines and aftermarket services
Defence	development, manufacture, marketing and sales of military aero engines, naval engines, submarine nuclear power plants and aftermarket services
Power Systems	development, manufacture, marketing and sales of integrated solutions for onsite power and propulsion
New Markets	development, manufacture and sales of small modular reactor (SMR) and new electrical power solutions

Other businesses include the trading results of the Bergen Engines AS business until the date of disposal on 31 December 2021, the results of the Civil Nuclear Instrumentation & Control business until the date of disposal on 5 November 2021 and the trading results of the UK Civil Nuclear business.

Underlying results

The Group presents the financial performance of the continuing businesses in accordance with IFRS 8 and consistently with the basis on which performance is communicated to the Board each month.

Underlying results are presented by recording all relevant revenue and cost of sales transactions at the average exchange rate achieved on effective settled derivative contracts in the period that the cash flow occurs. The impact of the revaluation of monetary assets and liabilities using the exchange rate that is expected to be achieved by the use of the effective hedge book is recorded within underlying cost of sales. Underlying financing excludes the impact of revaluing monetary assets and liabilities to period end exchange rates. Transactions between segments are presented on the same basis as underlying results and eliminated on consolidation. Unrealised fair value gains/(losses) on foreign exchange contracts, which are recognised as they arise in the statutory results, are excluded from underlying results. To the extent that the previously forecast transactions are no longer expected to occur, an appropriate portion of the unrealised fair value gain/(loss) on foreign exchange contracts is recorded immediately in the underlying results.

Amounts receivable/(payable) on interest rate swaps which are not designated as hedge relationships for accounting purposes are reclassified from fair value movement on a statutory basis to interest receivable/(payable) on an underlying basis, as if they were in an effective hedge relationship.

In the year to 31 December 2022, the Group was a net seller of USD at an achieved exchange rate GBP:USD of 1.50 (2021: In the first half of the year, the Group was a net purchaser of USD at an achieved exchange rate GBP:USD of 1.39. In the second half of 2021, the Group was a net seller of USD at an achieved exchange rate of GBP:USD of 1.59) based on the USD hedge book.

2 Segmental analysis – continued

Estimates of future USD cash flows have been determined using the Group's base-case forecast. These USD cash flows have been used to establish the extent of future USD hedge requirements. In 2020, the Group took action to reduce the size of the USD hedge book by $11.8bn across 2020-2026, resulting in an underlying charge of £1.7bn being recognised within underlying finance costs and the associated cash settlement costs occurring over the period 2020-2026. The derivatives relating to this underlying charge have been subsequently excluded from the hedge book, and, therefore, are also excluded from the calculation of the average exchange rate achieved in the current and future periods. This charge was reversed in arriving at the 2020 statutory performance on the basis that the cumulative fair value changes on these derivative contracts are recognised as they arise.

Underlying performance also excludes the following:

- the effect of acquisition accounting and business disposals;
- impairment of goodwill, other non-current and current assets where the reasons for the impairment are outside of normal operating activities;
- exceptional items; and
- certain other items which are market driven and outside of the control of management.

Acquisition accounting, business disposals and impairment

The Group exclude these from underlying results so that the current year and comparative results are directly comparable.

Exceptional items

Items are classified as exceptional where the Directors believe that presentation of the results in this way is useful in providing an understanding of the Group's financial performance. Exceptional items are identified by virtue of their size, nature or incidence.

In determining whether an event or transaction is exceptional, the Directors consider quantitative as well as qualitative factors such as the frequency or predictability of occurrence. Examples of exceptional items include one-time costs and charges in respect of aerospace programmes, costs of restructuring programmes and one-time past service charges and credits on post-retirement schemes.

Subsequent changes in exceptional items recognised in a prior period will also be recognised as exceptional. All other changes will be recognised within underlying performance.

Exceptional items are not allocated to segments and may not be comparable to similarly titled measures used by other companies.

Other items

The financing component of the defined benefit pension scheme cost is determined by market conditions and has therefore been included as a reconciling difference between underlying and statutory performance.

The tax effects of the adjustments above are excluded from the underlying tax charge. In addition, changes in tax rates or changes in the amount of recoverable deferred tax or advance corporation tax recognised are also excluded.

The following analysis sets out the results of the Group's businesses on the basis described above and also includes a reconciliation of the underlying results to those reported in the consolidated income statement.

	Civil Aerospace £m	Defence £m	Power Systems £m	New Markets £m	Other businesses £m	Corporate and Inter-segment £m	Total Underlying £m
Year ended 31 December 2022							
Underlying revenue from sale of original equipment	**1,982**	**1,634**	**2,187**	**1**	**–**	**(5)**	**5,799**
Underlying revenue from aftermarket services	**3,704**	**2,026**	**1,160**	**2**	**–**	**–**	**6,892**
Total underlying revenue	**5,686**	**3,660**	**3,347**	**3**	**–**	**(5)**	**12,691**
Gross profit/(loss)	**853**	**726**	**918**	**(1)**	**(29)**	**10**	**2,477**
Commercial and administrative costs	**(371)**	**(174)**	**(441)**	**(23)**	**(2)**	**(51)**	**(1,062)**
Research and development costs	**(452)**	**(122)**	**(204)**	**(108)**	**–**	**–**	**(886)**
Share of results of joint ventures and associates	**113**	**2**	**8**	**–**	**–**	**–**	**123**
Underlying operating profit/(loss)	**143**	**432**	**281**	**(132)**	**(31)**	**(41)**	**652**
Year ended 31 December 2021							
Underlying revenue from sale of original equipment	1,612	1,411	1,744	–	155	(11)	4,911
Underlying revenue from aftermarket services	2,924	1,957	1,005	2	148	–	6,036
Total underlying revenue	4,536	3,368	2,749	2	303	(11)	10,947
Gross profit/(loss)	474	721	778	1	32	(10)	1,996
Commercial and administrative costs	(297)	(161)	(383)	(3)	(20)	(35)	(899)
Research and development costs	(434)	(105)	(157)	(68)	(10)	–	(774)
Share of results of joint ventures and associates	85	2	4	–	–	–	91
Underlying operating (loss)/profit	(172)	457	242	(70)	2	(45)	414

2 Segmental analysis – continued

Reconciliation to statutory results

	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group statutory results £m
Year ended 31 December 2022			
Continuing operations			
Revenue from sale of original equipment	5,799	474	6,273
Revenue from aftermarket services	6,892	355	7,247
Total revenue	12,691	829	13,520
Gross profit	2,477	280	2,757
Commercial and administrative costs	(1,062)	(15)	(1,077)
Research and development costs	(886)	(5)	(891)
Share of results of joint ventures and associates	123	(75)	48
Operating profit	652	185	837
Gain arising on the disposal of businesses	–	81	81
Profit before financing and taxation	652	266	918
Net financing	(446)	(1,974)	(2,420)
Profit/(loss) before taxation	206	(1,708)	(1,502)
Taxation	(48)	356	308
Profit/(loss) for the year from continuing operations	158	(1,352)	(1,194)
Discontinued operations [1]	67	(147)	(80)
Profit/(loss) for the year	225	(1,499)	(1,274)
Attributable to:			
Ordinary shareholders	230	(1,499)	(1,269)
Non-controlling interests	(5)	–	(5)
Year ended 31 December 2021			
Continuing operations			
Revenue from sale of original equipment	4,911	152	5,063
Revenue from aftermarket services	6,036	119	6,155
Total revenue	10,947	271	11,218
Gross profit	1,996	140	2,136
Commercial and administrative costs	(899)	9	(890)
Research and development costs	(774)	(4)	(778)
Share of results of joint ventures and associates	91	(46)	45
Operating profit	414	99	513
Gain arising on the disposal of businesses	–	56	56
Profit before financing and taxation	414	155	569
Net financing	(378)	(485)	(863)
Profit/(loss) before taxation	36	(330)	(294)
Taxation	(26)	444	418
Profit for the year from continuing operations	10	114	124
Discontinued operations [1]	51	(54)	(3)
Profit for the year	61	60	121
Attributable to:			
Ordinary shareholders	60	60	120
Non-controlling interests	1	–	1

[1] Discontinued operations relate to the results of ITP Aero and are presented net of intercompany trading eliminations and related consolidation adjustments

2 Segmental analysis – continued

Disaggregation of revenue from contracts with customers

Analysis by type and basis of recognition

	Civil Aerospace £m	Defence £m	Power Systems £m	New Markets £m	Other businesses £m	Corporate and Inter-segment £m	Total Underlying £m
Year ended 31 December 2022							
Original equipment recognised at a point in time	1,982	689	2,155	1	–	(5)	4,822
Original equipment recognised over time	–	945	32	–	–	–	977
Aftermarket services recognised at a point in time	865	769	1,076	2	–	–	2,712
Aftermarket services recognised over time	2,772	1,257	84	–	–	–	4,113
Total underlying customer contract revenue [1]	5,619	3,660	3,347	3	–	(5)	12,624
Other underlying revenue	67	–	–	–	–	–	67
Total underlying revenue	5,686	3,660	3,347	3	–	(5)	12,691
Year ended 31 December 2021							
Original equipment recognised at a point in time	1,612	604	1,720	–	142	(11)	4,067
Original equipment recognised over time	–	807	24	–	13	–	844
Aftermarket services recognised at a point in time	629	825	871	2	148	–	2,475
Aftermarket services recognised over time	2,223	1,132	134	–	–	–	3,489
Total underlying customer contract revenue [1]	4,464	3,368	2,749	2	303	(11)	10,875
Other underlying revenue	72	–	–	–	–	–	72
Total underlying revenue	4,536	3,368	2,749	2	303	(11)	10,947

[1] Includes £367m, of which £360m relates to Civil LTSA contracts, (2021: £159m, of which £214m relates to Civil LTSA contracts) of revenue recognised in the year relating to performance obligations satisfied in previous years

	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group statutory results [1] £m
Year ended 31 December 2022			
Original equipment recognised at a point in time	4,822	474	5,296
Original equipment recognised over time	977	–	977
Aftermarket services recognised at a point in time	2,712	164	2,876
Aftermarket services recognised over time	4,113	176	4,289
Total customer contract revenue	12,624	814	13,438
Other revenue	67	15	82
Total revenue	12,691	829	13,520
Year ended 31 December 2021			
Original equipment recognised at a point in time	4,067	152	4,219
Original equipment recognised over time	844	–	844
Aftermarket services recognised at a point in time	2,475	38	2,513
Aftermarket services recognised over time	3,489	75	3,564
Total customer contract revenue	10,875	265	11,140
Other revenue	72	6	78
Total revenue	10,947	271	11,218

[1] During the year to 31 December 2022, revenue recognised within Civil Aerospace, Defence and Power Systems of £1,788m (2021: £1,634m) was received from a single customer

2 Segmental analysis – continued

Analysis by geographical destination

The Group's revenue by destination of the ultimate operator is as follows:

	2022 £m	2021 £m
United Kingdom	1,669	1,497
Germany	855	737
Switzerland	334	164
Ireland	328	5
Turkey	220	146
Spain	188	106
France	255	332
Italy	238	187
Norway	61	146
Rest of Europe	601	629
Europe	4,749	3,949
United States	4,334	3,525
Canada	267	235
North America	4,601	3,760
South America	168	170
Central America	91	76
Saudi Arabia	322	271
Qatar	231	131
United Arab Emirates	180	126
Rest of Middle East	164	107
Middle East	897	635
China	1,246	1,245
Singapore	317	105
Japan	276	233
South Korea	164	137
India	119	140
Rest of Asia	381	359
Asia	2,503	2,219
Africa	282	213
Australasia	229	196
	13,520	11,218

Order backlog

Contracted consideration, translated at the estimated long-term exchange rates, that is expected to be recognised as revenue when performance obligations are satisfied in the future (referred to as order backlog) is as follows:

	2022			2021		
	Within five years £bn	After five years £bn	Total £bn	Within five years £bn	After five years £bn	Total £bn
Civil Aerospace	25.7	22.0	47.7	20.3	20.8	41.1
Defence	7.8	0.7	8.5	6.2	0.3	6.5
Power Systems	3.7	0.3	4.0	2.6	0.2	2.8
New Markets	–	–	–	–	–	–
Other businesses	–	–	–	0.2	–	0.2
	37.2	23.0	60.2	29.3	21.3	50.6

The parties to these contracts have approved the contract and customers do not have a unilateral enforceable right to terminate the contract without compensation. The Group excludes Civil Aerospace OE orders (for deliveries beyond the next 7-12 months) that our customers have placed where they retain a right to cancel. The Group's expectation based on historical experience is that these orders will be fulfilled. Within the 0-5 years category, contracted revenue in Defence will largely be recognised in the next three years and Power Systems will be recognised over the next two years as it is a short cycle business.

2 Segmental analysis – continued

Underlying adjustments

		2022				2021			
		Revenue £m	Profit before financing £m	Net financing £m	Taxation £m	Revenue £m	Profit before financing £m	Net financing £m	Taxation £m
Underlying performance		**12,691**	**652**	**(446)**	**(48)**	10,947	414	(378)	(26)
Impact of foreign exchange differences as a result of hedging activities on trading transactions [1]	A	**829**	**267**	**(358)**	**(81)**	271	(34)	62	33
Unrealised fair value changes on derivative contracts held for trading [2]	A	**–**	**(3)**	**(1,768)**	**451**	–	(6)	(618)	110
Unrealised net gain on closing future over-hedged position [3]	A	**–**	**–**	**–**	**–**	–	–	(8)	–
Realised net gain on closing over-hedged position [3]	A	**–**	**–**	**–**	**–**	–	–	(6)	–
Unrealised fair value change to derivative contracts held for financing [4]	A	**–**	**–**	**191**	**(47)**	–	–	79	(20)
Exceptional programme credits/(charges) [5]	B	**–**	**69**	**(3)**	**–**	–	105	–	(1)
Exceptional restructuring (charges)/credit [6]	B	**–**	**(47)**	**–**	**4**	–	45	–	1
Impairment (charges)/reversals [7]	C	**–**	**(65)**	**–**	**–**	–	9	–	–
Effect of acquisition accounting [8]	C	**–**	**(58)**	**–**	**9**	–	(50)	–	12
Pension past-service credit [9]	B	**–**	**22**	**–**	**(2)**	–	47	–	(13)
Other [10]	D	**–**	**–**	**(36)**	**(69)**	–	(17)	6	(37)
Gain arising on disposals of businesses [11]	C	**–**	**81**	**–**	**(2)**	–	56	–	2
Impact of tax rate change [12]		**–**	**–**	**–**	**–**	–	–	–	327
Re-recognition of deferred tax assets [13]		**–**	**–**	**–**	**93**	–	–	–	30
Total underlying adjustments		**829**	**266**	**(1,974)**	**356**	271	155	(485)	444
Statutory performance per consolidated income statement		**13,520**	**918**	**(2,420)**	**308**	11,218	569	(863)	418

A – FX, B – Exceptional, C – M&A and impairment, D – Other

[1] The impact of measuring revenues and costs at the average exchange rate during the year and the impact of valuation of assets and liabilities using the year end exchange rate rather than the achieved rate or the exchange rate that is expected to be achieved by the use of the hedge book increased statutory revenues by £829m (2021: increased by £271m) and increased profit before financing and taxation by £267m (2021: reduced profit by £34m). Underlying financing excludes the impact of revaluing monetary assets and liabilities at the year-end exchange rate

[2] The underlying results exclude the fair value changes on derivative contracts held for trading. These fair value changes are subsequently recognised in the underlying results when the contracts are settled

[3] In 2020, the Group took action to reduce the size of the USD hedge book by $11.8bn across 2020-2026, resulting in an underlying charge of £1.7bn at 31 December 2020. In 2021, this estimate was updated to reflect the actual cash cost and resulted in a £15m gain to underlying finance costs

[4] Includes the gains on hedge ineffectiveness in the year of £1m (2021: losses of £1m) and net fair value gains of £190m (2021: gains of £80m) on any interest rate swaps not designated into hedging relationships for accounting purposes

[5] During the year to 31 December 2022 and 2021, contract loss provisions previously recognised in respect of the Trent 1000 technical issues which were identified in 2019 have been reversed due to a reduction in the estimated cost of settling the obligation

[6] During the year to 31 December 2022, the Group recorded an exceptional restructuring charge of £47m (2021: credit of £45m) which included £57m (2021: £93m) associated with initiatives to enable restructuring offset by £10m (2021: £138m) released from the provision

[7] The Group has assessed the carrying value of its assets. Further details are provided in notes 9, 10, 11 and 12

[8] The effect of acquisition accounting includes the amortisation of intangible assets arising on previous acquisitions

[9] The past-service credit of £22m includes a £23m credit as a result of changes in the schemes in Power Systems, a settlement loss of £7m on the Rolls-Royce North America retirement scheme and a credit of £6m as a result of a constructive obligation recognised for the offering of the Bridging Pension Option (BPO) to other deferred members in the RRUKPF. Further details are provided in note 22

[10] Includes £(14)m (2021: £14m) reclassification of amounts (received)/paid on interest rate swaps which are not designated as hedge relationship for accounting purposes from interest payable on an underlying basis to fair value movement

[11] Gains arising on the disposals of businesses are set out in note 27

[12] The 2021 tax credit relates to the increase in the UK tax rate from 19% to 25%

[13] The re-recognition of deferred tax assets relates to foreign exchange derivatives

2 Segmental analysis – continued

Balance sheet analysis

Year ended 31 December 2022	Civil Aerospace £m	Defence £m	Power Systems £m	New Markets £m	Total reportable segments £m
Segment assets	17,537	3,430	4,084	135	25,186
Interests in joint ventures and associates	387	4	31	–	422
Segment liabilities	(25,357)	(3,146)	(1,802)	(97)	(30,402)
Net (liabilities)/assets	(7,433)	288	2,313	38	(4,794)
Investment in intangible assets, property, plant and equipment, right-of-use assets and joint ventures and associates	415	146	177	16	754
Depreciation, amortisation and impairment	755	128	193	6	1,082

Year ended 31 December 2021					
Segment assets	15,846	2,766	3,531	90	22,233
Interests in joint ventures and associates	378	9	16	–	403
Segment liabilities	(20,745)	(2,635)	(1,503)	(33)	(24,916)
Net (liabilities)/assets	(4,521)	140	2,044	57	(2,280)
Investment in intangible assets, property, plant and equipment, right-of-use assets and joint ventures and associates	323	97	187	15	622
Depreciation, amortisation and impairment	660	117	177	4	958

Reconciliation to the balance sheet

	2022 £m	2021 £m
Total reportable segment assets excluding held for sale	25,186	22,233
Other businesses	19	14
Corporate and Inter-segment	(2,460)	(2,255)
Interests in joint ventures and associates	422	403
Assets held for sale [1]	–	2,028
Cash and cash equivalents and short-term investments	2,618	2,629
Fair value of swaps hedging fixed rate borrowings	194	135
Deferred and income tax assets	2,858	2,339
Post-retirement scheme surpluses	613	1,148
Total assets	29,450	28,674
Total reportable segment liabilities excluding held for sale	(30,402)	(24,916)
Other businesses	(34)	(11)
Corporate and Inter-segment	2,456	2,139
Liabilities associated with assets held for sale [1]	–	(723)
Borrowings and lease liabilities	(5,955)	(7,776)
Fair value of swaps hedging fixed rate borrowings	(108)	(98)
Deferred and income tax liabilities	(390)	(552)
Post-retirement scheme deficits	(1,033)	(1,373)
Total liabilities	(35,466)	(33,310)
Net liabilities	(6,016)	(4,636)

[1] At 31 December 2021, assets and liabilities relating to ITP Aero, the investment in Airtanker Holdings and other non-current assets related to the Group's site rationalisation activities were classified as held for sale. For further details see note 27

The carrying amounts of the Group's non-current assets including investments but excluding financial instruments, deferred tax assets and post-retirement scheme surpluses/(deficits), by the geographical area in which the assets are located, are as follows:

	2022 £m	2021 £m
United Kingdom	5,202	5,489
Germany	2,151	2,086
United States	1,465	1,282
Other	735	744
	9,553	9,601

3 Research and development

	2022 £m	2021 £m
Gross research and development costs	(1,287)	(1,179)
Contributions and fees [1]	359	366
Expenditure in the year	(928)	(813)
Capitalised as intangible assets	131	105
Amortisation and impairment of capitalised costs [2]	(94)	(70)
Net cost recognised in the income statement	(891)	(778)
Underlying adjustments relating to effects of acquisition accounting and foreign exchange	5	4
Net underlying cost recognised in the income statement	(886)	(774)

[1] Includes government funding
[2] See note 9 for analysis of amortisation and impairment. During the year, amortisation of £nil (2021: £5m) has been incurred within the disposal group recognised as a discontinued operation

4 Net financing

	2022		2021	
	Statutory £m	Underlying [1] £m	Statutory £m	Underlying [1] £m
Interest receivable	35	35	7	7
Net fair value gains on foreign currency contracts	–	–	80	–
Net fair value gains on non-hedge accounted interest rate swaps [2]	190	–	–	–
Net fair value gains on commodity contracts	106	–	63	–
Financing on post-retirement scheme surpluses	24	–	17	–
Net foreign exchange gains	–	–	62	–
Realised net gains on closing over-hedged position [3]	–	–	–	6
Unrealised net gains on closing over-hedged position [3]	–	–	–	8
Financing income	355	35	229	21
Interest payable	(343)	(320)	(252)	(262)
Net fair value losses on foreign currency contracts	(1,875)	–	(681)	–
Foreign exchange differences and changes in forecast payments relating to financial RRSAs	(7)	–	(7)	–
Financing on post-retirement scheme deficits	(26)	–	(20)	–
Net foreign exchange losses	(358)	–	–	–
Cost of undrawn facilities	(61)	(61)	(62)	(62)
Other financing charges	(105)	(100)	(70)	(75)
Financing costs	(2,775)	(481)	(1,092)	(399)
Net financing costs	(2,420)	(446)	(863)	(378)
Analysed as:				
Net interest payable	(308)	(285)	(245)	(255)
Net fair value (losses)/gains on derivative contracts	(1,579)	–	(538)	14
Net post-retirement scheme financing	(2)	–	(3)	–
Net foreign exchange (losses)/gains	(358)	–	62	–
Net other financing	(173)	(161)	(139)	(137)
Net financing costs	(2,420)	(446)	(863)	(378)

[1] See note 2 for definition of underlying result
[2] The consolidated income statement shows the net fair value gain/(loss) on any interest rate swaps not designated into hedging relationships for accounting purposes. Underlying financing reclassifies the fair value movements on these interest rate swaps to net interest payable
[3] In 2020, the Group took action to reduce the size of the USD hedge book by $11.8bn across 2020-2026, resulting in an underlying charge of £1,689m at 31 December 2020. In 2021, this estimate was updated to reflect the actual cash settlement cost of £1,674m and resulted in a £15m gain to underlying finance costs in the year to 31 December 2021. The cash settlement costs of £1,674m covers the period 2020-2026, £326m was incurred in the year to 31 December 2022 (2021: £452m, 2020: £186m). The Group estimates that future cash outflows of £389m will be incurred in 2023 and £321m spread over 2024-2026

5 Taxation

	UK		Overseas		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Current tax charge for the year	18	17	159	151	177	168
Adjustments in respect of prior years	(5)	2	(8)	12	(13)	14
Current tax	13	19	151	163	164	182
Deferred tax credit for the year	(427)	(173)	(61)	(59)	(488)	(232)
Adjustments in respect of prior years	4	(15)	12	(26)	16	(41)
Deferred tax credit resulting from an increase in UK tax rate	–	(327)	–	–	–	(327)
Deferred tax	(423)	(515)	(49)	(85)	(472)	(600)
(Credited)/charged in the income statement	(410)	(496)	102	78	(308)	(418)

Other tax credits/(charges)

	OCI				Equity	
	Items that will not be reclassified		Items that will be reclassified			
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Deferred tax:						
Movement in post-retirement schemes	89	(79)	–	–	–	–
Cash flow hedge	–	–	12	(2)	–	–
Net investment hedge	–	–	2	(3)	–	–
Share-based payments – direct to equity	–	–	–	–	1	17
Other tax credits/(charges)	89	(79)	14	(5)	1	17

Tax reconciliation on continuing operations

	2022 £m	2021 £m
Loss before taxation from continuing operations	(1,502)	(294)
Less share of results of joint ventures and associates (note 12)	(9)	(22)
Loss before taxation from continuing operations excluding joint ventures and associates	(1,511)	(316)
Nominal tax credit at UK corporation tax rate 19% (2021: 19%)	(287)	(60)
UK tax rate differential [1]	(69)	(33)
Overseas rate differences [2]	18	26
Exempt gain on disposal of businesses [3]	(14)	(15)
R&D credits	(7)	(10)
Other permanent differences	23	13
Benefit to deferred tax from previously unrecognised tax losses and temporary differences [4]	(134)	(47)
Tax losses and other temporary differences not recognised in deferred tax [5]	159	62
Adjustments in respect of prior years	3	(27)
Increase in closing deferred taxes resulting from a change in the UK tax rate [6]	–	(327)
	(308)	(418)
Underlying items (note 2)	48	26
Non-underlying items	(356)	(444)
	(308)	(418)

Tax on discontinued operations

	2022 £m	2021 £m
Tax charge/(credit) on profit/(loss) before taxation from discontinued operations	10	(34)
Tax credit on disposal of discontinued operations	(31)	–
	(21)	(34)

[1] The UK tax rate differential arises on the difference between the deferred tax rate and the statutory tax rate
[2] Overseas rate differences mainly relate to tax on profits or losses in countries such as the US and Germany, which have higher tax rates than the UK
[3] The exempt gain mainly relates to the disposal of Airtanker Holdings Ltd. The 2021 exempt gain relates to the disposal of the Civil Nuclear Instrumentation and Controls business
[4] Benefit to deferred tax from previously unrecognised tax losses and temporary differences mainly relates to foreign exchange derivatives
[5] Tax losses and other temporary differences not recognised mainly relate to the UK
[6] The 2021 tax credit arising on the change in the UK tax rate represents the impact of re-measurement of the UK deferred tax asset balances from 19% to 25%

5 Taxation – continued

Deferred taxation assets and liabilities

	2022 £m	2021 £m
At 31 December (as previously reported)	1,798	1,332
Adoption of amendment to IAS 37	(6)	–
At 1 January	1,792	1,332
Amount credited to income statement	495	636
Amount credited/(charged) to OCI	91	(82)
Amount credited/(charged) to hedging reserves	12	(2)
Amount credited to equity	1	17
On disposal of businesses [1]	28	(4)
Transferred to assets held for sale [2]	–	(85)
Exchange differences	26	(14)
At 31 December	2,445	1,798
Deferred tax assets	2,731	2,249
Deferred tax liabilities	(286)	(451)
	2,445	1,798

[1] The 2022 deferred tax relates to the disposal of ITP Aero. The 2021 deferred tax relates to the disposal of Bergen Engines AS and the Civil Nuclear Instrumentation and Control business
[2] The 2021 deferred tax transferred to assets held for sale relates to ITP Aero

The analysis of the deferred tax position is as follows:

	At 31 December (as previously reported) £m	On adoption of amendment to IAS 37	At 1 January £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Disposals related activity £m	Transferred to held for sale £m	Exchange differences £m	At 31 December £m
2022										
Intangible assets	(464)	–	(464)	29	–	–	–	–	(1)	(436)
Property, plant and equipment	193	–	193	33	–	–	6	–	(2)	230
Other temporary differences [1]	471	(6)	465	133	(1)	1	44	–	8	650
Net contract liabilities	73	–	73	(9)	–	–	–	–	–	64
Pensions and other post-retirement scheme benefits	(140)	–	(140)	(19)	89	–	–	–	13	(57)
Foreign exchange and commodity financial assets and liabilities	362	–	362	329	15	–	(22)	–	9	693
Losses	1,085	–	1,085	(12)	–	–	–	–	(1)	1,072
R&D credit	56	–	56	11	–	–	–	–	–	67
Advance corporation tax	162	–	162	–	–	–	–	–	–	162
	1,798	(6)	1,792	495	103	1	28	–	26	2,445
Recognised in:										
Continuing operations				472						
Discontinued operations				23						
2021										
Intangible assets			(567)	(102)	–	–	–	188	17	(464)
Property, plant and equipment			34	145	–	–	–	23	(9)	193
Other temporary differences [1]			343	185	(12)	–	(4)	(49)	8	471
Net contract liabilities			56	17	–	–	–	–	–	73
Pensions and other post-retirement scheme benefits			(8)	(47)	(79)	–	–	–	(6)	(140)
Foreign exchange and commodity financial assets and liabilities			187	165	7	–	–	1	2	362
Losses			850	254	–	17	–	(33)	(3)	1,085
R&D credit			274	20	–	–	–	(215)	(23)	56
Advance corporation tax			163	(1)	–	–	–	–	–	162
			1,332	636	(84)	17	(4)	(85)	(14)	1,798
Recognised in:										
Continuing operations				600						
Discontinued operations				36						

[1] Other temporary differences mainly relate to the deferral of relief for interest expenses in the UK and revenue recognised earlier under local GAAP compared to IFRS in Germany

5 Taxation – continued

Unrecognised deferred tax assets

	2022 £m	2021 £m
Advance corporation tax	19	19
UK losses	2,040	1,563
Foreign exchange and commodity financial assets and liabilities	218	392
Losses and other unrecognised deferred tax assets	33	73
Deferred tax not recognised on unused tax losses and other items on the basis that future economic benefit is uncertain	2,310	2,047

Gross amount and expiry of losses and other deductible temporary differences for which no deferred tax asset has been recognised.

	2022					2021				
	Total gross losses and deductible temporary differences £m	UK losses £m	Foreign exchange and commodity financial assets and liabilities £m	Other losses £m	Other deductible temporary differences £m	Total gross losses and deductible temporary differences £m	UK losses £m	Foreign exchange and commodity financial assets and liabilities £m	Other losses £m	Other deductible temporary differences £m
Expiry within 5 years	83	–	–	83	–	4	–	–	4	–
Expiry within 6 to 30 years	265	–	–	265	–	282	–	–	282	–
No expiry	9,057	8,157	871	27	2	7,992	6,251	1,567	66	108
	9,405	8,157	871	375	2	8,278	6,251	1,567	352	108

In addition to the gross balances shown above, advance corporation tax of £19m (2021: £19m) has not been recognised. Advance corporation tax has no expiry.

Of the total deferred tax asset of £2,731m, £2,183m (2021: £1,736m) relates to the UK and is made up as follows:

— £1,054m (2021: £1,054m) relating to tax losses;

— £668m (2021: £339m) arising on unrealised losses on derivative contracts;

— £162m (2021: £162m) of advance corporation tax; and

— £299m (2021: £181m) relating to other deductible temporary differences, in particular tax depreciation and relief for interest expenses.

The UK deferred tax assets primarily arise in Rolls-Royce plc and have been recognised based on the expectation that the business will generate taxable profits and tax liabilities in the future against which the losses and deductible temporary differences can be utilised.

Most of the UK tax losses relate to the Civil Aerospace large engine business which makes initial losses through the investment period of a programme and then makes a profit through its contracts for services. The programme lifecycles are typically in excess of 30 years.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profits will be available against which the assets can be utilised. A recoverability assessment has been undertaken, taking account of deferred tax liabilities against which the reversal can be offset and using latest UK forecasts, which are mainly driven by the Civil Aerospace large engine business, to assess the level of future taxable profits.

The recoverability of deferred tax assets has been assessed on the following basis:

— using the most recent UK profit forecasts which are consistent with past experience and external sources on market conditions. These forecasts cover the next five years;

— the long-term forecast profit profile of certain major large engine programmes which is typically in excess of 30 years from initial investment to retirement of the fleet, including the aftermarket revenues earned from airline customers;

— taking into account the risk that regulatory changes could materially impact demand for our products and shifting investment focus towards more sustainable products and solutions;

— consideration that all commercial aero-engines will be compatible with sustainable fuels by the end of 2023;

— a 25% probability of the severe but plausible downside forecast materialising in relation to the civil aviation industry; and

— the long-term forecast profit and cost profile of the other parts of the business.

5 Taxation – continued

The assessment takes into account UK tax laws that, in broad terms, restrict the offset of the carried forward tax losses to 50% of current year profits. In addition, management's assumptions relating to the amounts and timing of future taxable profits include the impact of macroeconomic factors and climate change on existing large engine programmes. Based on this assessment, the Group has recognised a total UK deferred tax asset of £2,183m. This reflects the conclusions that:

— It is probable that the business will generate taxable income and tax liabilities in the future against which these losses can be utilised.

— Based on current forecasts and using various scenarios these losses and other deductible temporary differences will be used in full within the expected large engine programme lifecycles. An explanation of the potential impact of climate change on forecast profits and sensitivity analysis can be found in note 1.

The Group has not recognised a deferred tax asset in respect of 2022 UK tax losses. This includes the impact of the IAS 37 amendment.

The other significant deferred tax asset arises in Rolls-Royce Deutschland Ltd & Co KG, where the main activity is business aviation. The total net deferred tax asset is £284m (2021: £254m), which has been recognised in full. The deferred tax asset relates to revenue being recognised and taxed earlier under local tax rules resulting in a benefit when revenue is recognised in the accounts.

Any future changes in tax law or the structure of the Group could have a significant effect on the use of losses and other deductible temporary differences, including the period over which they can be used. In view of this and the significant judgement involved the Board continuously reassesses this area.

The temporary differences associated with investments in subsidiaries, joint ventures and associates, for which a deferred tax liability has not been recognised, aggregate to £1,062m (2021: £957m). No deferred tax liability has been recognised on the potential withholding tax due on the remittance of undistributed profits as the Group is able to control the timing of such remittances and it is probable that consent will not be given in the foreseeable future.

The Group is reviewing the impact of the OECD Pillar Two (global minimum tax) rules and the associated UK draft legislation, which was released on 20 July 2022. These rules will apply to the Group from 2024.

6 Earnings per ordinary share

Basic earnings per ordinary share (EPS) is calculated by dividing the (loss)/profit attributable to ordinary shareholders by the weighted average number of ordinary shares in issue during the year, excluding ordinary shares held under trust, which have been treated as if they had been cancelled.

As there is a continuing loss during the year, the effect of potentially dilutive ordinary shares is anti-dilutive.

	2022			2021		
	Basic	Potentially dilutive share options	Diluted	Basic	Potentially dilutive share options	Diluted
(Loss)/profit attributable to ordinary shareholders (£m):						
Continuing operations	(1,189)		(1,189)	123		123
Discontinued operations	(80)		(80)	(3)		(3)
	(1,269)		(1,269)	120		120
Weighted average number of ordinary shares (millions)	8,349	–	8,349	8,332	20	8,352
EPS (pence):						
Continuing operations	(14.24)	–	(14.24)	1.48	(0.01)	1.47
Discontinued operations	(0.96)	–	(0.96)	(0.04)	–	(0.04)
	(15.20)	–	(15.20)	1.44	(0.01)	1.43

The reconciliation between underlying EPS and basic EPS is as follows:

	2022		2021	
	Pence	£m	Pence	£m
Underlying EPS/Underlying profit from continuing operations attributable to ordinary shareholders	1.95	163	0.11	9
Total underlying adjustments to (loss)/profit before taxation (note 2)	(20.45)	(1,708)	(3.96)	(330)
Related tax effects	4.26	356	5.33	444
EPS/(Loss)/profit from continuing operations attributable to ordinary shareholders	(14.24)	(1,189)	1.48	123
Diluted underlying EPS from continuing operations attributable to ordinary shareholders	1.95		0.11	

7 Auditors' remuneration

	2022 £m	2021 £m
Fees payable to the Company's auditor for the audit of the Company's annual Financial Statements	3.5	3.3
Fees payable to the Company's auditor and its associates for the audit of the Company's subsidiaries pursuant to legislation	8.5	8.3
Total fees payable for audit services	12.0	11.6
Fees payable to the Company's auditor and its associates for other services:		
Audit related assurance services [1]	1.3	1.7
Other assurance services [2]	0.2	0.2
Total fees payable to the Company's auditor and its associates [3]	13.5	13.5
Fees payable in respect of the Group's pension schemes:		
Audit	0.1	0.1

[1] This includes £0.7m (2021: £0.7m) for the review of the half-year report, £0.6m (2021: £0.8m) in respect of the audit of grant claims
[2] This includes £0.1m in respect of agreed upon procedures in respect of levies payable to BEIS (Department of Business, Energy and Industrial Strategy) (2021: £0.1m) and £0.1m in respect of sustainability assurance work (2021: £nil)
[3] Audit fees for overseas entities are reported at the average exchange rate for the year

8 Employee information

	2022 Number	2021 Number
United Kingdom	19,900	19,700
Germany	9,700	9,500
United States	5,000	5,000
Spain	1,800	2,700
Italy	900	900
Singapore	700	900
Canada	700	700
India	500	600
France	100	600
Nordics	–	700
Rest of world	2,500	2,700
Monthly average number of employees	41,800	44,000
Civil Aerospace	17,700	17,900
Defence	11,000	11,100
Power Systems	9,400	9,100
New Markets	800	400
Other businesses [1]	–	1,400
Corporate [2]	100	100
Monthly average number of employees excluding discontinued operations	39,000	40,000
ITP Aero (classified as discontinued operation) [3]	2,800	4,000
Monthly average number of employees	41,800	44,000

	2022			2021		
	Continuing operations £m	Discontinued operations £m	Total £m	Continuing operations £m	Discontinued operations £m	Total £m
Wages, salaries and benefits	2,629	117	2,746	2,392	154	2,546
Social security costs	378	27	405	343	36	379
Share-based payments (note 24)	47	–	47	28	–	28
Pensions and other post-retirement scheme benefits (note 22)	268	2	270	250	3	253
Group employment costs [4]	3,322	146	3,468	3,013	193	3,206

[1] Other businesses are set out in note 2 on page 125
[2] Corporate consists of employees who do not provide a shared service to the segments. Where corporate functions provide such a service, employees have been allocated to the segments on an appropriate basis
[3] ITP Aero was disposed of on 15 September 2022. The monthly average number of employees over the nine months to disposal was 4,200
[4] Remuneration of key management personnel is shown in note 26

9 Intangible assets

	Goodwill £m	Certification costs £m	Development expenditure £m	Customer relationships £m	Software [1] £m	Other £m	Total £m
Cost:							
At 1 January 2021	1,112	963	3,564	1,403	968	893	8,903
Additions	–	1	104	–	83	35	223
Transferred to assets held for sale [2]	–	(6)	(179)	(868)	(15)	(59)	(1,127)
Disposals	(4)	(22)	–	–	(51)	(2)	(79)
Reclassifications [3]	–	–	–	–	(2)	8	6
Exchange differences	(48)	(3)	(96)	(60)	(5)	(42)	(254)
At 31 December 2021	1,060	933	3,393	475	978	833	7,672
Additions	–	–	131	–	78	21	230
Disposals	–	–	–	–	(90)	(1)	(91)
Exchange differences	75	2	80	37	12	33	239
At 31 December 2022	1,135	935	3,604	512	978	886	8,050
Accumulated amortisation and impairment:							
At 1 January 2021	38	429	1,803	478	607	403	3,758
Charge for the year [4]	–	21	75	59	97	29	281
Impairment	–	–	–	–	1	8	9
Transferred to assets held for sale [2]	–	(4)	(51)	(176)	(10)	–	(241)
Disposals	(4)	(21)	–	–	(48)	(1)	(74)
Reclassifications [3]	–	–	(1)	–	6	1	6
Exchange differences	–	–	(66)	(19)	(3)	(20)	(108)
At 31 December 2021	34	425	1,760	342	650	420	3,631
Charge for the year [4]	–	21	77	35	86	33	252
Impairment	–	–	17	–	13	5	35
Disposals	–	–	–	–	(82)	(1)	(83)
Exchange differences	2	1	58	29	8	19	117
At 31 December 2022	36	447	1,912	406	675	476	3,952
Net book value at:							
At 31 December 2022	1,099	488	1,692	106	303	410	4,098
At 31 December 2021	1,026	508	1,633	133	328	413	4,041

[1] Includes £93m (2021: £115m) of software under course of construction which is not amortised
[2] ITP Aero was classified as a disposal group held for sale at 30 June 2021
[3] Includes reclassifications within intangible assets or from property, plant and equipment when available for use
[4] Charged to cost of sales and commercial and administrative costs except development costs, which are charged to research and development costs

At 31 December 2022, the Group had expenditure commitments for software of £37m (2021: £49m).

9 Intangible assets – continued

Goodwill

In accordance with the requirements of IAS 36, goodwill is allocated to the Group's CGUs, or groups of CGUs, that are expected to benefit from the synergies of the business combination that gave rise to the goodwill as follows:

Cash-generating unit (CGU) or group of CGUs

	Primary operating segment	2022 £m	2021 £m
Rolls-Royce Power Systems AG	Power Systems	**818**	760
Rolls-Royce Deutschland Ltd & Co KG	Civil Aerospace	**241**	229
Other	Various	**40**	37
		1,099	1,026

Goodwill has been tested for impairment during 2022 on the following basis:

- The carrying values of goodwill have been assessed by reference to the recoverable amount, being the higher of value in use or fair value less costs of disposal (FVLCOD).
- The recoverable amount has been estimated using cash flows from the most recent forecasts prepared by the Directors, which are consistent with past experience and external sources of information on market conditions. These forecasts generally cover the next five years. Growth rates for the period not covered by the forecasts are based on growth rates of 1% to 2% which reflects the products, industries and countries in which the relevant CGU or group of CGUs operate. Inflation has been included based on contractual commitments where relevant. Where general inflation assumptions have been required, these have been estimated based on externally sourced data. General inflation assumptions of 3% to 4% have been included in the forecasts, depending on the nature and geography of the flows.
- The key forecast assumptions for the impairment tests are the discount rate and the cash flow projections, in particular the programme assumptions (such as sales volumes and product costs), the impact of foreign exchange rates on the relationship between selling prices and costs, and growth rates. Impairment tests are performed using prevailing exchange rates.
- The Group believe there are significant business growth opportunities to come from Rolls-Royce playing a leading role in the transition to net zero, whilst at the same time climate change poses potentially significant risks. The assumptions used by the Directors are based on past experience and external sources of information. The main climate-related areas that have been considered are the risk that regulatory changes could materially impact demand for its products (and hence the utilisation of the products whilst in service and their useful lives) and shifting investment focus towards more sustainable products and solutions. Based on the climate scenarios prepared, the forecasts do not assume a significant deterioration of demand for Civil Aerospace (including Rolls-Royce Deutschland) programmes given that all commercial aero-engines will be compatible with sustainable fuels by the end of 2023. Similarly, the most popular reciprocating engines in Power Systems will be compatible with sustainable fuels by the end of 2023. The investment required to ensure our new products will be compatible with net zero operation by 2030, and to achieve net zero scope 1 and 2 GHG emissions is reflected in the forecasts used.

A 1.5°C scenario has been prepared using key data points from external sources including Oxford Economics, Global Climate Service and Databank and the International Energy Agency. This scenario has been used as the basis of a sensitivity. It is assumed that governments adopt stricter product and behavioural standards and measures that result in higher carbon pricing. Under these conditions it is assumed that markets are willing to pay for low carbon solutions and that there is an economic return from strategic investments in low carbon alternatives. The sensitivity has considered the likelihood of demand changes for our products based on their relative fuel efficiency in the marketplace and the probability of alternatives being introduced earlier than currently expected. The sensitivity also reflects the impact of a broad range of potential costs imposed by policy or regulatory interventions (through carbon pricing). This sensitivity does not indicate the need for an impairment charge.

The principal assumptions for goodwill balances considered to be individually significant are:

Rolls-Royce Power Systems AG

- Recoverable amount represents FVLCOD to reflect the future strategy of the business. Whilst there are no indicators of impairment under the value in use method presented in 2021, the Directors consider that disclosing information prepared on a FVLCOD basis here is a more useful representation of the recoverable amount when considering the future strategy of the business, including the impact of climate-related risks and opportunities. Due to the unavailability of observable market inputs or inputs based on market evidence, the fair value is estimated by discounting future cash flows (Level 3 as defined by IFRS 13 *Fair Value Measurement*) modified for market participants views;
- Trading assumptions (e.g. volume of equipment deliveries, pricing achieved and cost escalation) that are based on current and known future programmes, estimates of market share and long-term economic forecasts;
- Severe but plausible downside scenario in relation to macro-economic factors included with a 20% weighting;
- Cash flows beyond the five-year forecasts are assumed to grow at 1.0% (2021: 2.0%); and
- Nominal post-tax discount rate 10.0% (2021: 8.2%).

The Directors do not consider that any reasonably possible changes in the key assumptions (including taking consideration of the climate-related risks above) would cause the FVLCOD of the business to fall below its carrying value of goodwill.

9 Intangible assets – continued

Rolls-Royce Deutschland Ltd & Co KG

— Recoverable amount represents the value in use of the assets in their current condition;

— Trading assumptions (e.g. volume of engine deliveries, flying hours of installed fleet, including assumptions on the recovery of the aerospace industry, and cost escalation) that are based on current and known future programmes, estimates of market share and long-term economic forecasts;

— Severe but plausible downside scenario in relation to macro-economic factors included with a 25% weighting;

— Cash flows beyond the five-year forecasts are assumed to grow at 2.0% (2021: 2.0%).

— Nominal pre-tax discount rate 13.2% (2021: 11.9%).

The Directors do not consider that any reasonably possible changes in the key assumptions (including taking consideration of the climate-related risks above) would cause the value in use of the goodwill to fall below its carrying value.

Other CGUs

Goodwill balances across the Group that are not considered to be individually significant were also tested for impairment, resulting in no impairment charge (2021: no impairment charge) being recognised at 31 December 2022.

The carrying amount and the residual life of the material intangible assets (excluding goodwill) for the Group is as follows:

	Residual life [1]	Net book value	
		2022 £m	2021 £m
Trent programme intangible assets [2]	3-15 years	1,826	1,787
Business aviation programme intangible assets [3]	12-15 years	250	237
Intangible assets related to Power Systems [4]		466	491
		2,542	2,515

[1] Residual life reflects the remaining amortisation period of those assets where amortisation has commenced. As per page 120, the amortisation period of 15 years will commence on those assets which are not being amortised as the units are delivered
[2] Included within the Trent programmes are the Trent 1000, Trent 7000 and Trent XWB
[3] Included within business aviation are the Pearl 700 and Pearl 15
[4] Includes £114m (2021: £108m) in respect of a brand intangible asset which is not amortised. Remaining assets are amortised over a range of three to 20 years

The carrying amount of goodwill or intangible assets allocated across multiple CGUs is not significant in comparison with the Group's total carrying amount of goodwill or intangible assets with indefinite useful lives.

Other intangible assets (including programme intangible assets) have been reviewed for impairment in accordance with IAS 36. Assessments have considered potential triggers of impairment such as external factors, including climate change, significant changes with an adverse effect on a programme and by analysing latest management forecasts against those prepared in 2021 to identify any deterioration in performance.

Where a trigger event has been identified, an impairment test has been carried out. Where an impairment was required the test was performed on the following basis:

— The carrying values have been assessed by reference to value in use. These have been estimated using cash flows from the most recent forecasts prepared by the Directors, which are consistent with past experience and external sources of information on market conditions over the lives of the respective programmes; and

— The key assumptions underpinning cash flow projections are based on estimates of product performance related estimates, future market share and pricing and cost for uncontracted business. Climate-related risks are considered when making these estimates consistent with the assumptions above.

There have been no (2021: none) individually material impairment charges or reversals recognised during the year.

10 Property, plant and equipment

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	In course of construction £m	Total £m
Cost:					
At 1 January 2021	1,994	5,442	1,025	451	8,912
Additions	19	120	6	154	299
Transferred to assets held for sale [1]	(200)	(305)	(22)	(8)	(535)
Disposals/write-offs	(59)	(264)	(11)	(23)	(357)
Reclassifications [2]	144	75	53	(271)	1
Exchange differences	(33)	(82)	(5)	(3)	(123)
At 31 December 2021	1,865	4,986	1,046	300	8,197
Additions	**34**	**127**	**26**	**162**	**349**
Disposals/write-offs	**(38)**	**(142)**	**(81)**	**(1)**	**(262)**
Reclassifications [2]	**3**	**82**	**(3)**	**(82)**	**–**
Exchange differences	**72**	**172**	**11**	**21**	**276**
At 31 December 2022	**1,936**	**5,225**	**999**	**400**	**8,560**
Accumulated depreciation and impairment:					
At 1 January 2021	679	3,336	374	8	4,397
Charge for the year [3]	70	312	57	–	439
Impairment	1	18	–	–	19
Transferred to assets held for sale [1]	(74)	(127)	(5)	–	(206)
Disposals/write-offs	(48)	(254)	(1)	–	(303)
Reclassifications [2]	(7)	11	(10)	–	(6)
Exchange differences	(7)	(52)	(1)	–	(60)
At 31 December 2021	614	3,244	414	8	4,280
Charge for the year [3]	**79**	**296**	**55**	**–**	**430**
Impairment [4]	**5**	**(5)**	**–**	**–**	**–**
Disposals/write-offs	**(24)**	**(142)**	**(57)**	**–**	**(223)**
Reclassifications [2]	**(2)**	**5**	**(3)**	**–**	**–**
Exchange differences	**23**	**109**	**4**	**1**	**137**
At 31 December 2022	**695**	**3,507**	**413**	**9**	**4,624**
Net book value at:					
At 31 December 2022	**1,241**	**1,718**	**586**	**391**	**3,936**
At 31 December 2021	1,251	1,742	632	292	3,917

[1] ITP Aero and certain property, plant and equipment related to the Group's site rationalisation activities were classified as a disposal group or assets held for sale during the year to 31 December 2021

[2] Includes reclassifications of assets under construction to the relevant classification in property, plant and equipment, right-of-use assets or intangible assets when available for use

[3] Depreciation is charged to cost of sales and commercial and administrative costs or included in the cost of inventory as appropriate

[4] The carrying values of property, plant and equipment have been assessed during the year in line with IAS 36. Material items of plant and equipment and aircraft and engines are assessed for impairment together with other assets used in individual programmes – see assumptions in note 9. Land and buildings are generally used across multiple programmes and are considered based on future expectations of the use of the site, which includes any implications from climate-related risks as explained in note 9. As a result of this assessment, there are no individually material impairment charges or reversals in the year. The reversal in the year relates to an element of the non-underlying impairments recorded in 2020 in Civil Aerospace for site rationalisation where there has been a subsequent change in strategy to continue production on those sites

Property, plant and equipment includes:

	2022 £m	2021 £m
Assets held for use in leases where the Group is the lessor:		
Cost	**779**	808
Depreciation	**(343)**	(311)
Net book value	**436**	497
Capital expenditure commitments	**221**	121
Cost of fully depreciated assets	**2,184**	2,001

The Group's share of equity accounted entities' capital commitments is £34m (2021: £22m).

11 Right-of-use assets

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	Total £m
Cost:				
At 1 January 2021	447	150	1,833	2,430
Additions/modification of leases	37	15	30	82
Transferred to assets held for sale [1]	(16)	(2)	–	(18)
Disposals	(8)	(16)	(66)	(90)
Reclassifications to PPE	–	–	(8)	(8)
Exchange differences	(4)	(4)	(4)	(12)
At 31 December 2021	456	143	1,785	2,384
Additions/modification of leases	**52**	**34**	**59**	**145**
Disposals	**(30)**	**(19)**	**(22)**	**(71)**
Exchange differences	**28**	**4**	**5**	**37**
At 31 December 2022	**506**	**162**	**1,827**	**2,495**
Accumulated depreciation and impairment:				
At 1 January 2021	159	60	806	1,025
Charge for the year	43	30	199	272
Impairment [2]	(2)	(6)	(7)	(15)
Transferred to assets held for sale [1]	(4)	(1)	–	(5)
Disposals	(8)	(16)	(66)	(90)
Reclassifications to PPE	–	–	(1)	(1)
Exchange differences	(2)	(1)	(2)	(5)
At 31 December 2021	186	66	929	1,181
Charge for the year	**43**	**37**	**190**	**270**
Impairment [2]	**(2)**	**(1)**	**20**	**17**
Disposals	**(13)**	**(19)**	**(22)**	**(54)**
Exchange differences	**16**	**1**	**3**	**20**
At 31 December 2022	**230**	**84**	**1,120**	**1,434**
Net book value at:				
At 31 December 2022	**276**	**78**	**707**	**1,061**
At 31 December 2021	270	77	856	1,203
Right-of-use assets held for use in operating leases where the Group is the lessor				
Cost	**6**	**–**	**1,827**	**1,833**
Depreciation	**(3)**	**–**	**(1,120)**	**(1,123)**
Net book value at 31 December 2022	**3**	**–**	**707**	**710**
Cost	2	1	1,785	1,788
Depreciation	(1)	(1)	(929)	(931)
Net book value at 31 December 2021	1	–	856	857

[1] ITP Aero was classified as a disposal group held for sale at 30 June 2021

[2] The carrying values of right-of-use assets have been assessed during the year in line with IAS 36. Material items of plant and equipment and aircraft and engines are assessed for impairment together with other assets used in individual programmes – see assumptions in note 9. Land and buildings are generally used across multiple programmes and are considered based on future expectations of the use of the site (which includes any implications from climate-related risks as explained in note 9). During the year, a reversal was recognised relating to an element of the non-underlying impairments recorded in 2020 in Civil Aerospace for site rationalisation where there has been a subsequent change in strategy to continue production on those sites. In addition, a charge of £20m was recognised due to the current sanctions applicable over assets in Russia. At the balance sheet date the Group could not access the assets that were on lease and it is not known when this situation would be resolved to enable the Group to generate a recoverable amount

12 Investments

Composition of the Group

The entities contributing to the Group's financial results are listed on pages 179 to 184.

Where the Group does not own 100% of the shares of a group undertaking, there are a number of arrangements with the other shareholder(s) that give the Group the option or potential obligation to acquire the third parties' shares. These arrangements have been assessed and are not considered to have a significant value, individually or in aggregate.

The Group does not have any material non-wholly owned subsidiaries.

Equity accounted and other investments

	Equity accounted			Other [1]
	Joint ventures £m	Associates £m	Total £m	£m
At 1 January 2021	393	1	394	19
Additions	2	1	3	27
Disposals	–	–	–	(1)
Impairment	(2)	–	(2)	(5)
Share of retained profit/(loss) [2]	19	(1)	18	–
Reclassification of deferred profit to deferred income [3]	(24)	–	(24)	–
Transferred to assets held for sale [4]	(35)	–	(35)	–
Repayment of loans	(3)	–	(3)	–
Revaluation of other investments accounted for at FVOCI	–	–	–	(2)
Exchange differences	8	–	8	(2)
Share of OCI [5]	45	–	45	–
At 1 January 2022	**403**	**1**	**404**	**36**
Additions [6]	**29**	**–**	**29**	**7**
Disposals	**–**	**(1)**	**(1)**	**(2)**
Impairment [7]	**(74)**	**–**	**(74)**	**(1)**
Share of retained loss [2]	**(25)**	**–**	**(25)**	**–**
Reclassification of deferred profit to deferred income [3]	**(4)**	**–**	**(4)**	**–**
Repayment of loans	**(5)**	**–**	**(5)**	**–**
Revaluation of other investments accounted for at FVOCI	**–**	**–**	**–**	**(4)**
Exchange differences	**96**	**–**	**96**	**–**
Share of OCI	**2**	**–**	**2**	**–**
At 31 December 2022	**422**	**–**	**422**	**36**

[1] Other investments includes unlisted investments of £26m (2021: £29m) and listed investments of £10m (2021: £7m)
[2] See table below
[3] The Group's share of unrealised profit on sales to joint ventures is eliminated against the carrying value of the investment in the entity. Any excess amount, once the carrying value is reduced to nil, is recorded as deferred income
[4] The Group's investment in Airtanker Holdings Limited was classified as a non-current asset held for sale at 13 September 2021. Further detail can be found in note 27
[5] Up to 13 September 2021, when Airtanker Holdings Limited was transferred to held for sale, the Group recognised share of OCI relating to cash flow hedges of £43m
[6] During the year, additions to investments of £29m include the following significant transactions: On 20 June 2022, the Group acquired a 54% investment in Hoeller Electrolyzer. Although the Group has acquired a 54% stake, the Group has considered whether the majority stake constitutes a subsidiary as per the basis of consolidation on page 113 and 114. Based on key decisions requiring consent from both shareholders, the Group has concluded that Hoeller Electrolyser is jointly controlled and is equity accounted in the Consolidated Financial Statements. On 1 September 2022, the Group and Air China established a joint venture called Beijing Aero Engine Services Company Limited
[7] During the year, one of the Group's investments in its Civil Aerospace joint venture repair and overhaul facilities has been impaired by £74m. This reflects the Directors' updated judgement of the recoverable amount from that investment when measured on a value in use basis by discounting expected future dividends at 12.4% cost of equity. The charge in the year reflects a higher discount rate and revised assumptions taking into account the impact of inflation and interest rates on that business, reflecting current market conditions

Reconciliation of share of retained (loss)/profit to the income statement and cash flow statement:

	2022 £m	2021 £m
Share of results of joint ventures and associates	**9**	22
Adjustments for intercompany trading [1]	**39**	23
Share of results of joint ventures and associates to the Group	**48**	45
Dividends paid by joint ventures and associates to the Group (cash flow statement)	**(73)**	(27)
Share of retained (loss)/profit attributable to continuing operations (above)	**(25)**	18

[1] During the year, the Group sold spare engines to Rolls-Royce & Partners Finance, a joint venture and subsidiary of Alpha Partners Leasing Limited. The Group's share of the profit on these sales is deferred and released to match the depreciation of the engines in the joint venture's financial statements. In 2022 and 2021, profit deferred on the sale of engines was lower than the release of that deferred in prior years

12 Investments – continued

The following joint ventures are considered to be individually material to the Group:

	Principal location	Activity	Ownership interest
Alpha Partners Leasing Limited (APL)	UK	Aero engine leasing	50.0%
Hong Kong Aero Engine Services Limited (HAESL)	Hong Kong	Aero engine repair and overhaul	50.0%
Singapore Aero Engine Services Pte Limited (SAESL)	Singapore	Aero engine repair and overhaul	50.0%

Summarised financial information of the Group's individually material joint ventures is as follows:

	APL		HAESL		SAESL	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Revenue	310	278	2,388	1,605	2,012	1,057
Profit/(loss) and total comprehensive income/(expense) for the year	55	(16)	72	51	31	20
Dividends paid during the year	(22)	–	(66)	(46)	–	–
Profit/(loss) for the year included the following:						
Depreciation and amortisation	(190)	(165)	(13)	(14)	(21)	(20)
Interest income	–	–	–	–	1	–
Interest expense	(89)	(65)	(2)	(1)	(3)	(3)
Income tax expense	(13)	(77)	(14)	(10)	(2)	–
Current assets	375	314	886	533	865	676
Non-current assets	3,199	2,978	98	90	154	151
Current liabilities	(480)	(287)	(716)	(343)	(687)	(554)
Non-current liabilities	(2,389)	(2,401)	(26)	(73)	(60)	(65)
Net assets	705	604	242	207	272	208
Included in the above:						
Cash and cash equivalents	239	239	6	30	61	105
Current financial liabilities [1]	(411)	(217)	(135)	–	–	–
Non-current financial liabilities [1]	(2,003)	(2,048)	(17)	(67)	(60)	(65)
Reconciliation to the carrying amount recognised in the Consolidated Financial Statements:						
Ownership interest	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Group share of net assets above	353	302	121	104	136	104
Goodwill	–	–	38	34	11	78
Adjustments for intercompany trading	(353)	(302)	(2)	(1)	–	–
Included in the balance sheet	–	–	157	137	147	182

[1] Excluding trade payables and other liabilities

The summarised aggregated results of the Group's share of equity accounted investments is as follows:

	Individually material joint ventures (above)		Other joint ventures [1]		Associates		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Assets:								
Non-current assets	1,726	1,610	199	205	–	–	1,925	1,815
Current assets	1,063	762	327	316	–	1	1,390	1,079
Liabilities: [2]								
Current liabilities	(942)	(592)	(245)	(232)	–	–	(1,187)	(824)
Non-current liabilities	(1,237)	(1,270)	(58)	(84)	–	–	(1,295)	(1,354)
Group adjustment for goodwill	49	112	–	–	–	–	49	112
Adjustment for intercompany trading	(355)	(303)	(105)	(121)	–	–	(460)	(424)
Included in the balance sheet	304	319	118	84	–	1	422	404
[2] Liabilities include borrowings of:	*(1,313)*	*(1,198)*	*(84)*	*(534)*	–	–	(1,397)	*(1,732)*

[1] The aggregate value of the Group's share of profit/(loss) and total comprehensive (expense)/income of individually immaterial joint ventures is £(68)m (2021: £39m)

13 Inventories

	2022 £m	2021 £m
Raw materials	479	376
Work in progress	1,633	1,135
Finished goods	2,593	2,146
Payments on account	3	9
	4,708	3,666

Inventories stated at net realisable value	209	215
Amount of inventory write-down	85	92
Reversal of inventory write-down	27	26

14 Trade receivables and other assets

	Current		Non-current		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Trade receivables [1, 2]	2,376	2,141	43	52	2,419	2,193
Prepayments	886	572	893	378	1,779	950
Receivables due on RRSAs [2]	928	702	255	67	1,183	769
Amounts owed by joint ventures and associates	632	598	16	1	648	599
Other taxation and social security receivable	147	197	9	8	156	205
Costs to obtain contracts with customers [3]	12	13	67	41	79	54
Other receivables [4]	617	593	55	20	672	613
	5,598	4,816	1,338	567	6,936	5,383

Trade receivables and other assets are analysed as follows:		
Financial instruments (note 20):		
Trade receivables and similar items	4,147	3,466
Other non-derivative financial assets	775	705
Non-financial instruments	2,014	1,212
	6,936	5,383

[1] Non-current trade receivables relate to amounts not expected to be received in the next 12 months from customers on payment plans
[2] Includes receivables due from ITP Aero that were previously eliminated on consolidation
[3] These are amortised over the term of the related contract in line with engine deliveries, resulting in amortisation of £11m (2021: £9m) in the year. There were no impairment losses
[4] Other receivables includes unbilled recoveries relating to completed overhaul activity where the right to consideration is unconditional

The Group has adopted the simplified approach to provide for ECLs, measuring the loss allowance at a probability weighted amount incorporated by using credit ratings which are publicly available, or through internal risk assessments derived using the customer's latest available financial information.

The ECLs for trade receivables and other assets has increased by £87m to £346m (2021: £7m to £259m). This movement is mainly driven by the Civil Aerospace business of £90m, of which £83m relates to specific customers and £7m relates to updates to the recoverability of other receivables.

The assumptions and inputs used for the estimation of the ECLs are disclosed in the table below:

	2022			2021 [1]		
	Trade receivables and other financial assets £m	Loss allowance £m	Average ECL rate %	Trade receivables and other financial assets £m	Loss allowance £m	Average ECL rate %
Investment grade [2]	1,637	(177)	11%	1,296	(68)	5%
Non-investment grade	124	(16)	13%	48	(2)	4%
Without credit rating	3,507	(153)	4%	3,086	(189)	6%
	5,268	(346)	7%	4,430	(259)	6%

[1] During the year, the presentation of ECLs has been analysed in greater detail. This has resulted in comparative balances being represented in more appropriate line items. Trade receivables and other financial assets that are classified as investment grade has increased by £204m, with a decrease of £99m and £105m to those classified as non-investment grade and without credit rating respectively. The loss allowance against assets classified as investment grade has increased by £41m with the respective decrease in the loss allowance for those without a credit rating. The total amount of trade receivables and other financial assets and loss allowance as at 31 December 2021 has remained unchanged
[2] Counterparties with a credit rating of 'C' or above are classified as investment grade

14 Trade receivables and other assets – continued

The movements of the Group ECLs provision are as follows:

	2022 £m	2021 £m
At 1 January	(259)	(252)
Increases in loss allowance recognised in the income statement during the year	(118)	(124)
Loss allowance utilised	22	46
Releases of loss allowance previously provided	45	46
Transferred to assets held for sale	–	2
Exchange differences	(36)	23
At 31 December	(346)	(259)

15 Contract assets and liabilities

	Current		Non-current [1]		Total [2]	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Contract assets						
Contract assets with customers	621	586	617	641	1,238	1,227
Participation fee contract assets	28	27	215	219	243	246
	649	613	832	860	1,481	1,473

[1] Contract assets and contract liabilities have been presented on the face of the balance sheet in line with the operating cycle of the business. Contract liabilities are further split according to when the related performance obligation is expected to be satisfied and, therefore, when revenue is estimated to be recognised in the income statement. Further disclosure of contract assets is provided in the table above, which shows within current the element of consideration that will become unconditional in the next year

[2] Contract assets are classified as non-financial instruments

The balance includes £885m (2021: £915m) of Civil Aerospace LTSA assets, with most of the remaining balance relating to Defence. The decrease in the Civil Aerospace balance is due to collection of higher cash receipts than revenue recognised in relation to completion of performance obligations on those contracts with a contract asset balance. Revenue recognised relating to performance obligations satisfied in previous years was £26m in Civil Aerospace. No impairment losses in relation to these contract assets (2021: none) have arisen during the year.

Participation fee contract assets have reduced by £3m (2021: £188m) due to amortisation exceeding additions by £7m, offset by foreign exchange on consolidation of £4m.

The absolute value of ECLs for contract assets has increased by £6m to £21m (2021: £15m).

	Current		Non-current		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Contract liabilities	4,825	3,599	7,337	6,710	12,162	10,309

Contract liabilities are analysed as follows:		
Financial instruments (note 20)	420	264
Non-financial instruments	11,742	10,045
	12,162	10,309

During the year £3,321m (2021: £2,713m) of the opening contract liability was recognised as revenue.

Contract liabilities have increased by £1,853m. The movement in the Group balance is as a result of increases in Civil Aerospace of £1,395m and Defence of £324m. The main reason for the Civil Aerospace increase is a growth in LTSA liabilities of £1,128m to £8,257m (2021: £7,129m) driven by growth in customer payments as engine flying hours continue to recover from the COVID-19 pandemic and price escalation. There have also been additional buy-in fees received in relation to new contracts. This has been partly offset by revenue being recognised in relation to performance obligations satisfied in previous years of £334m as contract performance improves, which decreases the contract liability. An increase in Defence is from the receipt of deposits in advance of performance obligations being completed.

16 Cash and cash equivalents

	2022 £m	2021 £m
Cash at bank and in hand	847	795
Money-market funds	34	49
Short-term deposits	1,726	1,777
Cash and cash equivalents per the balance sheet	2,607	2,621
Cash and cash equivalents included within assets held for sale (note 27)	–	25
Overdrafts (note 17)	(2)	(7)
Cash and cash equivalents per cash flow statement (page 106)	2,605	2,639

Cash and cash equivalents at 31 December 2022 includes £235m (2021: £89m) that is not available for general use by the Group. This balance includes £40m which is held in an account that is exclusively for the general use of Rolls-Royce Submarines Limited and £138m which is held exclusively for the use of Rolls-Royce Saudi Arabia Limited. This cash is not available for use by other entities within the Group. The remaining balance relates to cash held in non-wholly owned subsidiaries and joint arrangements.

Balances are presented on a net basis when the Group has both a legal right of offset and the intention to either settle on a net basis or realise the asset and settle the liability simultaneously.

17 Borrowings and lease liabilities

	Current		Non-current		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Unsecured						
Overdrafts	2	7	–	–	2	7
Bank loans [1]	1	2	–	1,975	1	1,977
0.875% Notes 2024 €550m [2]	–	–	472	471	472	471
3.625% Notes 2025 $1,000m [2]	–	–	801	781	801	781
3.375% Notes 2026 £375m [3]	–	–	351	394	351	394
4.625% Notes 2026 €750m [4]	–	–	661	624	661	624
5.75% Notes 2027 $1,000m [4]	–	–	825	735	825	735
5.75% Notes 2027 £545m	–	–	541	540	541	540
1.625% Notes 2028 €550m [2]	–	–	444	493	444	493
Other loans	–	–	10	10	10	10
Total unsecured	3	9	4,105	6,023	4,108	6,032
Lease liability – Land and buildings	46	46	400	365	446	411
Lease liability – Aircraft and engines	278	198	1,047	1,053	1,325	1,251
Lease liability – Plant and equipment	31	26	45	56	76	82
Total lease liabilities	355	270	1,492	1,474	1,847	1,744
Total borrowings and lease liabilities	358	279	5,597	7,497	5,955	7,776

All outstanding items described as notes above are listed on the London Stock Exchange

[1] On 16 September 2022, the Group repaid the £2,000m loan maturing in 2025 (supported by an 80% guarantee from UK Export Finance)
[2] These notes are the subject of cross-currency interest rate swap agreements under which the Group has undertaken to pay floating rates of GBP interest, which form a fair value hedge. They are also subject to interest rate swap agreements under which the Group has undertaken to pay fixed rates of interest, which are classified as fair value through profit and loss
[3] These notes are the subject of interest rate swap agreements under which the Group has undertaken to pay floating rates of interest, which form a fair value hedge. They are also subject to interest rate swap agreements under which the Group has undertaken to pay fixed rates of interest, which are classified as fair value through profit and loss
[4] These notes are the subject of cross-currency interest rate swap agreements under which the Group has undertaken to pay fixed rates of GBP interest, which form a cash flow hedge

During the year ended 31 December 2022, the Group entered into a new £1,000m sustainability-linked facility, maturing in 2027 (supported by an 80% guarantee from UK Export Finance). The facility was undrawn at 31 December 2022.

At 31 December 2022, the Group had total undrawn facilities of £5,500m (2021: £4,500m).

Under the terms of certain recent loan facilities, the Company is restricted from declaring, making or paying distributions to shareholders on or prior to 31 December 2022 and from declaring, making or paying distributions to shareholders from 1 January 2023 unless certain conditions are satisfied. The restrictions on distributions do not prevent the Company from redeeming any unredeemed C Shares issued prior to March 2021.

18 Leases

Leases as lessee

The net book value of right-of-use assets at 31 December 2022 was £1,061m (2021: £1,203m), with a lease liability of £1,847m (2021: £1,744m), per notes 11 and 17 respectively. Leases that have not yet commenced to which the Group is committed have a future liability of £39m and consist of mainly plant and equipment and properties. The consolidated income statement shows the following amounts relating to leases:

	2022 £m	2021 £m
Land and buildings depreciation and impairment [1]	(41)	(41)
Plant and equipment depreciation and impairment [2]	(36)	(24)
Aircraft and engines depreciation and impairment [3]	(210)	(192)
Total depreciation and impairment charge for right-of-use assets	(287)	(257)
Adjustment of amounts payable under residual value guarantees within lease liabilities [3, 4]	3	4
Expense relating to short-term leases of 12 months or less recognised as an expense on a straight line basis [2]	(28)	(16)
Expense relating to variable lease payments not included in lease liabilities [3, 5]	(2)	(2)
Total operating costs	(314)	(271)
Interest expense [6]	(68)	(63)
Total lease expense	(382)	(334)
Income from sub-leasing right-of-use assets	32	35
Total amount recognised in the income statement	(350)	(299)

[1] Included in cost of sales and commercial and administration costs depending on the nature and the use of the right-of-use asset
[2] Included in cost of sales, commercial and administration costs, or research and development depending on the nature and use of the right-of-use asset
[3] Included in cost of sales
[4] Where the cost of meeting residual value guarantees is less than that previously estimated, as costs have been mitigated or liabilities waived by the lessor, the lease liability has been remeasured. Where the value of this remeasurement exceeds the value of the right-of use asset, the reduction in the lease liability is credited to cost of sales
[5] Variable lease payments primarily arise on a small number of contracts where engine lease payments are dependent upon utilisation rather than a periodic charge
[6] Included in financing costs

The total cash outflow for leases in 2022 was £316m (2021: £448m). Of this, £286m related to leases reflected in the lease liability, £28m to short-term leases where lease payments are expensed on a straight-line basis and £2m for variable lease payments where obligations are only due when the assets are used. The timing difference between income statement charge and cash flow relates to costs incurred at the end of leases for residual value guarantees and restoration costs that are recognised within depreciation over the term of the lease, the most significant amounts relate to engine leases.

Leases as lessor

The Group acts as lessor for engines to Civil Aerospace customers when they require engines to support their fleets. Lease agreements with the lessees provide protection over the assets. Usage in excess of specified limits and damage to the engine while on lease are covered by variable lease payment structures. Lessee bankruptcy risk is managed through the Cape Town Convention on International Interests in Mobile Equipment (including a specific protocol relating to aircraft equipment); an international treaty that creates common standards for the registration of lease contracts and establishes various legal remedies for default in financing agreements, including repossession and the effect of particular states' bankruptcy laws. Engines are only leased once the Group confirm that appropriate insurance documentation is established that covers the engine assets to pre-agreed amounts. All such contracts are operating leases. The Group also leases out a small number of properties, or parts of properties, where there is excess capacity under operating leases.

	2022 £m	2021 £m
Operating lease income – credited within revenue from aftermarket services [1, 2]	84	80

[1] Includes variable lease payments received of £73m (2021: £71m) that do not depend on an index or a rate
[2] Items of property, plant and equipment subject to an operating lease are disclosed in note 10

Total non-cancellable future operating lease rentals (undiscounted) of £95m (2021: £58m) are receivable over the next 12 years. £12m (2021: £9m) is due within one year, £45m (2021: £28m) between one to five years and £38m (2021: £21m) after five years.

In a limited number of circumstances, the Group sublets properties that are treated as a finance lease when the arrangement transfers substantially all the risks and rewards of ownership of the asset. At 31 December 2022, the total undiscounted lease payments receivable is £39m (2021: £19m) on annual lease income of £4m (2021: £2m). The discounted finance lease receivable at 31 December 2022 is £32m (2021: £17m). There was nil (2021: nil) finance income recognised during the year.

19 Trade payables and other liabilities

	Current		Non-current		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Trade payables [1]	1,735	1,272	–	–	1,735	1,272
Accruals	1,477	1,361	199	192	1,676	1,553
Customer concession credits [2]	616	1,106	864	399	1,480	1,505
Payables due on RRSAs [1]	1,392	739	–	–	1,392	739
Deferred receipts from RRSA workshare partners	32	23	829	484	861	507
Amounts owed to joint ventures and associates	567	486	–	–	567	486
Warranty credits	212	201	152	161	364	362
Government grants [3]	21	28	41	39	62	67
Other taxation and social security	88	40	–	–	88	40
Other payables [4]	843	760	279	300	1,122	1,060
	6,983	6,016	2,364	1,575	9,347	7,591

Trade payables and other liabilities are analysed as follows [5]:		
Financial instruments (note 20):		
Trade payables and similar items	5,739	4,409
Other non-derivative financial liabilities	2,385	2,403
Non-financial instruments	1,223	779
	9,347	7,591

[1] Includes payables due to ITP Aero that were previously eliminated on consolidation
[2] Customer concession credits are a form of discount and are reported within revenue as set out on page 114
[3] During the year, £20m, including £5m in discontinued operations, (2021: £13m) of government grants were released to the income statement
[4] Other payables includes parts purchase obligations, payroll liabilities, HM Government UK levies and payables associated with business disposals
[5] During the year, the classification between financial instruments and non-financial instruments has been reviewed and resulted in an increase to the 2021 classification of trade payables and other liabilities disclosed as financial instruments of £364m

The Group's payment terms with suppliers vary on the products and services being sourced, the competitive global markets the Group operates in and other commercial aspects of suppliers' relationships. Industry average payment terms vary between 90-120 days. The Group offers reduced payment terms for smaller suppliers, so that they are paid in 30 days. In line with aerospace industry practice, the Group offers a SCF programme in partnership with banks to enable suppliers, including joint ventures, who are on standard 75-day payment terms to receive their payments sooner. The SCF programme is available to suppliers at their discretion and does not change rights and obligations with suppliers nor the timing of payment to suppliers. At 31 December 2022, suppliers had drawn £422m under the SCF scheme (2021: £540m).

20 Financial instruments

Carrying values and fair values of financial instruments

	Notes	Basis for determining fair value	Assets			Liabilities		Total
			FVPL £m	FVOCI £m	Amortised cost £m	FVPL £m	Other £m	£m
2022								
Other non-current asset investments	12	A	26	10	–	–	–	36
Trade receivables and similar items	14	B/C	–	10	4,137	–	–	4,147
Other non-derivative financial assets	14	B	–	–	775	–	–	775
Other assets		D	35	–	–	–	–	35
Derivative financial assets [1]		C	648	–	–	–	–	648
Short-term investments		B	–	–	11	–	–	11
Cash and cash equivalents	16	B	34	–	2,573	–	–	2,607
Borrowings	17	E/F	–	–	–	–	(4,108)	(4,108)
Lease liabilities	17	G	–	–	–	–	(1,847)	(1,847)
Derivative financial liabilities [1]		C	–	–	–	(4,099)	–	(4,099)
Financial RRSAs		H	–	–	–	–	(22)	(22)
Other liabilities		H	–	–	–	–	(101)	(101)
C Shares		B	–	–	–	–	(24)	(24)
Trade payables and similar items	19	B	–	–	–	–	(5,739)	(5,739)
Other non-derivative financial liabilities	19	B	–	–	–	–	(2,385)	(2,385)
Contract liabilities	15	B	–	–	–	–	(420)	(420)
			743	20	7,496	(4,099)	(14,646)	(10,486)
2021								
Other non-current asset investments	12	A	36	–	–	–	–	36
Trade receivables and similar items	14	B/C	–	17	3,449	–	–	3,466
Other non-derivative financial assets	14	B	–	–	705	–	–	705
Other assets		D	28	–	–	–	–	28
Derivative financial assets [1]		C	379	–	–	–	–	379
Short-term investments		B	–	–	8	–	–	8
Cash and cash equivalents	16	B	49	–	2,572	–	–	2,621
Borrowings	17	E/F	–	–	–	–	(6,032)	(6,032)
Lease liabilities	17	G	–	–	–	–	(1,744)	(1,744)
Derivative financial liabilities [1]		C	–	–	–	(3,292)	–	(3,292)
Financial RRSAs		H	–	–	–	–	(12)	(12)
Other		H	–	–	–	–	(75)	(75)
C Shares		B	–	–	–	–	(25)	(25)
Trade payables and similar items [2]	19	B	–	–	–	–	(4,409)	(4,409)
Other non-derivative financial liabilities	19	B	–	–	–	–	(2,403)	(2,403)
Contract liabilities	15	B	–	–	–	–	(264)	(264)
			492	17	6,734	(3,292)	(14,964)	(11,013)

[1] In the event of counterparty default relating to derivative financial assets and liabilities, offsetting would apply and financial assets and liabilities held with the same counterparty would net off. If this occurred with every counterparty, total financial assets would be £8m (2021: nil) and liabilities £3,459m (2021: £2,913m)

[2] During the year trade payables and similar items have been analysed in greater detail and consequently have been represented to include items previously classified as non-financial instruments

20 Financial instruments – continued

Fair values equate to book values for both 2022 and 2021, with the following exceptions:

	Basis for determining fair value	2022 Book value £m	2022 Fair value £m	2021 Book value £m	2021 Fair value £m
Borrowings	E	(4,095)	(3,812)	(4,038)	(4,106)
Borrowings	F	(13)	(15)	(1,994)	(2,122)
Financial RRSAs	H	(22)	(22)	(12)	(13)

The fair value of a financial instrument is the price at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. There have been no transfers during the year from or to Level 3 valuation. Fair values have been determined with reference to available market information at the balance sheet date, using the methodologies described below.

[A] These primarily comprise unconsolidated companies where fair value approximates to the book value. Listed investments are valued using Level 1 methodology

[B] Fair values are assumed to approximate to cost either due to the short-term maturity of the instruments or because the interest rate of the investments is reset after periods not exceeding six months. Money market funds are valued using Level 1 methodology

[C] Fair values of derivative financial assets and liabilities and trade receivables held to collect or sell are estimated by discounting expected future contractual cash flows using prevailing interest rate curves. For commodity derivatives, forward commodity prices are used to determine expected future cash flows. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. These financial instruments are included on the balance sheet at fair value, derived from observable market prices (Level 2)

[D] Other assets are included on the balance sheet at fair value, derived from observable market prices or latest forecast (Level 2/Level 3). At 31 December 2022, Level 3 assets totalled £25m (2021: £15m)

[E] Borrowings are carried at amortised cost. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. The fair value of borrowings is estimated using quoted prices (Level 1)

[F] Borrowings are carried at amortised cost. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. The fair value of borrowings is estimated by discounting contractual future cash flows (Level 2)

[G] The fair value of lease liabilities are estimated by discounting future contractual cash flows using either the interest rate implicit in the lease or the Group's incremental cost of borrowing (Level 2)

[H] The fair value of RRSAs and other liabilities are estimated by discounting expected future cash flows. The contractual cash flows are based on future trading activity, which is estimated based on latest forecasts (Level 3)

IFRS 13 *Fair Value Measurement* defines a three-level valuation hierarchy:
Level 1 – quoted prices for similar instruments;
Level 2 – directly observable market inputs other than Level 1 inputs; and
Level 3 – inputs not based on observable market data.

Carrying values of other financial assets and liabilities

	Foreign exchange contracts £m	Commodity contracts £m	Interest rate contracts [1] £m	Total derivatives £m	Financial RRSAs £m	Other £m	C Shares £m	Total £m
2022								
Non-current assets	58	25	436	519	–	23	–	542
Current assets	87	40	2	129	–	12	–	141
Assets	145	65	438	648	–	35	–	683
Current liabilities	(966)	(1)	(2)	(969)	(8)	(15)	(24)	(1,016)
Non-current liabilities	(3,030)	(2)	(98)	(3,130)	(14)	(86)	–	(3,230)
Liabilities	(3,996)	(3)	(100)	(4,099)	(22)	(101)	(24)	(4,246)
	(3,851)	62	338	(3,451)	(22)	(66)	(24)	(3,563)
2021								
Non-current assets	159	11	176	346	–	15	–	361
Current assets	12	21	–	33	–	13	–	46
Assets	171	32	176	379	–	28	–	407
Current liabilities	(629)	–	–	(629)	(7)	(28)	(25)	(689)
Non-current liabilities	(2,581)	–	(82)	(2,663)	(5)	(47)	–	(2,715)
Liabilities	(3,210)	–	(82)	(3,292)	(12)	(75)	(25)	(3,404)
	(3,039)	32	94	(2,913)	(12)	(47)	(25)	(2,997)

[1] Includes the foreign exchange impact of cross-currency interest rate swaps

20 Financial instruments – continued

Derivative financial instruments

The Group uses various financial instruments to manage its exposure to movements in foreign exchange rates. The Group uses commodity swaps to manage its exposure to movements in the price of commodities (jet fuel and base metals). To hedge the currency risk associated with a borrowing denominated in a foreign currency, the Group has currency derivatives designated as part of fair value or cash flow hedges. The Group uses interest rate swaps and forward rate agreements to manage its exposure to movements in interest rates.

Movements in the fair values of derivative financial assets and liabilities were as follows:

	Foreign exchange instruments		Commodity instruments		Interest rate instruments – hedge accounted [1]		Interest rate instruments - non-hedge accounted		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
At 1 January	(3,039)	(2,871)	32	(11)	57	233	37	(57)	(2,913)	(2,706)
Movements in fair value hedges	–	–	–	–	(74)	(143)	–	–	(74)	(143)
Movements in cash flow hedges	(56)	(13)	–	4	142	(2)	–	–	86	(11)
Movements in other derivative contracts [2]	(1,875)	(681)	106	63	–	–	190	80	(1,579)	(538)
Contracts settled	1,119	538	(76)	(9)	–	(31)	(14)	14	1,029	512
Reclassification to held for sale	–	(12)	–	(15)	–	–	–	–	–	(27)
At 31 December	(3,851)	(3,039)	62	32	125	57	213	37	(3,451)	(2,913)

[1] Includes the foreign exchange impact of cross-currency interest rate swaps
[2] Included in net financing

Financial RRSAs and other financial assets and liabilities

The Group has financial liabilities arising from financial RRSAs. These financial liabilities are valued at each reporting date using the amortised cost method. This involves calculating the present value of the forecast cash flows of the arrangements using the internal rate of return at the inception of the arrangements as the discount rate.

Movements in the carrying values were as follows:

	Financial RRSAs		Other – assets		Other – liabilities	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
At 1 January	(12)	(81)	15	15	(75)	(73)
Exchange adjustments included in OCI	(2)	4	2	–	(4)	4
Additions	(6)	–	11	–	(35)	(9)
Financing charge [1]	–	–	–	–	(4)	(1)
Excluded from underlying profit/(loss):						
Changes in forecast payments [1]	(7)	(7)	–	–	–	–
Cash paid	5	3	(3)	–	8	3
Other	–	–	–	–	9	1
Reclassification to assets held for sale	–	69	–	–	–	–
At 31 December	(22)	(12)	25	15	(101)	(75)

[1] Included in financing

20 Financial instruments – continued

Effect of hedging instruments on the financial position and performance

To manage the risk of changes in the fair values of fixed rate borrowings (the hedged items), the Group has entered into fixed-to-floating interest rate swaps (the hedging instruments), which, for accounting purposes, are designated as fair value hedges. The impact of fair value hedges on the financial position and performance of the Group is as follows:

	Hedged item [1]				Hedging instrument [2]						
	Nominal £m	FV adjustment in the period £m	FV adjustment since inception £m	Carrying amount £m	Nominal £m	Carrying amount asset £m	Carrying amount liability £m	FV movement in the period £m	Hedge ineffect-iveness in the period [3] £m	Weighted average FX rate	Weighted average interest rate
At 31 December 2022											
Sterling	(375)	43	24	(351)	375	–	(24)	(43)	–	1.00	SONIA + 0.89
USD	(658)	(20)	(143)	(801)	658	134	–	18	(2)	1.52	SONIA + 1.47
Euro	(968)	49	52	(916)	968	–	(72)	(51)	(2)	1.14	SONIA + 0.92
At 31 December 2021											
Sterling	(375)	27	(19)	(394)	375	19	–	(27)	–	1.00	SONIA + 0.89
USD	(658)	19	(125)	(781)	658	116	–	(20)	(1)	1.52	SONIA + 1.47
Euro	(968)	91	1	(965)	968	–	(21)	(90)	1	1.14	SONIA + 0.92

[1] Hedged items are included in borrowings in the balance sheet
[2] Hedging instruments are included in other financial assets or liabilities in the balance sheet
[3] Hedge ineffectiveness is included in net financing in the income statement

To manage the foreign exchange rate risk in cash flows on fixed rate non-GBP borrowings (the hedged items), the Group has entered into fixed-to-fixed cross-currency interest rate swaps (the hedging instruments) to hedge the cash flows into GBP, which, for accounting purposes, are designated as cash flow hedges.

During the year to 31 December 2022, the Group entered into deal contingent forwards with a nominal amount of €1,500m to manage the foreign exchange risk in Euro proceeds expected from the disposal of ITP Aero (hedged item). These contracts were designated as the hedging instrument in cash flow hedges with hedge ratio of 1:1. At inception, the existence of an economic relationship between the hedged item and the hedging instrument is verified. Both the spot component and the contingent element were designated as the hedging instrument.

At deal completion, these contracts had a fair value of £(56)m, based on the weighted average foreign exchange rate of 1.1992. £52m was reclassified to loss on disposal in the income statement from hedging reserves (£62m from hedging reserve and £(10)m from cost of hedging reserve). There was ineffectiveness of £4m recognised in net financing during the year. The forward element and basis were excluded from the hedging instrument designation and separately accounted for in the equity reserve for cost of hedging.

The impact of cash flow hedges on the financial position and performance of the Group is as follows:

	Hedged item		Hedging instrument [1]						Hedging reserves		
	Nominal £m	FV movement in the period £m	Nominal £m	Carrying amount asset/ (liability) £m	FV movement in the period £m	Hedge ineffect-iveness in the period £m	Weighted average FX rate	Weighted average interest rate	Amount recognised in OCI £m	Recycled to net financing £m	Closing cash flow hedge reserve £m
At 31 December 2022											
USD	(772)	(104)	772	89	109	5	1.29	5.33	(111)	96	(25)
Euro	(677)	(35)	677	(2)	35	–	1.11	5.45	(27)	28	(9)
At 31 December 2021											
USD	(772)	(35)	772	(20)	35	–	1.29	5.33	(36)	10	(10)
Euro	(677)	32	677	(37)	(32)	(1)	1.11	5.45	39	(51)	(10)

[1] Hedging instruments are included in other financial assets or liabilities in the balance sheet

20 Financial instruments – continued

Risk management policies and hedging activities

The principal financial risks to which the Group is exposed are: foreign currency exchange rate risk; liquidity risk; credit risk; interest rate risk; and commodity price risk. The Board has approved policies for the management of these risks.

Foreign currency exchange rate risk – The Group has significant cash flows (most significantly USD, followed by the euro) denominated in currencies other than the functional currency of the relevant trading entity. To manage its exposures to changes in values of future foreign currency cash flows, so as to maintain relatively stable long-term foreign exchange rates on settled transactions, the Group enters into derivative forward foreign currency transactions.

During the year, the Board approved a revised FX hedging policy reducing the time horizon from 10 years to 5 years. The Group economically hedges its GBP/USD exposure by forecasting highly probable net USD receipts up to five years forward. Hedges are taken out within prescribed maximum and minimum hedge positions set out in the Group FX Policy. Transition of the existing hedge book to the levels stated with the new policy will be completed in the near term. The maximum and minimum policy bands decline gradually over the five-year horizon and are calculated as a percentage of forecast net income. A similar policy is operated for the Group's EUR/USD exposure. For accounting purposes, these derivative contracts are not designated in hedging relationships.

The Group also has exposures to cash flows on EUR and USD denominated fixed rate borrowings. To manage its exposures to changes in values of future foreign currency cash flows, the Group has entered into fixed-to-fixed cross-currency interest rate swaps, which, for accounting purposes, are designated as cash flow hedges. The swaps have similar critical terms to the hedged items, such as the initial exchange amounts, payment dates and maturities. Therefore, there is an economic relationship and the hedge ratio is established as 1:1. Possible sources of ineffectiveness in the cash flow hedge relationship are changes in the credit risk of either party to the interest rate swap. Another possible source of ineffectiveness would be if the notional of the borrowings is less than the notional of the derivative, for example, in the event of a partial repayment of hedged debt prior to its maturity.

The Group regards its interests in overseas subsidiary companies as long-term investments. The Group aims to match its translational exposures by matching the currencies of assets and liabilities.

Liquidity risk – The Group's policy is to hold financial investments and maintain undrawn committed facilities at a level sufficient to ensure that the Group has available funds to meet its medium-term capital and funding obligations and to meet any unforeseen obligations and opportunities. The Group holds cash and short-term investments, which, together with the undrawn committed facilities, enable the Group to manage its liquidity risk.

Credit risk – The Group is exposed to credit risk to the extent of non-payment by either its customers or the counterparties of its financial instruments. The effective monitoring and controlling of credit risk is a key component of the Group's risk management activities. The Group has credit policies covering both trading and financial exposures. Credit risks arising from treasury activities are managed by a central treasury function in accordance with the Group credit policy. The objective of the policy is to diversify and minimise the Group's exposure to credit risk from its treasury activities by ensuring the Group transacts strictly with 'BBB' or higher rated financial institutions based on pre-established limits per financial institution. At the balance sheet date, there were no significant concentrations of credit risk to individual customers or counterparties. The Group's revenue is generated from customers located across multiple geographical locations (see note 2). These customers are typically: airframers and airline operators relating to Civil Aerospace; government defence departments for the UK and US; and multiple smaller entities for Power Systems. Whilst there are a limited number of customers related to Civil Aerospace and Defence, they are spread across various geographical locations. The maximum exposure to credit risk at the balance sheet date is represented by the carrying value of each financial asset, including derivative financial instruments.

Interest rate risk – The Group's interest rate risk is primarily in relation to its fixed rate borrowings (fair value risk), floating rate borrowings and cash and cash equivalents (cash flow risk). Interest rate derivatives are used to manage the overall interest rate profile of the Group. The fixed or floating rate interest rate decision on long-term borrowings is determined for each new agreement at the point it is entered into. The aggregate interest rate position of the Group is reviewed regularly and can be revised at any time in order to react to changes in market conditions or circumstances.

The Group also has exposures to the fair values of non-derivative financial instruments such as EUR, GBP and USD fixed rate borrowings. To manage the risk of changes in these fair values, the Group has entered into fixed-to-floating interest rate swaps and cross-currency interest rate swaps, which, for accounting purposes, are designated as fair value hedges. The swaps have similar critical terms to the hedged items, such as the reference rate, reset dates, notional amounts, payment dates and maturities. Therefore, there is an economic relationship and the hedge ratio is established as 1:1. Possible sources of ineffectiveness in the fair value hedge relationship are changes in the credit risk of either party to the interest rate swap and, for cross-currency interest rate swaps, the cross-currency basis risk as this risk is present in the hedging instrument only. Another possible source of ineffectiveness would be if the notional of the borrowings is less than the notional of the derivative, for example in the event of a partial repayment of hedged debt prior to its maturity.

The Group has exposure to changes in cash flows due to changes in interest rates. To manage this risk the Group has entered into floating-to-fixed interest rate swaps to hedge a proportion of its floating rate exposure to fixed rates. The swaps have similar critical terms to the floating leg of swaps that form part of the fair value hedges, such as the reference rate, reset dates, notional amounts, payment dates and maturities. For accounting purposes, these derivative contracts are generally not designated as hedging instruments.

Commodity price risk – The Group has exposures to the price of jet fuel and base metals arising from business operations. To minimise its cash flow exposures to changes in commodity prices, the Group enters into derivative commodity transactions. The commodity hedging policy is similar to the Group FX policy, in that the Group forecasts highly probable exposures to commodities, and takes out hedges within prescribed maximum and minimum levels as set out in the policy. The maximum and minimum policy bands decline gradually over time. For accounting purposes, these derivative contracts are generally not designated in hedging relationships.

Other price risk – The Group's cash equivalent balances represent investments in money-market instruments, with a term of up to three months. The Group does not consider that these are subject to significant price risk.

20 Financial instruments – continued

Derivative financial instruments

The nominal amounts, analysed by year of expected maturity, and fair values of derivative financial instruments are as follows:

		Expected maturity				Fair value	
	Nominal amount £m	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Assets £m	Liabilities £m
At 31 December 2022							
Foreign exchange contracts:							
Non-hedge accounted	22,844	9,539	4,180	8,898	227	145	(3,996)
Interest rate contracts:							
Fair value hedges	2,001	–	484	1,033	484	135	(97)
Cash flow hedges	1,449	–	–	1,449	–	89	(2)
Non-hedge accounted	2,001	–	484	1,033	484	214	(1)
Commodity contracts:							
Non-hedge accounted	219	97	79	43	–	65	(3)
	28,514	9,636	5,227	12,456	1,195	648	(4,099)
At 31 December 2021							
Foreign exchange contracts:							
Non-hedge accounted	28,767	6,975	8,139	12,471	1,182	171	(3,210)
Interest rate contracts:							
Fair value hedges	2,001	–	–	1,517	484	135	(21)
Cash flow hedges	1,449	–	–	677	772	–	(57)
Non-hedge accounted	2,001	–	–	1,517	484	41	(4)
Commodity contracts:							
Non-hedge accounted	179	85	60	34	–	32	–
	34,397	7,060	8,199	16,216	2,922	379	(3,292)

As described above, all derivative financial instruments are entered into for risk management purposes, although these may not be designated into hedging relationships for accounting purposes.

Currency analysis

Foreign exchange contracts are denominated in the following currencies:

	Nominal amount of currencies purchased forward				
	Sterling £m	USD £m	Euro £m	Other £m	Total £m
At 31 December 2022					
Currencies sold forward:					
Sterling	–	4,321	45	146	4,512
USD	16,246	–	1,578	253	18,077
Euro	30	160	–	40	230
Other	–	8	17	–	25
At 31 December 2021					
Currencies sold forward:					
Sterling	–	5,479	–	250	5,729
USD	19,916	–	2,430	325	22,671
Euro	–	263	–	46	309
Other	2	41	14	1	58

The nominal value of interest rate and commodity contracts are denominated in the following currencies:

	2022 £m	2021 £m
Sterling	2,376	2,376
USD	1,629	1,600
Euro	1,665	1,654

20 Financial instruments – continued

Non-derivative financial instruments are denominated in the following currencies:

	Sterling £m	USD £m	Euro £m	Other £m	Total £m
At 31 December 2022					
Other non-current investments	10	16	10	–	36
Trade receivables and similar items	231	3,270	565	81	4,147
Other non-derivative financial assets	61	666	33	15	775
Other assets	–	24	11	–	35
Short-term investments	–	–	11	–	11
Cash and cash equivalents	398	897	1,155	157	2,607
Assets	700	4,873	1,785	253	7,611
Borrowings	(893)	(1,627)	(1,587)	(1)	(4,108)
Lease liabilities	(181)	(1,401)	(49)	(216)	(1,847)
Financial RRSAs	–	(7)	(15)	–	(22)
Other liabilities	(11)	(90)	–	–	(101)
C Shares	(24)	–	–	–	(24)
Trade payables and similar items	(690)	(4,315)	(675)	(59)	(5,739)
Other non-derivative financial liabilities	(271)	(1,941)	(129)	(44)	(2,385)
Contract liabilities	–	(420)	–	–	(420)
Liabilities	(2,070)	(9,801)	(2,455)	(320)	(14,646)
	(1,370)	(4,928)	(670)	(67)	(7,035)

At 31 December 2021					
Other non-current investments	12	23	1	–	36
Trade receivables and similar items	176	2,776	450	64	3,466
Other non-derivative financial assets	17	640	30	18	705
Other assets	–	28	–	–	28
Short-term investments	–	–	8	–	8
Cash and cash equivalents	700	673	1,135	113	2,621
Assets	905	4,140	1,624	195	6,864
Borrowings	(2,915)	(1,518)	(1,598)	(1)	(6,032)
Lease liabilities	(188)	(1,300)	(48)	(208)	(1,744)
Financial RRSAs	–	–	(12)	–	(12)
Other liabilities	(17)	(58)	–	–	(75)
C Shares	(25)	–	–	–	(25)
Trade payables and similar items [1]	(503)	(3,399)	(444)	(63)	(4,409)
Other non-derivative financial liabilities	(287)	(1,957)	(113)	(46)	(2,403)
Contract liabilities	–	(264)	–	–	(264)
Liabilities	(3,935)	(8,496)	(2,215)	(318)	(14,964)
	(3,030)	(4,356)	(591)	(123)	(8,100)

[1] During the year, trade payables and similar items have been analysed in greater detail and consequently have been represented to include items previously classified as non-financial instruments

20 Financial instruments – continued

Currency exposures

The Group's actual currency exposures on financial instruments after taking account of derivative foreign currency contracts, which are not designated as hedging instruments for accounting purposes are as follows:

Functional currency of Group operations	Sterling £m	USD £m	Euro £m	Other £m	Total £m
At 31 December 2022					
Sterling	–	–	1	4	5
USD	(7)	–	(2)	7	(2)
Euro	(1)	–	–	–	(1)
Other	108	26	86	–	220
At 31 December 2021					
Sterling	–	1	1	(4)	(2)
USD	(8)	–	–	4	(4)
Euro	1	(4)	–	3	–
Other	82	14	51	2	149

Ageing beyond contractual due date of financial assets

	Within terms £m	Up to three months overdue £m	Between three months and one year overdue £m	More than one year overdue £m	Total £m
At 31 December 2022					
Other non-current asset investments	36	–	–	–	36
Trade receivables and similar items	3,646	219	169	113	4,147
Other non-derivative financial assets	755	9	10	1	775
Other assets	35	–	–	–	35
Derivative financial assets	648	–	–	–	648
Short-term investments	11	–	–	–	11
Cash and cash equivalents	2,607	–	–	–	2,607
	7,738	228	179	114	8,259
At 31 December 2021					
Other non-current asset investments	36	–	–	–	36
Trade receivables and similar items	2,749	369	211	137	3,466
Other non-derivative financial assets	699	–	5	1	705
Other assets	28	–	–	–	28
Derivative financial assets	379	–	–	–	379
Short-term investments	8	–	–	–	8
Cash and cash equivalents	2,621	–	–	–	2,621
	6,520	369	216	138	7,243

20 Financial instruments – continued

Contractual maturity analysis of non-derivative financial liabilities

	Gross values				
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Carrying value £m
At 31 December 2022					
Borrowings	(168)	(653)	(3,612)	(510)	(4,108)
Lease liabilities	(435)	(311)	(886)	(734)	(1,847)
Financial RRSAs	(10)	(7)	(1)	(5)	(22)
Other liabilities	(15)	(10)	(30)	(46)	(101)
C Shares	(24)	–	–	–	(24)
Trade payables and similar items	(5,352)	(147)	(107)	(133)	(5,739)
Other non-derivative financial liabilities	(1,367)	(427)	(234)	(357)	(2,385)
Contract liabilities	(420)	–	–	–	(420)
	(7,791)	(1,555)	(4,870)	(1,785)	(14,646)
At 31 December 2021					
Borrowings	(259)	(265)	(4,806)	(1,849)	(6,032)
Lease liabilities	(322)	(261)	(724)	(852)	(1,744)
Financial RRSAs	(6)	(5)	(2)	–	(12)
Other liabilities	(27)	(9)	(24)	(15)	(75)
C Shares	(25)	–	–	–	(25)
Trade payables and similar items [1]	(4,019)	(33)	(131)	(226)	(4,409)
Other non-derivative financial liabilities	(1,812)	(83)	(207)	(301)	(2,403)
Contract liabilities	(264)	–	–	–	(264)
	(6,734)	(656)	(5,894)	(3,243)	(14,964)

[1] During the year trade payables and similar items have been analysed in greater detail and consequently have been represented to include items previously classified as non-financial instruments.

Expected maturity analysis of derivative financial instruments

	Gross values				
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Carrying value £m
At 31 December 2022					
Derivative financial assets:					
Cash inflows	3,002	551	3,179	–	
Cash outflows	(2,907)	(540)	(2,886)	–	
Other net cash flows [1]	131	90	98	7	
	226	101	391	7	648
Derivative financial liabilities:					
Cash inflows	6,658	4,238	8,290	722	
Cash outflows	(8,019)	(5,162)	(10,604)	(745)	
Other net cash flows [1]	(10)	(10)	(4)	–	
	(1,371)	(934)	(2,318)	(23)	(4,099)
At 31 December 2021					
Derivative financial assets:					
Cash inflows	840	1,051	3,145	456	
Cash outflows	(811)	(1,017)	(2,922)	(445)	
Other net cash flows [1]	26	27	43	2	
	55	61	266	13	379
Derivative financial liabilities:					
Cash inflows	6,246	7,198	11,441	1,987	
Cash outflows	(6,917)	(8,022)	(13,200)	(2,314)	
Other net cash flows [1]	(2)	(1)	–	–	
	(673)	(825)	(1,759)	(327)	(3,292)

[1] Derivative financial assets and liabilities that are settled on a net cash basis

20 Financial instruments – continued

Interest rate risk

In respect of income-earning financial assets and interest-bearing financial liabilities, the following table indicates their effective interest rates. The value shown is the carrying amount before taking account of swaps.

	2022			2021		
	Fixed rate £m	Floating rate £m	Total £m	Fixed rate £m	Floating rate £m	Total £m
Short-term investments	–	11	11	–	8	8
Cash and cash equivalents [1]	–	2,607	2,607	–	2,621	2,621
Borrowings	(4,096)	(12)	(4,108)	(4,041)	(1,991)	(6,032)
Lease liabilities	(1,235)	(612)	(1,847)	(1,084)	(660)	(1,744)
	(5,331)	1,994	(3,337)	(5,125)	(22)	(5,147)
Weighted average interest rates						
Borrowings	3.7%	4.7%		3.7%	4.1%	
Lease liabilities [2]	3.9%	6.3%		4.0%	2.0%	

[1] Cash and cash equivalents comprises bank balances and term deposits and earn interest based on short-term floating market interest rates
[2] Interest rates for lease liabilities are considered to be the discount rates at the balance sheet date

None (2021: £8m (including borrowings classified as held for sale)) of the Group's borrowings are subject to the Group meeting certain obligations, including customary financial covenants. There are no rating triggers contained in any of the Group's facilities that could require the Group to accelerate or repay any facility for a given movement in the Group's credit rating.

£111m (2021: £99m) of the Group's lease liabilities include a customary loan-to-value covenant. The Group has several contractual cures available in the event the stipulated loan-to-value ratio is exceeded. Failure by the Group to satisfy its contractual obligations under the covenant gives rights to the lessor to terminate its lease and claim termination amounts for the outstanding lease balance. At 31 December 2022 none (2021: none) of these were in breach.

Sensitivity analysis

Sensitivities at 31 December (all other variables held constant) – impact on profit after taxation and equity	2022 £m	2021 £m
Sterling 10% weaker against the USD	(1,600)	(1,687)
Sterling 10% stronger against the USD	1,309	1,382
Euro 10% weaker against the USD	(46)	(227)
Euro 10% stronger against the USD	38	185
Sterling 10% weaker against the Euro	(17)	(15)
Sterling 10% stronger against the Euro	14	12
Commodity prices 10% lower	(21)	(17)
Commodity prices 10% higher	21	17
Interest rates 50 basis points lower	(65)	(67)
Interest rates 50 basis points higher	64	65

C Shares and payments to shareholders

The Company issues non-cumulative redeemable preference shares (C Shares) as an alternative to paying a cash dividend. C Shares in respect of a year are issued in the following year. Shareholders are able to redeem any number of their C Shares for cash. Any C Shares retained attract a dividend of Bank of England base rate on the 0.1p nominal value of each share, paid on a twice-yearly basis, and have limited voting rights. The Company has the option to compulsorily redeem the C Shares, at any time, if the aggregate number of C Shares in issue is less than 10% of the aggregate number of C Shares issued, or on the acquisition or capital restructuring of the Company.

Movements in issued and fully paid C Shares during the year were as follows:

	2022		2021	
	Millions	Nominal value £m	Millions	Nominal value £m
At 1 January	24,928	25	27,540	28
Redeemed	(1,073)	(1)	(2,612)	(3)
At 31 December	23,855	24	24,928	25

Payments to shareholders represent the value of C Shares to be issued in respect of the results for the year. There have been no issues (2021: no issues) of C Shares declared in respect of the year to 31 December 2022.

21 Provisions for liabilities and charges

	At 31 December 2021 as previously reported £m	On adoption of amendment to IAS 37 £m	At 1 January 2022 £m	Charged to income statement[1] £m	Reversed £m	Utilised £m	Exchange differences £m	At 31 December 2022 £m
Contract losses	845	723	1,568	520	(395)	(106)	5	1,592
Warranty and guarantees	305	–	305	98	(20)	(87)	21	317
Trent 1000 wastage costs	157	–	157	106	–	(84)	–	179
Insurance	52	–	52	15	(20)	(7)	–	40
Employer liability claims	47	–	47	3	(14)	(3)	–	33
Restructuring	21	–	21	–	(10)	(6)	1	6
Customer financing	17	–	17	–	(7)	(10)	–	–
Tax related interest and penalties	14	–	14	3	(2)	–	1	16
Other	124	–	124	47	(18)	(7)	4	150
	1,582	723	2,305	792	(486)	(310)	32	2,333
Current liabilities	475		513					632
Non-current liabilities	1,107		1,792					1,701

[1] The charge to the income statement includes £33m (2021: £32m) as a result of the unwinding of the discounting of provisions previously recognised

Contract losses

Provisions for contract losses are recorded when the direct costs to fulfil a contract are assessed as being greater than the expected revenue. As a result of the amendment to IAS 37 for Onerous Contracts, from 1 January 2022 provisions for contract losses have been measured on a fully costed basis resulting in a £723m increase of the total contract loss provision as at 1 January 2022 (see note 1 for details). During the year, additional contract losses for the Group of £520m have been recognised as a result of changes in future cost estimates, primarily in relation to LTSA shop visits, exchange rate movements and also includes £157m which arose from the sale of ITP Aero resulting in the recognition of additional costs which were previously eliminated on consolidation. Contract losses of £395m previously recognised have been reversed following improvements to cost estimates across various large engine programmes as a result of operational improvements and updates to the discount rate. The Group continues to monitor the contract loss provision for changes in the market and revises the provision as required. The value of the remaining contract loss provisions reflect, in each case, the single most likely outcome. The provisions are expected to be utilised over the term of the customer contracts, typically within 8 to 16 years.

Warranty and guarantees

Provisions for warranty and guarantees primarily relate to products sold and are calculated based on an assessment of the remediation costs related to future claims based on past experience. The provision generally covers a period of up to three years.

Trent 1000 wastage costs

In November 2019, the Group announced the outcome of testing and a thorough technical and financial review of the Trent 1000 TEN programme, following technical issues which were identified in 2019, resulting in a revised timeline and a more conservative estimate of durability for the improved HP turbine blade for the TEN variant. During the year, the Group has utilised £84m of the Trent 1000 wastage costs provision. This represents customer disruption costs and remediation shop visit costs. During the year, additional Trent 1000 costs of £106m relating to wastage have been recognised reflecting delays in certification which have led to revised cost and timing estimates. The value of the remaining provision reflects the single most likely outcome and is expected to be utilised over the period 2023-2024.

Insurance

The Group's captive insurance company retains a portion of the exposures it insures on behalf of the remainder of the Group, which include policies for aviation claims, employer liabilities and healthcare claims. Significant delays can occur in the notification and settlement of claims, and judgement is involved in assessing outstanding liabilities, the ultimate cost and timing of which cannot be known with certainty at the balance sheet date. The insurance provisions are based on information currently available, however, it is inherent in the nature of the business that ultimate liabilities may vary if the frequency or severity of claims differs from estimated. Provisions for outstanding claims are established to cover the outstanding expected liability as well as claims incurred but not yet reported.

Employer liability claims

The provision relating to employer healthcare liability claims is as a result of an historical insolvency of the previous provider and is expected to be utilised over the next 30 years.

Customer financing

Customer financing provisions are made to cover guarantees provided for asset value and/or financing where it is probable that a payment will be made. These are reported on a discounted basis at the Group's borrowing rate to better reflect the time span over which these exposures could arise. The values of aircraft providing security are based on advice from a specialist aircraft appraiser. There were no provisions for Customer financing provisions at 31 December 2022 (2021: £17m). The Group has contingent liabilities for customer financing arrangements where the payment is not probable. See note 25.

21 Provisions for liabilities and charges – continued

Tax related interest and penalties

Provisions for tax related interest and penalties relate to uncertain tax positions in some of the jurisdictions in which the Group operates. Utilisation of the provisions will depend on the timing of resolution of the issues with the relevant tax authorities.

Other

During the year, £47m of other provisions have been charged to the income statement. The items that make up the charge in the year are individually immaterial and predominately relate to claims. At 31 December 2022, other provisions includes those items, as well as others (predominantly supplier claims), where the related legal proceedings are ongoing and utilisation will depend upon their resolution. The value of the provision reflects the single most likely outcome in each case.

22 Post-retirement benefits

The Group operates a number of defined benefit and defined contribution schemes:

- The UK defined benefit scheme is funded, with the assets held in a separate UK trust. The scheme closed to future accrual on 31 December 2020 for all active members and there are no new defined benefit accruals in the UK scheme. As at 31 December 2022 the scheme was estimated to be funded at 109% on the Technical Provisions basis.
- The Group also operates a large trust-based defined contribution scheme for current employees in the UK (RRRST). Pension contributions are generally paid as a salary sacrifice under which employees agree to a reduction in gross contractual pay in return for the Group making additional pension contributions on their behalf. As a result, there is a decrease in wages and salaries and a corresponding increase in pension costs of £46m (2021: £45m) in the year.
- Overseas defined benefit schemes are a mixture of funded and unfunded plans and provide benefits in line with local practice. Additionally, in the US, and to a lesser extent in some other countries, the Group's employment practices include the provision of healthcare and life insurance benefits for retired employees. These healthcare schemes are unfunded.

The valuations of the defined benefit schemes are based on the results of the most recent funding valuation, where relevant, updated by the scheme actuaries to 31 December 2022.

Changes to the defined benefit scheme

As at 31 December 2022, a constructive obligation has been recognised for the extension of the Bridging Pension Option (BPO) to other deferred members in RRUKPF. As a result, a past service credit of £6m has been recognised within non-underlying operating profit.

The Rolls-Royce North America salaried plan was closed to future accruals in 2021. On 1 December 2022, the remaining assets and liabilities were transferred to Legal and General America Group as a bulk annuity purchase and were derecognised from the balance sheet. This resulted in a settlement loss of £7m.

During the year, Power Systems replaced a number of their existing defined benefit schemes with a new company pension scheme to offer payment options at time of retirement. The new system, which is similar in structure to a defined contribution scheme with a guarantee from the Company in accordance with German legislation, significantly reduces interest risks and longevity risks for the employer for future commitments. Invested assets for the scheme will be managed by Swiss Life. A past service credit of £23m has been recognised within non-underlying operating profit.

22 Post-retirement benefits – continued

Amounts recognised in the income statement

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Defined benefit schemes:						
Current service cost and administrative expenses	8	44	52	10	61	71
Past-service credit and settlement loss	(6)	(19)	(25)	(15)	(33)	(48)
	2	25	27	(5)	28	23
Defined contribution schemes	154	87	241	146	81	227
Operating cost	156	112	268	141	109	250
Net financing (credit)/charge in respect of defined benefit schemes	(21)	23	2	(16)	19	3
Total income statement charge	135	135	270	125	128	253

The operating cost is charged as follows:

	Defined benefit		Defined contribution		Total	
	2022 £m	2021 £m	2022 £m	2021 £m	2022 £m	2021 £m
Cost of sales	37	50	168	158	205	208
Commercial and administrative costs	(17)	(38)	38	32	21	(6)
Research and development costs	7	11	33	35	40	46
	27	23	239	225	266	248
Discontinued operations	–	–	2	2	2	2
	27	23	241	227	268	250

Net financing comprises:

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Financing on scheme obligations	149	46	195	137	41	178
Financing on scheme assets	(170)	(23)	(193)	(153)	(22)	(175)
Net financing (income)/charge in respect of defined benefit schemes	(21)	23	2	(16)	19	3
Financing income on scheme surpluses	(21)	(3)	(24)	(16)	(1)	(17)
Financing cost on scheme deficits	–	26	26	–	20	20

Amounts recognised in OCI in respect of defined benefit schemes

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Actuarial gains and losses arising from:						
Demographic assumptions [1]	19	–	19	(101)	(2)	(103)
Financial assumptions [2]	3,423	602	4,025	416	159	575
Experience adjustments [3]	(235)	(7)	(242)	(88)	12	(76)
Return on scheme assets excluding financing income [2]	(3,751)	(207)	(3,958)	(112)	(30)	(142)
	(544)	388	(156)	115	139	254

[1] For the UK Scheme, this reflects latest available CMI mortality projections and an update of the post-retirement mortality assumptions based on an analysis prepared for the 31 March 2020 funding valuation
[2] Actuarial gains and losses arising from financial assumptions arise primarily due to changes in interest rates and inflation
[3] This reflects realised inflation being higher than expected in the period, resulting in increases in actual pension increases and deferred pension expectations

22 Post-retirement benefits – continued

Amounts recognised in the balance sheet in respect of defined benefit schemes

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Present value of funded obligations	(4,621)	(944)	(5,565)	(8,010)	(863)	(8,873)
Fair value of scheme assets	5,215	493	5,708	9,128	861	9,989
Net asset/(liability) on funded schemes	594	(451)	143	1,118	(2)	1,116
Present value of unfunded obligations	–	(563)	(563)	–	(1,341)	(1,341)
Net asset/(liability) recognised in the balance sheet	594	(1,014)	(420)	1,118	(1,343)	(225)
Post-retirement scheme surpluses [1]	594	19	613	1,118	30	1,148
Post-retirement scheme deficits	–	(1,033)	(1,033)	–	(1,373)	(1,373)

[1] The surplus in the UK scheme is recognised as on an ultimate wind-up when there are no longer any remaining members, any surplus would be returned to the Group, which has the power to prevent the surplus being used for other purposes in advance of this event

Overseas schemes are located in the following countries:

	2022			2021		
	Assets £m	Obligations £m	Net £m	Assets £m	Obligations £m	Net £m
Canada	187	(226)	(39)	245	(275)	(30)
Germany	10	(638)	(628)	2	(883)	(881)
US pension schemes	296	(308)	(12)	614	(643)	(29)
US healthcare schemes	–	(333)	(333)	–	(400)	(400)
Other	–	(2)	(2)	–	(3)	(3)
Net asset/(liability) recognised in the balance sheet	493	(1,507)	(1,014)	861	(2,204)	(1,343)

Defined benefit schemes

Assumptions

Significant actuarial assumptions for UK schemes at the balance sheet date were as follows:

		2022	2021
Discount rate		4.80%	1.90%
Inflation assumption (RPI)		3.50%	3.60%
Inflation assumption (CPI)		2.95%	3.05%
Transfer assumption (employed deferred/deferred)		50%/40%	50%/40%
Bridging Pension Option assumption		30%	25%
Life expectancy from age 65:	current male pensioner	21.9 years	21.8 years
	future male pensioner currently aged 45	23.2 years	23.2 years
	current female pensioner	23.7 years	23.6 years
	future female pensioner currently aged 45	25.5 years	25.4 years

Discount rates are determined by reference to the market yields on AA rated corporate bonds. The rate is determined by using the profile of forecast benefit payments to derive a weighted average discount rate from the yield curve.

The inflation assumption is determined by the market-implied assumption based on the yields on long-term index-linked government securities.

The mortality assumptions adopted for the UK pension schemes are derived from the SAPS S3 'All' actuarial tables, with future improvements in line with the CMI 2021 core projections updated to reflect use of an 'A' parameter of 0.25% for future improvements and long-term improvements of 1.25%. Where appropriate, these are adjusted to take account of the scheme's actual experience.

The assumption for transfers and the BPO is based on actual experience and actuarial advice.

Other assumptions have been set on advice from the actuary, having regard to the latest trends in scheme experience and the assumptions used in the most recent funding valuation. The rate of increase of pensions in payment is based on the rules of the scheme, combined with the inflation assumption where the increase is capped.

22 Post-retirement benefits – continued

Assumptions for overseas schemes are less significant and are based on advice from local actuaries. The principal assumptions are:

	2022	2021
Discount rate	4.70%	2.20%
Inflation assumption	2.30%	2.10%
Long-term healthcare cost trend rate	4.75%	4.75%
Male life expectancy from age 65: current pensioner	20.5 years	20.7 years
future pensioner currently aged 45	22.4 years	22.5 years

Changes in present value of defined benefit obligations

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	(8,010)	(2,204)	(10,214)	(8,879)	(2,463)	(11,342)
Exchange differences	–	(165)	(165)	–	49	49
Current service cost	(4)	(43)	(47)	(4)	(60)	(64)
Past-service cost	6	24	30	15	33	48
Finance cost	(149)	(49)	(198)	(137)	(41)	(178)
Contributions by employees	–	(4)	(4)	–	(2)	(2)
Benefits paid out	329	102	431	768	101	869
Disposal of businesses	–	–	–	–	12	12
Actuarial gains	3,207	599	3,806	227	169	396
Transfers	–	(2)	(2)	–	(2)	(2)
Settlement	–	235	235	–	–	–
At 31 December	(4,621)	(1,507)	(6,128)	(8,010)	(2,204)	(10,214)
Funded schemes	(4,621)	(944)	(5,565)	(8,010)	(863)	(8,873)
Unfunded schemes	–	(563)	(563)	–	(1,341)	(1,341)
The defined benefit obligations are in respect of:						
Active plan participants [1]	(1,681)	(693)	(2,374)	(3,451)	(1,193)	(4,644)
Deferred plan participants	(1,172)	(93)	(1,265)	(2,258)	(176)	(2,434)
Pensioners	(1,768)	(721)	(2,489)	(2,301)	(835)	(3,136)
Weighted average duration of obligations (years)	17	13	16	22	15	21

[1] Although the UK scheme closed to future accrual on 31 December 2020, members who became deferred as a result of the closure and remain employed by the Group retain some additional benefits compared to other deferred members. The obligations for these members are shown as active plan participants

Changes in fair value of scheme assets

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	9,128	861	9,989	9,762	894	10,656
Exchange differences	–	77	77	–	12	12
Administrative expenses	(4)	(1)	(5)	(6)	(1)	(7)
Financing	170	23	193	153	22	175
Return on plan assets excluding financing	(3,751)	(207)	(3,958)	(112)	(30)	(142)
Contributions by employer	1	80	81	99	63	162
Contributions by employees	–	4	4	–	2	2
Benefits paid out	(329)	(102)	(431)	(768)	(101)	(869)
Settlement	–	(242)	(242)	–	–	–
At 31 December	5,215	493	5,708	9,128	861	9,989
Total return on scheme assets	(3,581)	(184)	(3,765)	41	(8)	33

22 Post-retirement benefits – continued

Fair value of scheme assets at 31 December

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Sovereign debt	3,574	120	3,694	5,756	217	5,973
Corporate debt instruments	1,492	257	1,749	3,122	389	3,511
Interest rate swaps	196	–	196	54	–	54
Inflation swaps	212	–	212	106	–	106
Cash and similar instruments [1]	(1,066)	–	(1,066)	(811)	144	(667)
Liability driven investment (LDI) portfolios [2]	4,408	377	4,785	8,227	750	8,977
Listed equities	–	78	78	–	101	101
Unlisted equities	40	–	40	54	–	54
Synthetic equities [3]	(8)	–	(8)	43	4	47
Sovereign debt	–	–	–	–	4	4
Corporate debt instruments	772	–	772	802	–	802
Cash	–	5	5	–	2	2
Other	3	33	36	2	–	2
At 31 December	5,215	493	5,708	9,128	861	9,989

[1] UK cash and similar instruments include repurchase agreements on UK Government bonds amounting to £(1,221)m (2021: £(1,087)m). The latest maturity date for these short-term borrowings is April 2024

[2] A portfolio of gilt and swap contracts, backed by investment-grade credit instruments and diversified liquidity funds, that is designed to hedge the majority of the interest rate and inflation risks associated with the schemes' obligations

[3] Portfolios of swap contracts designed to provide investment returns in line with global equity markets. The maximum exposure (notional value and accrued returns) on the portfolios was £344m (2021: £550m)

The investment strategy for the UK scheme is controlled by the Trustee in consultation with the Group. The scheme assets do not directly include any of the Group's own financial instruments, nor any property occupied by, or other assets used by, the Group. At 31 December 2022, there was no indirect holding of the Group's financial instruments (2021: none).

The liquidity of the UK scheme was not significantly impacted by the rapid rise in UK Government bond yields in the second half of 2022. The UK scheme (and its predecessor schemes) benefited from prudent cash funding from the Group in previous financial years coupled with long-term liability hedging programmes. These factors have resulted in the scheme being relatively well funded and consequently enabled it to keep leverage relatively low. Throughout 2022, the UK scheme maintained adequate levels of liquidity and eligible collateral to service its leveraged positions.

Future contributions

The Group expects to contribute approximately £70m to its overseas defined benefit schemes in 2023 (2022: £66m).

In the UK, any cash funding of RRUKPF is based on a statutory triennial funding valuation process. The Group and the Trustee negotiate and agree the actuarial assumptions used to value the liabilities (Technical Provisions); assumptions which may differ from those used for accounting set out above. The assumptions used to value Technical Provisions must be prudent rather than a best estimate of the liability. Most notably, the Technical Provision discount rate is currently based upon UK Government yields plus a margin (0.5% at the 31 March 2020 valuation) rather than being based on yields of AA corporate bonds. Once each valuation is signed, a Schedule of Contributions (SoC) must be agreed which sets out the cash contributions to be paid. The most recent valuation, as at 31 March 2020, agreed by the Trustee in June 2021, showed that RRUKPF was estimated to be 105% funded on the Technical Provisions basis (estimated to be 109% at 31 December 2022). All cash due has been paid in full and the current SoC does not require any cash contributions to be made by the Group. The current SoC does include an agreement for contributions between 2024 to 2027 (capped at £145m in total) if the Technical Provisions funding position is below 107% at 31 March 2023.

22 Post-retirement benefits – continued

Sensitivities

The calculations of the defined benefit obligations are sensitive to the assumptions set out above. The following table summarises how the estimated impact of a change in a significant assumption would affect the UK defined benefit obligation at 31 December 2022, while holding all other assumptions constant. This sensitivity analysis may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

For the most significant funded schemes, the investment strategies hedge the risks from interest rates and inflation measured on a proxy solvency basis.

For the UK scheme, the interest rate and inflation hedging is currently based on UK Government bond yields without any adjustment for any credit spread. The sensitivity analysis set out below have been determined based on a method that estimates the impact on the defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

		2022 £m	2021 £m
Reduction in the discount rate of 0.25% [1]	Obligation	**(205)**	(460)
	Plan assets (LDI portfolio)	**235**	484
Increase in inflation of 0.25% [1]	Obligation	**(70)**	(210)
	Plan assets (LDI portfolio)	**91**	147
Increase of 1% in transfer value assumption	Obligations	**(30)**	(55)
Increase of 5% of transfers instead of BPO	Obligations	**(5)**	(30)
One year increase in life expectancy	Obligations	**(165)**	(365)

[1] The differences between the sensitivities on obligations and plan assets arise largely due to differences in the methods used to value the obligations for accounting purposes and the adopted proxy solvency basis

23 Share capital

	Non-equity		Equity	
	Special Share of £1	Nominal value £m	Ordinary shares of 20p each Millions	Nominal value £m
Issued and fully paid				
At 1 January 2021	1	–	8,368	1,674
At 31 December 2021	1	–	8,368	1,674
At 31 December 2022	**1**	**–**	**8,368**	**1,674**

The rights attaching to each class of share are set out on page 207.

In accordance with IAS 32 *Financial Instruments: Presentation*, the Company's non-cumulative redeemable preference shares (C Shares) are classified as financial liabilities. Accordingly, movements in C Shares are included in note 20.

24 Share-based payments

Effect of share-based payment transactions on the Group's results and financial position

	2022 £m	2021 £m
Total expense recognised for equity-settled share-based payments transactions	46	28
Total cost recognised for cash-settled share-based payments transactions	1	–
Share-based payments recognised in the consolidated income statement	47	28
Liability for cash-settled share-based payment transactions	1	–

A description of the share-based payment plans is included in the Directors' Remuneration Report on pages 77 to 95.

Movements in the Group's share-based payment plans during the year

	ShareSave		LTIP	DSBP
	Number Millions	Weighted average exercise price Pence	Number Millions	Number Millions
Outstanding at 1 January 2021	49.6	239	67.6	1.4
Granted	56.8	97	33.8	0.1
Forfeited	(31.3)	239	(14.3)	(0.1)
Exercised	–	–	(10.1)	(0.6)
Outstanding at 31 December 2021	75.1	132	77.0	0.8
Granted	0.1	104	47.2	12.3
Forfeited	(9.6)	161	(13.4)	(0.2)
Exercised	–	–	(17.8)	(0.7)
Outstanding at 31 December 2022	65.6	127	93.0	12.2
Exercisable at 31 December 2022	–	–	–	–
Exercisable at 31 December 2021	–	–	–	–

The weighted average share price at the date share options were exercised was 95p (2021: 119p). The closing price at 31 December 2022 was 93p (2021: 123p).

The weighted average remaining contractual life for the share options as at 31 December 2022 was two years (2021: two years) and the range of exercise prices for the share options as at 31 December 2022 was 97p to 261p.

Fair values of share-based payment plans

The weighted average fair value per share of equity-settled share-based payment plans granted during the year, estimated at the date of grant, are as follows:

	2022	2021
LTIP	90p	104p
ShareSave – three year grant	n/a	67p
DSBP	91p	105p

Long-term incentive plans (LTIP)

The fair value of shares awarded is calculated using a pricing model that takes account of the non-entitlement to dividends (or equivalent) during the vesting period and the market-based performance condition based on expectations about volatility and the correlation of share price returns in the group of FTSE 100 companies and which incorporates into the valuation the interdependency between share price performance and TSR vesting. This adjustment decreases the fair value of the award relative to the share price at the date of grant.

ShareSave

The fair value of the options granted is calculated using a pricing model that assumes that participants will exercise their options at the beginning of the six-month window if the share price is greater than the exercise price. Otherwise it assumes that options are held until the expiration of their contractual term. This results in an expected life that falls somewhere between the start and end of the exercise window.

Deferred Share Bonus Plan (DSBP)

The fair value of shares awarded under DSBP is calculated as the share price on the date of the award, excluding expected dividends (or equivalent).

25 Contingent liabilities

In January 2017, after full cooperation, the Company concluded deferred prosecution agreements (DPA) with the SFO and the US Department of Justice (DoJ) and a leniency agreement with the MPF, the Brazilian federal prosecutors. The terms of both DPAs have now expired. The Company continues to co-operate with the Controller General, Brazil (CGU) under the terms of a two-year leniency agreement signed in October 2021 relating to the same historical matters. Certain authorities are investigating members of the Group for matters relating to misconduct in relation to historical matters. The Group is responding appropriately. Action may be taken by further authorities against the Company or individuals. In addition, the Group could still be affected by actions from other parties, including customers, customers' financiers and the Company's current and former investors, including certain potential claims in respect of the Group's historical ethics and compliance disclosures which have been notified to the Company. The Directors are not currently aware of any matters that are likely to lead to a material financial loss over and above the penalties imposed to date, but cannot anticipate all the possible actions that may be taken or their potential consequences.

Contingent liabilities exist in respect of guarantees provided by the Group in the ordinary course of business for product delivery, commitments made for future service demand in respect of maintenance, repair and overhaul, and performance and reliability. The Group has, in the normal course of business, entered into arrangements in respect of export finance, performance bonds, countertrade obligations and minor miscellaneous items. Various Group undertakings are parties to legal actions and claims (including with tax authorities) which arise in the ordinary course of business, some of which are for substantial amounts. As a consequence of the insolvency of an insurer as previously reported, the Group is no longer fully insured against known and potential claims from employees who worked for certain of the Group's UK based businesses for a period prior to the acquisition of those businesses by the Group.

In connection with the sale of its products, the Group will, on some occasions, provide financing support for its customers, generally in respect of civil aircraft. The Group's commitments relating to these financing arrangements are spread over many years, relate to a number of customers and a broad product portfolio and are generally secured on the asset subject to the financing. These include commitments of $1.2bn (2021: $1.7bn) (on a discounted basis) to provide facilities to enable customers to purchase aircraft (of which approximately $0.9bn could be called during 2023). These facilities may only be used if the customer is unable to obtain financing elsewhere and are priced at a premium to the market rate. Significant events impacting the international aircraft financing market, the failure by customers to meet their obligations under such financing agreements, or inadequate provisions for customer financing liabilities may adversely affect the Group's financial position.

The Group has responded appropriately to the Russia-Ukraine conflict to comply with international sanctions and export control regime, and also to implement our business decision to exit from Russia. The Group could be subject to action by impacted customers and other contract parties.

While the outcome of the above matters cannot precisely be foreseen, the Directors do not expect any of these arrangements, legal actions or claims, after allowing for provisions already made, to result in significant loss to the Group.

26 Related party transactions

	2022 £m	2021 £m
Sales of goods and services [1]	5,074	3,548
Purchases of goods and services [1]	(4,915)	(3,677)
Lease payments to joint ventures and associates	(163)	(225)
Guarantees of joint arrangements' and associates' borrowings	3	1
Guarantees of non-wholly owned subsidiaries' borrowings	3	3
Dividends received from joint ventures and associates	73	27
Other income received from joint ventures and associates	2	3

[1] Sales of goods and services to related parties and purchases of goods and services from related parties, including joint ventures and associates, are included at the average exchange rate, consistent with the statutory income statement

Included in sales of goods and services to related parties are sales of spare engines amounting to £19m (2021: £157m). Profit recognised in the year on such sales amounted to £50m (2021: £47m), including profit on current year sales and recognition of profit deferred on similar sales in previous years. Cash receipts relating to the sale of spare engines amounted to £40m (2021: £181m).

The aggregated balances with joint ventures are shown in notes 14 and 19. Transactions with Group pension schemes are shown in note 22.

In the course of normal operations, related party transactions entered into by the Group have been contracted on an arm's-length basis.

Key management personnel are deemed to be the Directors (pages 62 to 63) and the members of the Executive Team (described on page 59). Remuneration for key management personnel is shown below:

	2022 £m	2021 £m
Salaries and short-term benefits	18	20
Post-retirement schemes	–	–
Share-based payments	10	4
	28	24

26 Related party transactions – continued

More detailed information regarding the Directors' remuneration, shareholdings, pension entitlements, share options and other long-term incentive plans is shown in the Directors' Remuneration Report on pages 77 to 95. The charge for share-based payments above is based on when the award is charged to the income statement in accordance with IFRS 2 *Share-based Payment*, rather than when the shares vest, which is the basis used in the Directors' Remuneration Report.

27 Disposals, held for sale and discontinued operations

Disposals

On 13 September 2021, the Group signed an agreement with Equitix Investment Management Limited to dispose its 23.1% shareholding in Airtanker Holdings Ltd for a cash consideration of £189m. In accordance with IFRS 5, the Group had classified £47m of the assets as held for sale at 31 December 2021. The sale completed on 9 February 2022 for a value of £189m. On disposal, the Group has recycled the Group's share of cash flow hedge reserve through the income statement during the year.

On 27 September 2021, the Group signed an agreement for the sale of ITP Aero to Bain Capital for £1.3bn. In accordance with IFRS 5, at 31 December 2021, the Group classified the net assets of the ITP Aero disposal group of £1.2bn as held for sale. The sale completed on 15 September 2022 for a value of £1.3bn. On disposal, the Group recycled the Group's share of hedging reserves and the cumulative currency translation reserve through the income statement. In addition, as part of the disposal, costs have been recognised in loss on disposal for continuing obligations (£157m), in particular where previous amounts were eliminated on consolidation in the Group's results. ITP Aero was acquired in 2017, resulting in a gain on bargain purchase of £303m recognised in 2018. The consideration for the acquisition was settled by issue of shares and the premium on the share issues, of £650m, recognised as merger reserve. As a result of the sale of ITP Aero for qualifying consideration, the merger reserve arising has been realised in accumulated losses.

	ITP Aero – Total subsidiaries £m	Airtanker £m	Total £m
Proceeds			
Cash consideration at prevailing exchange rate	1,387	189	1,576
Impact of deal contingent forward	(52)	–	(52)
Cash consideration at effective hedged rate	1,335	189	1,524
Cash and cash equivalents disposed	(60)	–	(60)
Net cash consideration	1,275	189	1,464
Intangible assets	912	–	912
Property, plant and equipment	338	–	338
Right-of-use assets	13	–	13
Investments	1	34	35
Deferred tax assets	57	–	57
Inventory	283	–	283
Trade receivables and other assets [1]	768	14	782
Borrowings and lease liabilities	(53)	–	(53)
Trade payables and other liabilities [1]	(1,148)	–	(1,148)
Provisions for liabilities and charges	(22)	–	(22)
Less: Net assets disposed	1,149	48	1,197
Profit on disposal before disposal costs and accounting adjustments	126	141	267
Disposal costs	(33)	(3)	(36)
De-recognition of NCI	(1)	–	(1)
Cumulative currency translation loss	(65)	–	(65)
Cumulative hedging reserves loss	(49)	(62)	(111)
Impact of disposal on consolidated position of onerous contracts [2]	(157)	–	(157)
(Loss)/profit before taxation	(179)	76	(103)
Tax on disposal	31	–	31
(Loss)/profit on disposal of business after taxation	(148)	76	(72)

[1] At 15 September 2022, trading balances that ITP Aero held with other group undertakings, that were previously eliminated on consolidation, have been reclassified as external balances and are included in the net assets disposed

[2] Reflects increased future costs in Civil Aerospace in respect of amounts charged by ITP Aero that were previously eliminated on consolidation. These future costs relate to onerous contract provisions and have therefore crystallised on disposal as a result of the ongoing trading with ITP Aero no longer being classified as intra-group

27 Disposals, held for sale and discontinued operations – continued

Reconciliation of profit on disposal of businesses in continuing operations to the income statement:

	Total £m
Profit before taxation on disposal (see above)	76
Adjustment to consideration on disposals completed in prior periods	5
Profit on disposal of businesses per income statement	81

Reconciliation of cash flow on disposal of businesses to the cash flow statement:

	Total £m
Proceeds on disposal (see above)	1,464
Disposal costs paid	(45)
Cash outflow on disposals completed in prior periods	(21)
Cash flow on disposal of businesses per cash flow statement	1,398

Discontinued operations

ITP Aero represented a separate major line of business and was classified as a disposal group held for sale up to the date of disposal. Therefore, in line with IFRS 5, the financial results of ITP Aero up to disposal have been classified as a discontinued operation.

The financial performance and cash flow information presented reflects the operations for the year that have been classified as discontinued operations.

	2022 £m	2021 £m
Revenue	275	365
Operating profit/(loss) [1]	86	(4)
Profit before taxation [1]	78	2
Income tax (charge)/credit [1]	(10)	34
Profit for the year from discontinued operations on ordinary activities	68	36
Costs of disposal on discontinued operations [2]	–	(39)
Loss on disposal of discontinued operations (see above)	(148)	–
Loss for the year from discontinued operations	(80)	(3)
Net cash inflow from operating activities [2]	85	12
Net cash outflow from investing activities [2]	(67)	(32)
Net cash outflow from financing activities	(25)	(25)
Exchange gain	–	4
Net change in cash and cash equivalents	(7)	(41)

[1] Profit/(loss) from discontinued operations on ordinary activities is presented net of intercompany trading eliminations and related consolidation adjustments

[2] Cash flows from investing activities include £42m (2021: cash flows from operating activities include £39m) costs of disposal paid during the year to 31 December 2022 that are not a movement in the cash balance of the disposal group as they were borne centrally

28 Derivation of summary funds flow statement

	2022					2021
	Cash flow £m	Impact of hedge book £m	Impact of acquisition accounting £m	Impact of other non-underlying items £m	Funds flow £m	Funds flow £m
Operating profit	837	(264)	58	21	652	414
Operating profit/(loss) from discontinued operations	86	–	–	–	86	(43)
Depreciation, amortisation and impairment	1,076	–	(58)	(65)	953	971
Movement in provisions	(197)	91	–	83	(23)	(136)
Movement in Civil LTSA balance	1,158	(366)	–	–	792	66
Loss on disposal of property, plant and equipment	18	–	–	–	18	9
Joint venture trading	25	–	–	–	25	(18)
Interest received	36	–	–	–	36	9
Contributions to defined benefit schemes in excess of underlying operating profit charge	(54)	–	–	22	(32)	(92)
Share-based payments	47	–	–	–	47	28
Other	–	(53)	–	–	(53)	(26)
Cash flow before working capital and taxation	3,032	(592)	–	61	2,501	1,182
Increase in inventories	(887)	–	–	–	(887)	(169)
Movement in trade receivables/payables and other assets/liabilities	(386)	(348)	–	(19)	(753)	(469)
Movement in contract assets/liabilities (excluding Civil LTSA)	595	297	–	–	892	(289)
Revaluation of trading assets (excluding exceptional items) [1]	(407)	(114)	–	–	(521)	32
Realised derivatives in financing [1]	737	–	–	–	737	85
Cash flows on other financial assets and liabilities held for operating purposes	(660)	737	–	–	77	(85)
Income tax	(174)	–	–	–	(174)	(185)
Cash from operating activities	1,850	(20)	–	42	1,872	102
Capital element of lease payments	(218)	20	–	–	(198)	(374)
Capital expenditure and investment	(512)	–	–	36	(476)	(426)
Interest paid	(352)	–	–	–	(352)	(331)
Settlement of excess derivatives	(326)	–	–	–	(326)	(452)
Other (M&A, restructuring and financial penalties paid)	49	–	–	(78)	(29)	39
Free cash flow	491	–	–	–	491	(1,442)
– of which is continuing operations	*505*				*505*	*(1,485)*

[1] Included in working capital

The comparative information to 31 December 2021 has been presented in a different format to align to the current year presentation. In some instances, the groupings of items may have changed. All comparative figures remain unchanged versus those reported in the 2021 Annual Report.

Free cash flow is a measure of financial performance of the business' cash flow to see what is available for distribution among those stakeholders funding the business (including debt holders and shareholders). Free cash flow is calculated as trading cash flow less recurring tax and post-employment benefit expenses. It excludes payments made to shareholders, amounts spent (or received) on business acquisitions or disposals, financial penalties paid and foreign exchange changes on net funds. The Board considers that free cash flow reflects cash generated from the Group's underlying trading.

Cash flow from operating activities is determined to be the nearest statutory measure to free cash flow. The reconciliation between free cash flow and cash flow from operating activities can be found on page 205.

Company balance sheet

At 31 December 2022

	Notes	2022 £m	2021 £m
ASSETS			
Investments – subsidiary undertakings	2	**14,762**	14,716
Trade receivables and other assets	3	**–**	1
Current assets		**–**	1
TOTAL ASSETS		**14,762**	14,717
LIABILITIES			
Trade payables and other liabilities	4	**(335)**	(335)
Other financial liabilities	5	**(24)**	(25)
Current liabilities		**(359)**	(360)
NET ASSETS	7	**14,403**	14,357
EQUITY			
Called-up share capital	6	**1,674**	1,674
Share premium		**1,012**	1,012
Merger reserve		**6,962**	6,962
Capital redemption reserve		**2,748**	2,747
Other reserve		**349**	303
Retained earnings		**1,658**	1,659
TOTAL EQUITY		**14,403**	14,357

The Company has elected to take the exemption under section 408 of the Companies Act 2006 from presenting the parent company income statement. The result for the Company for the year was nil (2021: nil).

The Financial Statements on pages 173 to 178 were approved by the Board on 23 February 2023 and signed on its behalf by:

Tufan Erginbilgic Chief Executive
Panos Kakoullis Chief Financial Officer

Company's registered number: 7524813

Company statement of changes in equity

For the year ended 31 December 2022

	Attributable to ordinary shareholders						
	Share capital £m	Share premium £m	Merger reserve [1] £m	Capital redemption reserve £m	Other reserve [2] £m	Retained earnings [3,4] £m	Total equity £m
At 1 January 2021	1,674	1,012	6,962	2,744	275	1,662	14,329
Result for the year	–	–	–	–	–	–	–
Redemption of C Shares	–	–	–	3	–	(3)	–
Share-based payments – direct to equity	–	–	–	–	28	–	28
At 1 January 2022	**1,674**	**1,012**	**6,962**	**2,747**	**303**	**1,659**	**14,357**
Result for the year	–	–	–	–	–	–	–
Redemption of C Shares	–	–	–	1	–	(1)	–
Share-based payments – direct to equity	–	–	–	–	46	–	46
At 31 December 2022	**1,674**	**1,012**	**6,962**	**2,748**	**349**	**1,658**	**14,403**

[1] The Company's merger reserve was created as a result of a High Court approved scheme of arrangement in 2011, when the Company became the holding company for the Rolls-Royce Group. The merger reserve that was created as a result of the transactions in 2018 and 2019 on the acquisition of ITP Aero has not been realised in the Company financial statements as this relates to the Company's investment in Rolls-Royce plc. The merger reserve in Rolls-Royce plc has been realised at 31 December 2022

[2] Other reserve represents the value of the share-based payments in respect of employees of subsidiary undertakings for which payment has not been received

[3] The reserves, which are distributable to the Company's equity shareholders, are determined with reference to the Companies Act 2006 and requires judgement in determining the amount available for distribution, subject to the restrictions explained in note 17 of the Consolidated Financial Statements. Further guidance is given in the Institute of Chartered Accountants in England and Wales technical release 02/17BL in relation to what profits can be treated as distributable. At 31 December 2022, all the Company's retained earnings are distributable, however, the available amount may be different at the point any future distributions are made

[4] At 31 December 2022, 11,402,796 ordinary shares with a net book value of £27m (2021: 29,405,191 ordinary shares with a net book value of £65m) were held for the purpose of share-based payment plans and included in accumulated losses. During the year, 18,488,558 ordinary shares with a net book value of £39m (2021: 10,667,095 ordinary shares with a net book value of £24m) vested in share-based payment plans. During the year, the Company acquired none (2021: none) of its ordinary shares via reinvestment of dividends received on its own shares and purchased 486,163 (2021: none) of its ordinary shares through purchases on the London Stock Exchange

1 Accounting policies

Basis of accounting

Rolls-Royce Holdings plc (the Company) is a public company limited by shares incorporated and domiciled in England in the United Kingdom. These Financial Statements have been prepared in accordance with Financial Reporting Standard 101 *Reduced Disclosure Framework* on the historical cost basis.

These financial statements have been prepared on a going concern basis. Further details are given in the Going Concern Statement on page 48. After due consideration, the Directors consider that the Group has sufficient liquidity headroom to continue in operational existence for a period of at least 18 months from the date of this report and there are no material uncertainties that may cast doubt on the Company's going concern status, accordingly they are satisfied that it is appropriate to adopt the going concern basis of accounting in preparing the Company Financial Statements.

In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the UK (UK-adopted international accounting standards), but makes amendments where necessary in order to comply with the Companies Act 2006 and to take advantage of FRS 101 disclosure exemptions:

- a cash flow statement and related notes;
- comparative period reconciliation for investments and financial liabilities;
- comparative period reconciliation for share capital;
- the effects of new, but not yet effective accounting standards; and
- the requirements of IAS 24 *Related Party Transactions* and has, therefore, not disclosed transactions between the Company and its wholly-owned subsidiaries.

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these Financial Statements.

There were no changes to accounting standards that had a material impact on these Financial Statements.

The Company's Financial Statements are presented in sterling, which is the Company's functional currency.

As permitted by section 408 of the Companies Act 2006, a separate income statement for the Company has not been included in these Financial Statements. As permitted by the audit fee disclosure regulations, disclosure of non-audit fees information is not included in respect of the Company.

Key areas of judgement and sources of estimation uncertainty

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires the Directors to exercise their judgement in the process of applying the accounting policies. The Directors have not identified any critical estimates, apart from the carrying value of investments in subsidiary undertakings, where there is a significant risk of material change in the next 12 months at 31 December 2022.

Key source of estimation uncertainty – carrying value of investments in subsidiary undertakings

The carrying value of the investment in subsidiary undertakings is reviewed for indicators of impairment on an annual basis. Where such indicators are present, a quantified impairment test would be required and the value in use calculated based upon a discounted cash flow methodology using the most recent forecasts prepared by the Directors of the Rolls-Royce Holdings plc Group. At 31 December 2022, the Directors identified indicators of impairment and performed a quantified impairment test. As part of this assessment, the Directors considered the areas of estimation uncertainty discussed in note 2. As a result of this, no impairment was required.

Significant accounting policies

Investments in subsidiary undertakings

Investments included in fixed assets are investments in subsidiary companies and these are held at historical cost less impairments which is considered annually by the Directors.

Trade receivables

Trade receivables are recognised initially at the transaction price. They are subsequently measured at amortised cost using the effective interest method, less provision for impairment. A provision for the impairment of trade receivables is established when there is objective evidence that the Company will not be able to collect all amounts due according to the original terms of the receivables. The Company applies the IFRS 9 *Financial Instruments* simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables.

1 Accounting policies – continued

Trade payables
Trade payables are recognised initially at the transaction price and subsequently measured at amortised cost using the effective interest method.

Financial instruments
In accordance with IAS 32 *Financial Instruments: Presentation*, the Company's C Shares are classified as financial liabilities and held at amortised cost from the date of issue until redeemed.

Equity
Ordinary shares are classified as equity. Equity instruments are measured at the fair value of the cash or other resources received or receivable, net of the direct costs of issuing the equity instruments. The cost of issuing ordinary shares are charged to the share premium account.

Share-based payments
As described in the Directors' Remuneration Report on pages 77 to 95, the Company grants awards of its own shares to employees of its subsidiary undertakings (see note 24 of the Consolidated Financial Statements). The costs of share-based payments in respect of these awards are accounted for, by the Company, as an additional investment in its subsidiary undertakings. The costs are determined in accordance with IFRS 2 *Share-based Payment*. Any payments made by the subsidiary undertakings in respect of these arrangements are treated as a return of this investment.

2 Investments – subsidiary undertakings

	£m
Cost:	
At 1 January 2022	14,716
Cost of share-based payments in respect of employees of subsidiary undertakings less receipts from subsidiaries in respect of those payments	46
At 31 December 2022	14,762

Details of the Company's subsidiary undertakings and joint venture and associates undertakings are listed on pages 179 to 184.

The carrying value of the Company's investments in subsidiary undertakings has been reviewed for impairment in accordance with IAS 36. The carrying value is compared to the asset's recoverable amount and has been assessed by reference to value in use. The value in use has been calculated based upon a discounted cash flow methodology using the most recent forecasts prepared and considered by the Directors of the Rolls-Royce Holdings plc Group. These forecasts:

- are consistent with past experience and external sources on market conditions;
- cover the next five years for each business together with a terminal value. The growth rate used within the terminal value reflects average growth of 1%-2% based on inflation forecasts by recognised bodies and also utilises long-term cash flow forecasts specific to each of the businesses. These reflect the best estimate of the impact of macro-economic factors and estimated cash flows from each major product line; and
- reflect estimation uncertainty through the use of a probability downside scenario for the businesses. These assumptions are consistent with those set out in the Going Concern Statement on page 48. The weighting applied is 75%-80% to a base case and 20%-25% to a downside scenario.

Management estimates nominal discount rates that reflect current market assessments of the time value of money and the rate of return a market participant would require. The rates used to discount the forecast cash flows reflects the individual businesses in the Group and is 11.6% to 13.7% pre-tax. An increase in the pre-tax discount rate of 1.6% would cause the carrying amount of the Company's investment to equal its recoverable amount.

The key assumptions for the value in use calculation are assumed market share, programme timings, unit cost assumptions, discount rates and foreign exchange. When making these considerations, the Group has also assessed the impact of climate change by considering the potential impact of carbon prices, commodity prices and aviation demand on the value in use under a 1.5°C and 3.6°C aligned scenario, based on specific pathway assumptions. The assumptions are consistent with those detailed in note 1 of the Consolidated Financial Statements. As a stress test, the potential impact of the full scenario occurring has been evaluated and it would not result in an impairment.

As a result of this analysis, the Directors have determined that no impairment charge is required.

3 Trade receivables and other assets

	2022 £m	2021 £m
Other receivables	–	1

4 Trade payables and other liabilities

	2022 £m	2021 £m
Amounts owed to subsidiary undertakings	335	335

Amounts owed to subsidiary undertakings are interest-free and repayable on demand.

5 Financial liabilities

C Shares

Movements during the year were as follows:

	C Shares of 0.1p Millions	Nominal value £m
At 1 January 2022	24,928	25
Redeemed	(1,074)	(1)
At 31 December 2022	23,854	24

The rights attaching to C Shares are set out on page 207.

6 Share capital

	Non-equity			Equity	
	Special Share of £1	Preference shares of £1 each	Nominal value £m	Ordinary shares of 20p each Millions	Nominal value £m
Issued and fully paid					
At 1 January 2022	1	–	–	8,368	1,674
At 31 December 2022	1	–	–	8,368	1,674

The rights attaching to each class of share are set out on page 207.

In accordance with IAS 32, the Company's non-cumulative redeemable preference shares (C Shares) are classified as financial liabilities. Accordingly, movements in C Shares are included in note 5.

7 Reconciliation of net assets between Rolls-Royce Holdings plc Group and Company

As at 31 December 2022, Rolls-Royce Holdings plc consolidated Group had net liabilities of £6.0bn (2021: £4.6bn) compared to £14.4bn (2021: £14.4bn) of net assets of the Company. The Company is a holding company and does not trade in its own right. The Company was incorporated in 2011 and became the Rolls-Royce Holdings company through a Scheme of Arrangement. On becoming the Rolls-Royce Holdings company, the value of the Company's investment in subsidiaries was based on the market capitalisation of the Rolls-Royce Group at that time. There was an increase in the investment as a result of a capital injection to Rolls-Royce Group Limited during 2020. The Group's consolidated financial statements are prepared on a historical cost basis except where UK adopted international accounting standards requires a valuation basis to be applied (see page 175 for further details). As different principles are applied in preparing the Company and consolidated group balance sheets there is a difference in the financial position reported. Examples of such differences include the following items that are in the Consolidated balance sheet but not reflected in the Company's balance sheet: liabilities of £10,681m (2021: £8,836m) as a result of IFRS 15; and financial liabilities of £3,851m (2021: £3,039m) arising from the recognition at fair value of foreign exchange derivatives held to manage exposure on the Group's future trading.

8 Contingent liabilities

Where the Company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its group, these guarantee contracts are considered to be contingent liabilities until such time as it becomes probable that the Company will be required to make a payment under the guarantee.

At 31 December 2022, these guarantees amounted to £9,724m (2021: £10,458m) of which total drawn is £4,224m (2021: £5,958m).

For further details on action related to historical matters that could have an impact on the Company, see page 169.

9 Other information

Employees

The Company had no employees in 2022 (2021: none).

Share-based payments

Shares in the Company have been granted to employees of the Group as part of share-based payment plans, and are charged in the employing company.

Emoluments of Directors

The remuneration of the Directors of the Company is shown below, further information is in the Directors' Remuneration Report on pages 77 to 95.

The total amount of remuneration paid to Directors for the year ended 31 December 2022 was £7,577,000 (2021: £6,920,000). £3,718,000 of this was attributed to the highest paid Director (2021: £3,840,000). A cash allowance in lieu of company contributions to a pensions scheme was also paid to two Directors (2021: three), which totalled £199,000 (2021: £185,000). No Directors exercised share options during the year (2021: none) nor received vested shares under the Long-Term Incentive Plan (2021: none).

No Director accrued any retirement benefits in the year (2021: none).

SUBSIDIARIES

As at 31 December 2022, the companies listed below and on the following pages are indirectly held by Rolls-Royce Holdings plc except Rolls-Royce Group Limited which is 100% directly owned by Rolls-Royce Holdings plc and Rolls-Royce plc which Rolls-Royce Holdings plc directly owns 3.54%. The financial year end of each company is 31 December unless otherwise indicated.

Company name	Address	Class of shares	% of class held
Aerospace Transmission Technologies GmbH [1]	Adelheidstrasse 40, D-88046, Friedrichshafen, Germany	Capital Stock	50
Amalgamated Power Engineering Limited [2]	London [3]	Deferred Ordinary	100 100
Bristol Siddeley Engines Limited [4]	London [3]	Ordinary	100
Brown Brothers & Company, Limited [4]	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	Ordinary	100
C.A. Parsons & Company Limited [4]	London [3]	Ordinary	100
Derby Specialist Fabrications Limited [2]	London [3]	Ordinary	100
Europea Microfusioni Aerospaziali S.p.A.	Zona Industriale AS1, 83040 Morra de Sanctis, Avellino, Italy	Ordinary	100
Heaton Power Limited [2]	London [3]	Ordinary	100
John Thompson Cochran Limited [2]	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	6% Cumulative Preference Ordinary	100 100
Karl Maybach-Hilfe GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
Kinolt Immo SA	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Kinolt Immobilien SA	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Kinolt Trading and Contracting LLC [5]	REGUS Service Office, Office No. 1034, Shoumoukh Tower, 10th Floor, Tower B, C-Ring Road, Al Sadd, PO Box 207207, Doha, Qatar	Ordinary	49
Kinolt Sistemas de UPS SpA	Bucarest No 17 Oficina, No 33, Previdencia, Santiago, Chile	Ordinary	100
Kinolt UK Limited [4]	London [3]	Ordinary	100
LLC Rolls-Royce Solutions Rus	Shabolovka Street 2, 119049, Moscow, Russian Federation	Ordinary	100
MTU India Private Limited [6]	6th Floor, RMZ Galleria, S/Y No. 144 Bengaluru, Bangalore, Kamataka 560,064, India	Ordinary	100
MTU Polska Sp. z o.o.	Ul. Lekka 3., Lokal U4. Raum, PLZ: 01-910, Ort: Warszawa, Poland	Ordinary	100
NEI International Combustion Limited [2]	London [3]	Ordinary	100
NEI Mining Equipment Limited [2]	London [3]	Ordinary	100
NEI Nuclear Systems Limited [2]	London [3]	Ordinary	100
NEI Parsons Limited [2]	London [3]	Ordinary	100
NEI Peebles Limited [2]	London [3]	Ordinary	100
NEI Power Projects Limited [2]	London [3]	Ordinary	100
Nightingale Insurance Limited	PO Box 33, Dorey Court, Admiral Park, St Peter Port, GY1 4AT, Guernsey	Ordinary	100
No-Break Power Limited [2]	Unit 29 Birches Industrial Estate, East Grinstead, RH19 1XZ, England	Ordinary	100
Powerfield Limited [2]	Derby [7]	Ordinary	100
PT Rolls-Royce	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
PT Rolls Royce Solutions Indonesia	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
Rolls-Royce (Ireland) Unlimited Company [2]	Ulster International Finance, 1st Floor IFSC House, IFSC, Dublin 1, Ireland	Ordinary	100
Rolls-Royce (Thailand) Limited	989 Floor 12A, Unit B1, B2, Siam Piwat Tower, Rama 1, Pathumwan, Bangkok, 10330, Thailand	Ordinary	100
Rolls-Royce Aero Engine Services Limited [2]	London [3]	Ordinary	100
Rolls-Royce Australia Pty Limited	Level 1, 60 Martin Place, Sydney NSW 2000, Australia	Ordinary	100
Rolls-Royce Australia Services Pty Limited	Level 1, 60 Martin Place, Sydney NSW 2000, Australia	Ordinary	100
Rolls-Royce Brasil Limitada	Rua Jose Versolato, No. 111, Torre B, Sala 2502, Centro, São Bernando do Campo, Sao Paulo, CEP 09750-730, Brazil	Quotas	100
Rolls-Royce Canada Limited	9500 Côte de Liesse, Lachine, Québec H8T 1A2, Canada	Common Stock	100

Company name	Address	Class of shares	% of class held
Rolls-Royce Chile SpA	Alcantra 200 office 601, Piso 6, C.O, 7550159 Las Condes, Santiago, Chile	Ordinary	100
Rolls-Royce China Holding Limited	305 Indigo Building 1, 20 Jiuxianqiao Road, Beijing, 100016, China	Registered Capital	100
Rolls-Royce Commercial Aero Engines Limited [2]	London [3]	Ordinary	100
Rolls-Royce Controls and Data Services Limited [2]	London [3]	Ordinary	100
Rolls-Royce Controls and Data Services (NZ) Limited	c/o Deloitte, 80 Queen Street, Auckland Central, Auckland 1010, New Zealand	Ordinary	100
Rolls-Royce Controls and Data Services (UK) Limited	Derby [7]	Ordinary	100
Rolls-Royce Corporation	Wilmington [8]	Common Stock	100
Rolls-Royce Crosspointe LLC	Wilmington [8]	Partnership (no equity)	100
Rolls-Royce Defense Products and Solutions, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Defense Services, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Deutschland Ltd & Co KG	Amtsgericht Potsdam, Blankenfelde-Mahlow, Germany	Ordinary	100
Rolls-Royce Electrical Norway AS	Jarleveien 8A, 7041, Trondheim 500, Norway	Ordinary	100
Rolls-Royce Energy Angola, Limitada [2]	Rua Rei Katyavala, Edificio Rei Katyavala, Entrada B, Piso 8, Luanda, Angola	Quota	100
Rolls-Royce Energy Systems Inc. [2]	Wilmington [8]	Common Stock	100
Rolls-Royce Engine Services Holdings Co.	Wilmington [8]	Common Stock	100
Rolls-Royce Engine Services Limitada Inc. [9]	Bldg. 06 Berthaphil Compound, Jose Abad Santos Avenue, Clark Special Economic Zone, Clark, Pampanga, Philippines	Capital Stock	100
Rolls-Royce Erste Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Rolls-Royce Finance Company Limited [2]	London [3]	Deferred Ordinary	100 100
Rolls-Royce Finance Holdings Co.	Wilmington [8]	Common Stock	100
Rolls-Royce Fuel Cell Systems Limited [4]	Derby [7]	Ordinary	100
Rolls-Royce General Partner (Ireland) Limited	29 Earlshot Terrace, Dublin 2, Ireland	Ordinary	100
Rolls-Royce General Partner Limited [2]	London [3]	Ordinary	100
Rolls-Royce Group Limited	London [3]	Ordinary Ordinary A	100
Rolls-Royce High Temperature Composites, Inc.	Corporation Service Company, 2710 Gateway Oaks Drive, Suite 150N, Sacramento, California 95833, United States	Ordinary	100
Rolls-Royce Holdings Canada Inc.	9500 Côte de Liesse, Lachine, Québec H8T 1A2, Canada	Common C	100
Rolls-Royce Hungary Kft	Gizella U. 51–57, 1143 Budapest, Hungary	Cash shares	100
Rolls-Royce India Limited [2, 6, 10]	Derby [8]	Ordinary	100
Rolls-Royce India Private Limited [6]	Birla Tower West, 2nd Floor 25, Barakhamba Road, New Delhi, 110001, India	Equity	100
Rolls-Royce Industrial & Marine Power Limited [4]	London [3]	Ordinary	100
Rolls-Royce Industrial Power (India) Limited [2, 6]	Derby [7]	Ordinary	100
Rolls-Royce Industrial Power Engineering (Overseas Projects) Limited	Derby [7]	Ordinary	100
Rolls-Royce Industries Limited [4]	Derby [7]	Ordinary	100
Rolls-Royce International Limited	Derby [7]	Ordinary	100
Rolls-Royce Japan Co., Limited	31st Floor, Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyoda-Ku, Tokyo, 100-6031, Japan	Ordinary	100
Rolls-Royce Leasing Limited	Derby [7]	Ordinary	100
Rolls-Royce Malaysia Sdn. Bhd.	C-2-3A TTDI Plaza, Jalan Wan Kadir 3, Taman Tun Dr Ismail, 6000 Kuala Lumpur, Malaysia	Ordinary	100
Rolls-Royce Marine North America, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Military Aero Engines Limited [2, 6, 10]	London [3]	Ordinary	100

Company name	Address	Class of shares	% of class held
Rolls-Royce New Zealand Limited	c/o Deloitte, 80 Queen Street, Auckland Central, Auckland 1010, New Zealand	Ordinary	100
Rolls-Royce North America (USA) Holdings Co.	Wilmington [8]	Common Stock	100
Rolls-Royce North America Holdings, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce North America Ventures, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce North America, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce North American Technologies, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Oman LLC	Bait Al Reem, Business Office #131, Building No 81, Way No 3409, Block No 234, Al Thaqafa Street, Al Khuwair, PO Box 20, Postal Code 103, Oman	Ordinary	100
Rolls-Royce Operations (India) Private Limited [2, 6]	Birla Tower West, 2nd Floor, 25 Barakhamba Road, New Delhi, 110001, India	Ordinary	100
Rolls-Royce Overseas Holdings Limited	Derby [7]	Ordinary Ordinary A	100 100
Rolls-Royce Overseas Investments Limited [4]	Derby [7]	Ordinary	100
Rolls-Royce Placements Limited	London [3]	Ordinary	100
Rolls-Royce plc	London [3]	Ordinary	100
Rolls-Royce Power Engineering plc	Derby [7]	Ordinary	100
Rolls-Royce Power Systems AG	Maybachplatz 1, 88045, Friedrichshafen, Germany	Ordinary	100
Rolls-Royce Retirement Savings Trust Limited [2, 6]	Derby [7]	Ordinary	100
Rolls-Royce Saudi Arabia Limited	3010 – Al Arid, Unit No 1, Riyadh 13332 – 7663, Saudi Arabia	Cash shares	100
Rolls-Royce Singapore Pte. Ltd.	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100
Rolls-Royce SMR Limited	Derby [7]	Ordinary	82.8
Rolls-Royce Solutions (Suzhou) Co. Ltd	9 Long Yun Road, Suzhou Industrial Park, Suzhou 215024, Jiang Su, China	Ordinary	100
Rolls-Royce Solutions Africa (Pty) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Capital Stock	100
Rolls-Royce Solutions America Inc.	Wilmington [8]	Ordinary	100
Rolls-Royce Solutions Asia Pte. Limited	10 Tukang Innovation Drive, Singapore 618302	Ordinary	100
Rolls-Royce Solutions Augsburg GmbH	Dasinger Strasse 11, 86165, Augsburg, Germany	Capital Stock	100
Rolls-Royce Solutions Benelux B.V.	Merwedestraat 86, 3313 CS, Dordrecht, Netherlands	Ordinary	100
Rolls-Royce Solutions Berlin GmbH	Villa Rathenau, Wilhelminenhofstrasse 75, 12459 Berlin, Germany	Common Seed Preferred Series A Preferred	100 100 100
Rolls-Royce Solutions Brasil Limitada	Via Anhanguera, KM 29203, 05276-000 Sao Paulo – SP, Brazil	Ordinary	100
Rolls-Royce Solutions Enerji Deniz Ve Savunma Anonim Şirketi	Hatira Sokak, No. 5, Ömerli Mahellesi, 34555 Arnavutköy, Istanbul, Turkey	Ordinary	100
Rolls-Royce Solutions France S.A.S.	Immeuble Colorado, 8/10 rue de Rosa Luxembourg-Parc des Bellevues 95610, Erangy-sur-Oise, France	Ordinary	100
Rolls-Royce Solutions GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
Rolls-Royce Solutions Hong Kong Limited	No.8 Hart Avenue, Unit D, 8th Floor, Tsim Sha Tsui, Kowloon, Hong Kong	Ordinary	100
Rolls-Royce Solutions Ibérica s.l.u.	Calle Copérnico 26–28, 28823 Coslada, Madrid, Spain	Ordinary	100
Rolls-Royce Solutions Israel Limited	4 Ha'Alon Street, South Building, Third Floor, 4059300 Kfar Neter, Israel	Ordinary	100
Rolls-Royce Solutions Italia S.r.l.	Via Aurelia Nord, 328, 19021 Arcola (SP), Italy	Capital Stock	100
Rolls-Royce Solutions Japan Co. Limited	Resorttrust Building 4-14-3, Nishitenma Kita-ku, Osaka 530-0047, Japan	Ordinary	100
Rolls-Royce Solutions Korea Limited	22nd Floor, Olive Tower, 41 Sejongdaero 9 gil, Junggu, 100-737 Seoul, Republic of Korea	Ordinary	100
Rolls-Royce Solutions Liège Holding S.A.	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Rolls-Royce Solutions Liège S.A.	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Rolls-Royce Solutions Magdeburg GmbH	Friedrich-List-Strasse 8, 39122 Magdeburg, Germany	Capital Stock	100
Rolls-Royce Solutions Mexico City S.A. de C.V.	Xochicalco 620, Colonia Letran Valle, Delegacion Benito Juarez, Mexico City 03650, Mexico	Common Shares	100

Company name	Address	Class of shares	% of class held
Rolls-Royce Solutions Middle East FZE	S3B5SR06, Jebel Ali Free Zone, South P.O. Box 61141, Dubai, United Arab Emirates	Ordinary	100
Rolls-Royce Solutions Ruhstorf GmbH	Rotthofer Strasse 8, 94099 Ruhstorf a.d. Rott, Germany	Capital Stock	100
Rolls-Royce Solutions South Africa (Pty) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Ordinary	100
Rolls-Royce Solutions UK Limited	Derby [7]	Ordinary	100
Rolls-Royce Solutions Willich GmbH	Konrad-Zuse-Str. 3, 47877, Willich, Germany	Ordinary	100
Rolls-Royce Sp z.o.o.	Opolska 100 31-323, Krakow, Poland	Ordinary	100
Rolls-Royce Submarines Limited	Atlantic House, Raynesway, Derby, Derbyshire, United Kingdom, DE21 7BE	Ordinary	100
Rolls-Royce Technical Support Sarl	Centreda I, Avenue Didier Daurat, 31700 Blagnac, Toulouse, France	Ordinary	100
Rolls-Royce Total Care Services Limited [4]	Derby [7]	Ordinary	100
Rolls Royce Turkey Güç Çözümleri San. ve Tic. Ltd.Şti.	Acıbadem Mah. Çeçen Sk. Akasya A Kule Kent Etabı Blok No: 25, İç Kapı No:13, Üsküdar, Istanbul, Turkey	Cash shares	100
Rolls-Royce UK Pension Fund Trustees Limited [2]	Derby [7]	Ordinary	100
Rolls-Royce Zweite Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Ross Ceramics Limited	Derby [7]	Ordinary	100
Servowatch Systems Limited	Endeavour House, Benbridge Industrial Estate, Holloway Road, Heybridge, Maldon, Essex, CM9 4ER, United Kingdom	Ordinary	100
Sharing in Growth UK Limited [11]	Derby [7]	Limited by guarantee	100
Spare IPG 20 Limited [4]	London [3]	Ordinary	100
Spare IPG 21 Limited [2]	London [3]	Ordinary	100
Spare IPG 24 Limited [4]	London [3]	Ordinary	100
Spare IPG 32 Limited [4]	London [3]	Ordinary	100
Spare IPG 4 Limited [2]	London [3]	Ordinary	100
The Bushing Company Limited [4]	London [3]	Ordinary	100
Timec 1487 Limited [2]	London [3]	Ordinary	100
Turbine Surface Technologies Limited [1]	Derby [7]	Ordinary A Ordinary B	Nil 100
Vessel Lifter, Inc. [2]	Corporation Service Company, 1201 Hays Street, Tallahassee, Florida 32301, United States	Common Stock	100
Vinters Defence Systems Limited [2]	London [3]	Ordinary	100
Vinters Engineering Limited	Derby [7]	Ordinary	100
Vinters International Limited [4]	Derby [7]	Ordinary	100
Vinters Limited [4]	Derby [7]	Ordinary	100
Vinters-Armstrongs (Engineers) Limited [2]	London [3]	Ordinary	100
Vinters-Armstrongs Limited [2]	London [3]	Ordinary B	100
Yocova Private Ltd [2]	London [3]	Ordinary	100
Yocova PTE. Ltd.	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100

[1] Although the interest held is 50%, the Company controls the entity (see note 1 to the Consolidated Financial Statements) and, as a result, consolidates the entity and records a non-controlling interest.
[2] Dormant entity.
[3] Kings Place, 90 York Way, London, United Kingdom, N1 9FX.
[4] Entity to take advantage of s479A Companies Act 2006 (s479A) audit exemption for the year ended 31 December 2022. Rolls-Royce plc will issue a guarantee pursuant to s479A in relation to the liabilities of the entity.
[5] Although the interest held is 49%, the Company controls the entity (see note 1 to the Consolidated Financial Statements) and, as a result, consolidates the entity and records a non-controlling interest.
[6] Reporting year end is 31 March.
[7] Moor Lane, Derby, Derbyshire, DE24 8BJ, United Kingdom.
[8] Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19809, United States.
[9] Entity in liquidation.
[10] Entity to take advantage of s479A Companies Act 2006 (s479A) audit exemption for the year ending 31 March 2023. Rolls-Royce plc will issue a guarantee pursuant to S479A in relation to the liabilities of the entity.
[11] The entity is not included in the consolidation as Rolls-Royce plc does not have a beneficial interest in the net assets of the entity.
[12] The entity is accounted for as a joint operation (see note 1 to the Consolidated Financial Statements).

JOINT VENTURES AND ASSOCIATES

Company name	Address	Class of shares	% of class held	Group interest held %
Aero Gearbox International SAS [12]	18 Boulevard Louis Sequin, 92700 Colombes, France	Ordinary	50	50
Airtanker Services Limited	Airtanker Hub, RAF Brize Norton, Carterton, Oxfordshire, OX18 3LX, United Kingdom	Ordinary	23.5	23.5
Alpha Leasing (US) (No.2) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.4) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.5) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.6) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.7) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.8) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Partners Leasing Limited	1 Brewer's Green, London, United Kingdom, SW1H 0RH	Ordinary A	100	50
Beijing Aero Engine Services Company Limited	Room 711, Building 2, No.1 Jinhang Middle Road, Shunyi District, Beijing, China	Capital	50	50
CFMS Limited	43 Queen Square, Bristol, England, BS1 4QP	Limited by guarantee	–	50
Clarke Chapman Portia Port Services Limited	Maritime Centre, Port of Liverpool, Liverpool, L21 1LA, United Kingdom	Ordinary A	100	50
Egypt Aero Management Services [9]	EgyptAir Engine Workshop, Cairo International Airport, Cairo, Egypt	Ordinary	50	50
EPI Europrop International GmbH	Pelkovenstr. 147, 80992 München, Germany	Capital Stock	28	28
Eurojet Turbo GmbH	Lilienthalstrasse 2b, 85399 Halbergmoos, Germany	Ordinary	33	33
Force MTU Power Systems Private Limited	Mumbai Pune Road, Akurdi, Pune, Maharashtra 411035, India	Capital Stock	49	49
Genistics Holdings Limited	Derby [7]	Ordinary A	100	50
Global Aerospace Centre for Icing and Environmental Research Inc. [12]	1000 Marie-Victorin Boulevard, Longueuil Québec J4G 1A1, Canada	Ordinary	50	50
Hoeller Electrolyzer GmbH	Alter Holzhafen, 23966 Wismar, Germany	Ordinary	54.2	54.2
Hong Kong Aero Engine Services Limited	33rd Floor, One Pacific Place, 88 Queensway, Hong Kong	Ordinary	50	50
International Aerospace Manufacturing Private Limited [6, 12]	Survey No. 3 Kempapura Village, Varthur Hobli, Bangalore, KA 560037, India	Ordinary	50	50
ITP Next Generation Turbines SLU	Parque Tecnologico Edificio 300, 48170, Zamudio, Vizcaya, Spain	Ordinary-B	25	25
Light Helicopter Turbine Engine Company (unincorporated partnership)	Suite 119, 9238 Madison Boulevard, Madison, Alabama 35758, United States	Partnership (no equity held)	–	50
Manse Opus Management Company Limited [6]	Third Floor Queensberry House, 3 Old Burlington Street, London, United Kingdom, W1S 3AE	Limited by guarantee	33	33
MEST Co., Limited	97 Bukjeonggongdan 2-gil, Yangsan-si, Gyeongsangnam-do, 50571, Republic of Korea	Normal	46.8	46.8
MTU Cooltech Power Systems Co., Limited	Building No. 2, No. 1633 Tianchen Road, Qingpu District, Shanghai, China	Equity	50	50
MTU Power Systems Sdn. Bhd.	Level 10 Menara LGB, 1 Jalan Wan Kadir Taman Tun Dr Ismail 6000 Kuala Lumpur, Malaysia	Ordinary A	100	49
MTU Turbomeca Rolls-Royce ITP GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	25	25
MTU Turbomeca Rolls-Royce GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	33.3	33.3
MTU Yuchai Power Company Limited	No 7 Danan Road, Yuzhou, Yulin, Guangxi, China, 537005, China	Capital Stock	50	50
N3 Engine Overhaul Services GmbH & Co KG	Gerhard-Höltje-Strasse 1, D-99310, Arnstadt, Germany	Capital Stock	50	50
N3 Engine Overhaul Services Verwaltungsgesellschaft Mbh	Gerhard-Höltje-Strasse 1, D-99310, Arnstadt, Germany	Capital Stock	50	50

Company name	Address	Class of shares	% of class held	Group interest held %
Rolls Laval Heat Exchangers Limited [2]	Derby [7]	Ordinary	50	50
Rolls-Royce & Partners Finance (US) (No 2) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Rolls-Royce & Partners Finance (US) LLC	Wilmington [8]	Partnership (no equity held)	–	50
SAFYRR Propulsion Limited [2]	Derby [7]	B Shares	100	50
Shanxi North MTU Diesel Co. Limited	No.97 Daqing West Road, Datong City, Shanxi Province, China	Ordinary	49	49
Singapore Aero Engine Services Private Limited	11 Calshot Road, 509932, Singapore	Ordinary	50	50
Taec Ucak Motor Sanayi AS	Levent Mahallesi Prof. Ahmet Kemal Aru Sk. No: 4/1, Beşiktaş, Turkey	Cash Shares	49	49
Techjet Aerofoils Limited [12]	Tefen Industrial Zone, PO Box 16, 24959, Israel	Ordinary A Ordinary B	50 50	50
Texas Aero Engine Services LLC [2]	The Corporation Trust Company, 1209, Orange Street, Wilmington, Delaware 19801, United States	Partnership (no equity held)	–	50
TRT Limited	Derby [7]	Ordinary B	100	50
Turbo-Union GmbH	Lilienthalstrasse 2b, 85399 Halbergmoos, Germany	Capital Stock	40.0	40.0
United Battery Management GmbH	Wilhelminenhofstr. 76/77, 12459, Berlin, Germany	Ordinary	30	30
Xian XR Aero Components Co., Limited [12]	Xujiawan, Beijiao, Po Box 13, Xian 710021, Shaanxi, China	Ordinary	49	49

[1] Although the interest held is 50%, the Company controls the entity (see note 1 to the Consolidated Financial Statements) and, as a result, consolidates the entity and records a non-controlling interest.
[2] Dormant entity.
[3] Kings Place, 90 York Way, London, United Kingdom, N1 9FX.
[4] Entity to take advantage of s479A Companies Act 2006 (s479A) audit exemption for the year ended 31 December 2022. Rolls-Royce plc will issue a guarantee pursuant to s479A in relation to the liabilities of the entity.
[5] Although the interest held is 49%, the Company controls the entity (see note 1 to the Consolidated Financial Statements) and, as a result, consolidates the entity and records a non-controlling interest.
[6] Reporting year end is 31 March.
[7] Moor Lane, Derby, Derbyshire, DE24 8BJ, United Kingdom.
[8] Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19809, United States.
[9] Entity in liquidation.
[10] Entity to take advantage of s479A Companies Act 2006 (s479A) audit exemption for the year ending 31 March 2023. Rolls-Royce plc will issue a guarantee pursuant to S479A in relation to the liabilities of the entity.
[11] The entity is not included in the consolidation as Rolls-Royce plc does not have a beneficial interest in the net assets of the entity.
[12] The entity is accounted for as a joint operation (see note 1 to the Consolidated Financial Statements).

INDEPENDENT AUDITORS' REPORT

INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF ROLLS-ROYCE HOLDINGS PLC

Report on the audit of the financial statements

Opinion

In our opinion:

- Rolls-Royce Holdings plc's consolidated financial statements and company financial statements (the "financial statements") give a true and fair view of the state of the group's and of the company's affairs as at 31 December 2022 and of the group's loss and the group's cash flows for the year then ended;
- the consolidated financial statements have been properly prepared in accordance with UK-adopted international accounting standards as applied in accordance with the provisions of the Companies Act 2006;
- the company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework", and applicable law); and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements, included within the Annual Report, which comprise: the consolidated and company balance sheets as at 31 December 2022; the consolidated income statement and consolidated statement of comprehensive income, the consolidated cash flow statement, the consolidated and company statements of changes in equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided.

Other than those disclosed in note 7, we have provided no non-audit services to the company or its controlled undertakings in the period under audit.

Our audit approach

Overview

Audit scope

- Following our assessment of the risks of material misstatement of the financial statements, including the impact of climate change, we subjected 33 individual components (including three joint ventures) to full scope audits for group purposes, which following an element of sub-consolidation, equates to 16 group reporting opinions. In addition, nine components performed targeted specified procedures.
- In addition, the group engagement team audited the company and other centralised functions including those covering the group treasury operations, corporate costs, corporate taxation, post-retirement benefits, and certain goodwill and intangible asset impairment assessments. The group engagement team performed audit procedures over the group consolidation and financial statements disclosures and performed group level analytical procedures over out of scope components.
- The components on which full scope audits, targeted specified procedures and centralised work was performed accounted for 98% of revenue, 79% of loss before tax from continuing operations and 90% of total assets.
- Central audit testing was performed where appropriate for reporting components in group audit scope who are supported by the group's Finance Service Centres (FSCs).
- As part of the group audit supervision process, the group engagement team has performed 16 file reviews, which included meetings on approach and conclusions with the component teams and review of their audit files and final deliverables. In person site visits to components in the UK, Germany and US were also performed.

Key audit matters
- Long-term contract accounting and associated provisions (group)
- Deferred tax asset recognition and recoverability (group)
- Translation of foreign-currency denominated transactions and balances (group)
- Presentation and accuracy of underlying results and disclosure of other one-off items (including exceptional items) (group)
- Recoverability of the company's investment in subsidiary undertakings (company)

Materiality
- Overall group materiality: £80m (2021: £80m) based on approximately 0.6% of five year average underlying revenues from continuing operations (2021 approximately 0.6% of four year average underlying revenues from continuing and discontinued operations).
- Overall company materiality: £147m (2021: £147m) based on approximately 1.0% of total assets.
- Performance materiality: £60m (2021: £60m) (group) and £110m (2021: £110m) (company).

The scope of our audit
As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements.

Key audit matters
Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

This is not a complete list of all risks identified by our audit.

Determination of the ITP Aero disposal group and the accounting treatment and related consolidation adjustments for Civil engine sales to related entities, which were key audit matters last year, are no longer included because the ITP Aero sale completed in September 2022 and because we validated the structure and related accounting associated with spare engine sales to related entities in the prior year. Spare engine sales, including verifying that control has been passed to the customer to allow the associated revenue to be recognised, continues to be audited as part of our revenue procedures. Otherwise, the key audit matters below are consistent with last year.

Key audit matter	How our audit addressed the key audit matter
Long-term contract accounting and associated provisions (group) *Audit Committee report and note 1 to the consolidated financial statements – Accounting policies – Revenue recognition* The Civil Aerospace and Defence businesses operate primarily with long-term customer contracts that span multiple periods. These long-term contracts require a number of assumptions to be made in order to determine the expected lifetime revenue and costs of the contract and the amounts of revenue and profit/loss that is recognised in each reporting period. Small adjustments can have a significant impact on the results of an individual financial year. Changes to the profile of shop visits or operating conditions of engines can result in different performance assumptions and hence cost profiles. Some contracts include inflation linked price escalations which require judgement to determine the extent to which future price increases are highly probable not to reverse and therefore can be recognised. These changes to forecasts can result in revisions to the revenue previously recognised. £367m of such revisions has been recognised in the current year, increasing revenue. For Defence, long-term contracts tend to be for a fixed price or based on a cost plus or target cost reimbursement for qualifying costs and there are also some flying hours arrangements. For Civil Aerospace aftermarket contracts, cash is earned based on engine flying hours, which requires management to estimate future engine flying hours (EFH) in order to arrive at the total income expected over the life of a contract. There remains significant uncertainty over the speed and shape of recovery in EFH for large engines. The group expects EFH to recover to pre-pandemic levels by the end of 2024. In addition, the profitability of Civil Aerospace aftermarket contracts typically assumes that there will be significant cost improvements over the lifetime (15–25 years) of the contracts. Significant judgement needs to be applied in determining time-on-wing, whether incremental costs should be treated as wastage or are part of the ongoing cost of servicing a contract, future exchange rates used to translate foreign currency income and costs and other operating parameters used to calculate the projected life cycle. These future costs are also risk adjusted to take into account forecasting accuracy which represents an additional judgement. At the development stage of a programme, agreements are entered into with certain Civil suppliers to share in the risk and rewards of the contracts (Risk and Revenue Sharing Partners – 'RRSP'). This can involve upfront participation fees from the RRSP that are amortised over the engine production phase. In addition, specified revenue and costs are recorded in the consolidated income statement net of the RRSP's share. The nature of the Civil Aerospace business gives rise to a number of contractual guarantees, warranties and potential claims, including the in-service issues of the Trent 1000 programme. The accounting for these can be complex and judgemental and may impact the consolidated income statement immediately or over the life of the contract. The valuation of provisions for the associated amounts are judgemental and need to be considered on a contract by contract basis.	We focused our work on a number of contracts where we consider there to be the highest degree of management judgement or estimation and designed specific procedures over the long-term contract accounting targeted at the associated risks. We also sample tested the remaining population of contracts. The audit procedures performed included: – We attended meetings with Civil Aerospace and Defence engine programme and customer contract managers in order to understand the operational matters impacting the performance of specific contracts and any amendments to contractual arrangements that could have an impact on performance; – We obtained and read the relevant sections of a sample of contracts to understand the key terms including performance obligations and pricing structures; – We assessed how management had forecast the speed and shape of the recovery of engine flying hours including by considering the downside scenarios modelled and comparing the assumptions to industry data; – We challenged management's judgments and associated risk adjustments relating to the risk of customer default and insolvency; – We re-performed the calculations used to determine the degree of completion for a sample of contracts and this was also used in assessing the magnitude of any catch-up adjustments; – We compared the previously forecast results of a sample of contracts with the actual results to assess the performance of the contract and the historical accuracy of forecasting; – We verified a sample of costs incurred to third party documentation in order to assess the validity of the forecast costs to complete; – We assessed the assumptions relating to life cycle cost reductions to determine the likelihood of realisation and where relevant the speed at which they would be achieved, including the impact on the number of shop visits, validating these assumptions directly with the senior programme engineers; – We obtained support for the risk adjustments made in respect of future costs and challenged management's assumptions through assessment against historical performance, known technical issues and the stage of completion of the programme; – We recalculated the price escalation included within the contracts based on recent experience; – We challenged the assessment of provisions for onerous contracts to determine the completeness of the unavoidable costs to fulfil the contractual obligations. This included validating the additional provision recorded in the year to reflect the amended accounting standard which required such provisions to be recognised for all direct costs. We validated the rates used to discount the future cash flows and how management has considered the potential impact of climate change; – We assessed the sensitivity of the Trent 1000 provision to reasonable changes in estimates, particularly in respect of the repair and overhaul facility capacity, technical cost creep on the known issues and cost outturns against previous provisions, in determining whether the provision was sufficient; – We read and understood the key terms of a sample of RRSP contracts to assess whether revenue and costs had been appropriately reflected, net of the share attributable to the RRSP in the consolidated income statement;

Key audit matter	How our audit addressed the key audit matter
Long-term contract accounting and associated provisions (group) continued Management has modelled the potential impact of climate change on its forecasts and has incorporated these estimates into the long-term contract models. This included incorporating the potential impact of carbon prices on the group's direct emissions including engine testing and those of its suppliers and the potential impact of climate change on commodity prices in cost estimates. It also includes the estimated costs of demonstrating that all the commercial aero engines are compatible with sustainable aviation fuels. The impact of climate change on long-term contracts is highly uncertain and requires estimates on carbon prices, the cost and speed of decarbonisation, the ability of the group and its suppliers to pass on incremental costs and assessing the associated impact on aviation demand.	— With assistance from our valuation experts, we considered the appropriateness of the key assumptions used by management to model the impact of climate change, including the reasonableness of the carbon and commodity price forecasts. We validated management's assertions on the ability of suppliers and the group to pass on incremental costs by reviewing supplier and customer contracts for price change mechanisms. Where appropriate we performed independent sensitivity analysis to determine to what extent reasonably possible changes in these assumptions could result in material changes to the revenue recorded in the year and assessed the appropriateness of the associated disclosures; — We read and challenged management's accounting papers that were prepared to explain the positions taken in respect of their key contract judgements; — We considered whether there were any indicators of management override of controls or bias in arriving at their reported position; and — We also assessed the adequacy of disclosures in note 1 of the key judgements and estimates involved in long-term contract accounting. Based on the work performed, we concur that management's estimates for long-term contract accounting and associated provisions is materially appropriate, in the context of the financial statements taken as a whole.
Deferred tax asset recognition and recoverability (group) *Audit Committee report, note 1 to the consolidated financial statements – Accounting policies – Taxation and note 5 to the consolidated financial statements – Taxation* The recognition and recoverability of deferred tax assets in Rolls-Royce plc is a significant judgement. Rolls-Royce plc has recognised significant deferred tax assets on the basis of expected future levels of profitability. The magnitude of the assets recognised necessitates the need for a number of assumptions in assessing the future levels of profitability in the UK over an extended period. This requires assumptions on future profits from the Group's aftermarket and original equipment sales including EFH levels, associated costs and the future exchange rates used to translate foreign currency denominated amounts. The additional loss reported for 2022, along with the existence of tax losses brought forward and other deductible temporary differences in Rolls-Royce plc, combined with the impact of climate change on future forecasts, presents a heightened risk that deferred tax assets previously recognised may not be recoverable. Since the recognised deferred tax asset is recoverable over a long period, management has reflected their assessment of the impact of climate change within the model forecasting probable taxable profits. This incorporates multiple assumptions including future carbon prices, commodity prices, the impact of government action on aviation demand, the cost and speed of decarbonisation and the ability of suppliers and Rolls-Royce plc to pass on price changes. To assess the impact of inherent uncertainty management has performed sensitivities over key estimates.	We evaluated management's methodology for assessing the recognition and recoverability of deferred tax assets, including the ability to offset certain deferred tax liabilities and deferred tax assets. Where recognition is supported by the availability of sufficient probable taxable profits in future periods against which the asset can be utilised in future periods, our evaluation of these future profits considered both the business model and the applicable UK tax legislation. We assessed the future profit forecasts and the underpinning assumptions including management's risk weighting of particular profit streams in Rolls-Royce plc and tested that the assumptions and forecasts for periods beyond the normal five year forecasting horizon were reasonable. In doing this, we verified that the forecasts did not include taxable profit growth that could not be demonstrated as probable. We arrived at an independent range of long-term exchange rates based on historical movements in exchange rates and inflation expectations and compared this to management's rates. Where applicable we assessed the consistency of the forecasts used to justify the recognition of deferred tax assets to those used elsewhere in the business, including for long-term contract accounting, impairment assessments, or for the Directors' viability and going concern statements. We also assessed the risk adjustments applied by management to these profit forecasts to future periods that are significantly further in time than the group's normal five year forecasting process and considered whether these appropriately reflect the estimation risk to the longer term forecasts.

Key audit matter	How our audit addressed the key audit matter
Deferred tax asset recognition and recoverability (group) continued	We considered the appropriateness of the climate change assumptions modelled as part of their probability weighted scenarios to forecast probable profit levels. As described in the long-term contract accounting and associated provisions key audit matter, this included deploying valuation experts to assess the reasonableness of carbon pricing and commodity assumptions as well as the comparison of forecast aviation demand to third party sources. We considered the likelihood that the group and its suppliers would be able to pass on incremental climate related costs in the short, medium and longer term and verified that management's forecasts included the costs arising from the group's stated commitment to emissions reductions by 2030. We performed additional sensitivity analysis to understand whether reasonably possible changes to these assumptions could lead to a material change in the recognised asset and where appropriate ensured that adequate disclosure was provided. We assessed the treatment of the losses that are realised or unrealised on the group's hedge book and whether they were treated appropriately and how they are recovered using the same profit forecasts. We also assessed the adequacy of disclosures over this area, particularly the impact of changes in key estimates of the asset recognised and this has been disclosed in notes 1 and 5. We did not identify any material uncorrected exceptions from our audit work.
Translation of foreign-currency denominated transactions and balances (group) *Note 1 to the consolidated financial statements – Accounting policies – Foreign currency translation* Foreign exchange rate movements influence the reported consolidated income statement, the consolidated cash flow statement and consolidated balance sheet. One of the group's primary accounting systems that is used by a number of its subsidiaries translates transactions and balances denominated in foreign currencies at a fixed budget rate for management information purposes. Foreign currency denominated transactions and balances are then re-translated to actual average and closing spot rates through manual adjustments. Due to the manual nature of the process and significance of the recurring adjustments needed there is a risk that transactions and balances denominated in foreign currencies are incorrectly translated in the consolidated financial statements.	In addition to our testing in other areas, we performed the following specific audit procedures over this area: — Obtained an understanding of the process employed by management to correctly record the translation of foreign currency balances and transactions; — Tested system reports identifying transactions and balances in source currency by agreeing these to general ledger balances; — Tested on a sample basis the manual calculations of the adjustment needed to correctly record the translation of the foreign currency denominated transactions and balances; — We sampled balances and transactions requiring adjustment by source currency and tested to source data and assessed the completeness of these balances and transactions; — We created an independent expectation of the loss on the translation of monetary assets and liabilities based on the movements in the group's key exchange rates and associated balances in the year; — We agreed the exchange rates used in management's translation adjustments to an independent source; and — For each adjustment sampled we assessed whether the foreign currency denominated balance or transaction was translated at the appropriate exchange rate depending on its nature. There were no material uncorrected exceptions from our audit work.

Key audit matter	How our audit addressed the key audit matter
Presentation and accuracy of underlying results and disclosure of other one-off items (including exceptional items) (group) *Note 1 to the consolidated financial statements – Accounting policies – Presentation of underlying results, note 2 to the consolidated financial statements – Segmental analysis and note 28 to the consolidated financial statements – Derivation of summary of funds flow statement.* In addition to the performance measures prescribed by International Financial Reporting Standards, the group also presents its results on an underlying basis, as the Directors believe this reflects the performance of the group during the year. The group also presents a free cash flow metric which the Directors believe reflects the cash generated from underlying trading; this differs from the cash flows presented in the consolidated cash flow statement. The underlying results differ significantly from the reported statutory results and are used extensively to explain performance to the shareholders. Alternative performance measures can provide investors with additional understanding of the group's performance if consistently calculated, properly used and presented. However, when improperly used and presented, these non-GAAP measures can mislead investors and may mask the real financial performance and position. There is judgement on whether items should be excluded from underlying profit or free cash flow. A key adjustment between the statutory results and the underlying results relates to the foreign exchange rates used to translate foreign currency transactions and balances. The underlying results reflect the achieved rate on foreign currency derivative contracts settled in the period and retranslates assets and liabilities at the foreign currency rates at which they are expected to be realised or settled in the future. As the group can influence which derivative contracts are settled in each reporting period it has the ability to influence the achieved rate and hence the underlying results. This risk is more limited for free cash flow as there are a small number of items that are excluded from free cash flows. During the year, the group excluded £69m of credits from the net release of onerous contract and Trent-1000 provisions and a net £22m of credits associated with changes to the group's pension schemes from underlying profit before tax. In addition, £65m of impairment charges and £47m of restructuring costs have also been excluded.	We have considered the judgements taken by management to determine what should be treated as an exceptional item and the translation of foreign currency amounts and obtained corroborative evidence for these. We also considered whether there were items that were recorded within underlying profit that are exceptional in nature and should be reported as an exceptional item. No such material items were identified. As part of this assessment we challenged management's rationale for the designation of certain items as exceptional or one-off and assessed such items against the group's accounting policy, considering the nature and value of those items. Within underlying results, foreign currency transactions are presented at rates achieved on derivative contracts hedging the net operating cash flows of the group and monetary assets and liabilities are retranslated at rates forecast to be achieved on derivative contracts when the associated cash flows occur. We have agreed these forecast rates to the profile of the derivatives that are expected to mature in the future and tested their application to the relevant monetary assets and liabilities. We audited the reconciling items between the underlying profit before tax and free cash flow disclosed in note 28 including verifying that the items adjusted for are consistent with the prior period. We also considered whether free cash flow contains material one-off items which require further disclosure. We assessed the appropriateness and completeness of the disclosures of the impact of one-off or non-underlying items primarily in notes 1, 2, 4 and 28 to the consolidated financial statements and found them to be appropriate. This included assessing the explanations management provided on the reconciling items between underlying performance and statutory performance in note 2. Overall we found that the classification judgements made by management were in line with their policy for underlying results and exceptional items, had been consistently applied and there are no material uncorrected misstatements resulting from our testing.

Key audit matter	How our audit addressed the key audit matter
Recoverability of the company's investment in subsidiary undertakings (company) *Note 1 to the company financial statements – Accounting policies and note 2 to the company financial statements – Investments – Subsidiary Undertakings* Investments in subsidiaries of £14,762m (2021: £14,716m) are accounted for at cost less provision for impairment in the company balance sheet at 31 December 2022. Investments are tested for impairment if impairment indicators exist. If such indicators exist, the recoverable amounts of the investments in subsidiaries are estimated in order to determine the extent of the impairment loss, if any. Any such impairment loss is recognised in the income statement. Judgement is required in this area, particularly in assessing: (1) whether an event has occurred that may indicate that the related asset values may not be recoverable; (2) whether the carrying value of an asset can be supported by the recoverable value, being the higher of fair value less cost of disposal or the net present value of future cash flows which are estimated based on the continued use of the asset in the business; and (3) key assumptions to be applied in preparing cash flow projections including whether these cash flow projections are discounted using an appropriate rate. Changing the assumptions selected by management to determine the level of any impairment, including the discount rates or the growth rate assumptions in the cash flow projections, could materially affect the recoverable value determined by the impairment test and as a result affect the company's financial condition and results. Management has identified the increase in discount rates and the fall in market capitalisation since the date of the last impairment review as indicators of potential impairment which has necessitated the performance of a quantitative impairment assessment. For this purpose, management has used the latest available cash flow forecasts. Management has incorporated an estimate of the potential impact of climate change on the group's future cash flows, in particular the impact of carbon pricing and commodity prices on the group's future cost base and the potential impact on demand. Management found the investment carrying value to be supported by the future cash flows as a result of this exercise.	We evaluated management's determination that the decrease in the group's share price in 2022 along with the increases in cost of capital represented potential indicators of impairment. The associated recoverable value of the investments was determined from the discounted future cash flows of the group. We have tested the reasonableness of the key assumptions used, including revenue, profit and cash flow growth rates, terminal growth rates and the discount rates that management has applied. We tested that the underlying assumptions were consistent with other forecasts. We also assessed whether management's probability weighted cash flow forecasts appropriately reflect the estimation uncertainty over the group's forecast cash flows especially within Civil Aerospace. Deploying our valuation experts, we assessed certain key assumptions such as the discount rate and the long-term growth rate used to project cash flows after the initial forecasting period. We validated the key assumptions included within management's assessment of the impact of climate change on the group's cash flows. This included consideration of the costs of the group's stated commitment to emissions reductions by 2030.With the assistance of our valuation experts, we assessed the reasonableness of management's assumptions on future carbon prices and changes in commodity prices. We also considered other estimates of the group's valuation such as third party analyst reports and considered the potential reasons why the market capitalisation of the group was lower than the carrying value and the valuation produced by management, including the element of this that could reasonably be explained by control premium and other factors. We performed our own independent sensitivity analysis to understand if reasonable possible changes in management's assumptions would result in an impairment. We reviewed the company's disclosure in note 1 to the company financial statements over this critical estimate and found this to be appropriate. As a result of our work, we did not identify any material impairment and consider the carrying value of the investments in subsidiary undertakings to be supportable in the context of the company financial statements taken as a whole.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the group and the company, the accounting processes and controls, and the industry in which they operate.

Our scoping is based on the group's consolidation structure. We define a component as a single reporting unit which feeds into the group consolidation. Of the group's 427 reporting components, 33 individual components (including three joint ventures) were subject to full scope audits for group purposes, which following an element of sub-consolidation, equates to 16 group reporting opinions; and nine components performed targeted specified audit procedures.

In order to achieve audit coverage over the financial statements, under our audit methodology, we test both the design and operation of relevant business process controls and perform substantive testing over each financial statement line item.

The group operates Finance Service Centres (FSCs) to bulk process financial transactions in Derby (UK), Indianapolis (US) and Bengaluru (India). Based on our assessment it is not possible to fully test revenue and profit centrally as certain key processes, such as long-term contracting, remain within the business due to their nature and are not handled by the FSCs.

Our audit covered 98% of revenue, 79% of loss before tax from continuing operations and 90% of total assets. All entities that contribute in excess of 1% of the group's revenue were included in scope.

Further specific audit procedures over central functions, the group consolidation and areas of significant judgement (including corporate costs, taxation, certain goodwill balances, intangible assets, treasury and post-retirement benefits) were directly led by the group audit team.

Where work was performed by component auditors, we determined the level of involvement we needed to have in the audit work at those reporting units to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the consolidated financial statements.

We issued formal written instructions to all component auditors setting out the audit work to be performed by each of them and maintained regular communication with the component auditors throughout the audit cycle. These interactions included attending certain component clearance meetings and holding regular conference calls, as well as reviewing and assessing any matters reported. The group engagement team also reviewed selected audit working papers for certain component teams to evaluate the sufficiency of audit evidence obtained and fully understand the matters arising from the component audits.

In addition, senior members of the group engagement team have visited component teams across all group segments in the UK, US and Germany. These visits were in-person for these locations. They included meetings with the component auditor and with local management.

The impact of climate risk on our audit

As part of our audit we made enquiries of management to understand the process management adopted to assess the extent of the potential impact of climate risk on the group's and company's financial statements and to support the disclosures made within the Sustainability section of the Strategic report. In addition to enquiries with management, we understood the governance process in place to assess climate risk, reviewed the group's assessment of climate related risk including both physical and transition risks and read additional reporting made on climate including its Carbon Disclosure Project public submission and the group's separate Climate Review which incorporates disclosures in line with the Task Force on Climate-related Financial disclosure (TCFD) framework.

We held meetings with management including the group's sustainability team to consider the completeness of management's climate risk assessment and its consistency with internal climate plans and board minutes, including whether the time horizons management have used take account of all relevant aspects of climate change such as transition risks. We also considered the consistency with the group's communications on climate related impacts. The group has publicly set out its target to achieve net carbon zero from operations by 2030 (excluding product testing and development), a target for a 50% reduction in total scope 1 and 2 emissions by 2030 and net zero 2050 commitments albeit the pathway to these commitments is not fully developed.

We considered the following areas which depend on medium to long term profit or cash flow forecasts to potentially be materially impacted by climate risk and consequently we focused our audit work in these areas: long-term contract accounting in the UK Civil business (including contract loss provisions); the recoverability of deferred tax assets in the UK; the recoverability of the carrying value of goodwill and certain intangible assets and the company's investments in subsidiary undertakings on the company balance sheet. Our findings were reported to and discussed with the Audit Committee and management. Where significant, further details of how climate change has been considered in these areas and our audit response is given in the key audit matters above.

To respond to the audit risks identified in these areas we tailored our audit approach to address these, in particular, we:

- Deployed our valuation experts to benchmark carbon pricing and key commodity price forecasts against forecasts of future prices and found them to be materially reasonable. These have been incorporated by management in their forecasts of the group's future cost base for long-term contract accounting and associated provisions as well as scenarios utilised in assessing the recoverability of deferred tax assets, goodwill and other assets;
- Considered the reasonableness of management's assertion that climate change is unlikely to have a material impact on aviation demand by comparing management's EFH forecasts against other industry benchmarks;
- Verifying that the capital and cash costs of the group's climate change commitments have been incorporated in the group's forecasts including those used for going concern and the disclosures around the viability of the group that are included in the Strategic Report;
- Considered whether management had adequately reflected the risk of regulatory changes or demand changes to the extent known in the useful economic lives and recoverable value of other intangible assets including those related to diesel engines produced by Power Systems;
- Validated management's judgement that climate change is unlikely to have a material impact on other estimates as at 31 December 2022 including the recoverability of inventory or the expected credit loss provision associated with trade receivables and contract assets by considering the short timeframe these assets are expected to be utilised compared to the period over which transition and physical risks are expected to arise; and
- Where appropriate, performed independent sensitivity analysis to determine to what extent reasonably possible changes in the climate related assumptions in the group's forecasts could result in material changes to the impacted balances and assessed the appropriateness of the associated disclosures.

We also considered the consistency of the disclosures in relation to climate change (including the disclosures in the Sustainability section of the Strategic Report) within the Annual Report and the separate Climate Review with the financial statements and our knowledge obtained from our audit. This included considering the models management used in the TCFD scenario analysis and if the assumptions in those models are consistent with the assumptions used elsewhere in the financial statements.

The group has incorporated an estimate within its forecasts of the associated costs for its 2030 commitments to reach net zero for facilities and to reduce scope 1 and 2 emissions by 50%. As disclosed within the Sustainability section of the Strategic Report and the Climate Review the achievement of net zero by 2050 will require significant change across the aviation sector in particular, including widespread adoption of Sustainable Aviation Fuels or other alternative fuel sources. Management has not included the incremental cost of this over and above the costs to achieve its 2030 targets in its longer term forecasts, based on the assumptions that such costs can be passed onto customers and will occur after the average life of the current existing contracts.

Our procedures did not identify any material impact in the context of our audit of the financial statements as a whole for the year ended 31 December 2022. The future estimated financial impacts of climate risk are clearly uncertain given the medium to long term timeframes involved and their dependency on how Governments, global markets, corporations and society respond to the issue of climate change and the speed of technological advancements that may be necessary. Accordingly, financial statements cannot capture all possible future outcomes as these are not yet known.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Financial statements – group	Financial statements – company
Overall materiality	£80m (2021: £80m).	£147m (2021: £147m).
How we determined it	Based on approximately 0.6% of five year average underlying revenues from continuing operations (2021: approximately 0.6% of four year average underlying revenues from continuing and discontinued operations)	Based on approximately 1.0% of total assets (2021: Based on approximately 1.0% of total assets)
Rationale for benchmark applied	We have consistently used underlying revenue to determine materiality as opposed to a profit based benchmark. This is because there is considerable volatility in profit before tax as a result of revenue recognition under IFRS 15 and from the fair value movement in the group's derivatives. Underlying revenue continues to be a key performance metric for the group and is more stable than the profit metric. However, from 2020 COVID-19 introduced additional volatility that impacted benchmarks. To mitigate this we have used a five year average underlying revenue measure to calculate materiality. ITP Aero, which was classified as a discontinued operation, has now been sold and therefore we have excluded its contribution to revenue over this five year period in determining our materiality.	We determined our materiality based on total assets, which is more applicable than a performance-related measure as the company is an investment holding company for the group. The higher company materiality level was used for the purposes of testing balances not relevant to the group audit, such as investments in subsidiary undertakings and intercompany balances.

For each component in the scope of our group audit, we allocated a materiality that is less than our overall group materiality. The range of materiality allocated across components was between £4m and £67m. Certain components were audited to a local statutory audit materiality that was also less than our overall group materiality.

We use performance materiality to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds overall materiality. Specifically, we use performance materiality in determining the scope of our audit and the nature and extent of our testing of account balances, classes of transactions and disclosures, for example in determining sample sizes. Our performance materiality was 75% (2021: 75%) of overall materiality, amounting to £60m (2021: £60m) for the group financial statements and £110m (2021: £110m) for the company financial statements.

In determining the performance materiality, we considered a number of factors – the history of misstatements, risk assessment and aggregation risk and the effectiveness of controls – and concluded that an amount at the upper end of our normal range was appropriate.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above £3m (group audit) (2021: £3m) and £7m (company audit) (2021: £7m) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Conclusions relating to going concern

Our evaluation of the directors' assessment of the group's and the company's ability to continue to adopt the going concern basis of accounting included:

- Testing the model used for management's going concern assessment which is primarily a liquidity assessment given there are no significant financial covenants in its committed debt facilities. Management's assessment covered the 18 months to August 2024. We focussed on this period and also considered the subsequent four months to the end of 2024.
- Management's base case forecasts are based on its normal budget and forecasting process for each of its businesses for the next five years. We understood and assessed this process by business including the assumptions used for 2023 and 2024 and assessed whether there was adequate support for these assumptions. We also considered the reasonableness of the monthly phasing of cash flows. A similar assessment was performed of both downside and stressed downside cash flows, including understanding of the scenarios modelled by management, how they were quantified and the resultant monthly phasing of the downside and stressed downside cash flow forecasts.
- We have read and understood the key terms of all committed debt facilities to understand any terms, covenants or undertakings that may impact the availability of the facility.
- Using our knowledge from the audit and assessment of previous forecasting accuracy we calculated our own sensitivities to apply to management's cash flow forecasts. We overlaid these on management's forecasts to arrive at our own view of management's downside forecasts. This included consideration of management's assessment of the impact of climate change and the likelihood of any downside risks crystallising in the period to August 2024.
- We considered the potential mitigating actions that management may have available to it to reduce costs, manage cash flows or raise additional financing and assessed whether these were within the control of management and possible in the period of the assessment.
- We assessed the adequacy of disclosures in the Going Concern statement and statements in note 1 of the consolidated and company financial statements and found these appropriately reflect the key areas of uncertainty identified.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's and the company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the group's and the company's ability to continue as a going concern.

In relation to the directors' reporting on how they have applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information, which includes reporting based on the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

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

With respect to the Strategic report and Directors' report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on our work undertaken in the course of the audit, the Companies Act 2006 requires us also to report certain opinions and matters as described below.

Strategic report and Directors' report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic report and Directors' report for the year ended 31 December 2022 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements.

In light of the knowledge and understanding of the group and company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic report and Directors' report.

Directors' Remuneration

In our opinion, the part of the Remuneration Committee Report to be audited has been properly prepared in accordance with the Companies Act 2006.

Corporate governance statement

The Listing Rules require us to review the directors' statements in relation to going concern, longer-term viability and that part of the corporate governance statement relating to the company's compliance with the provisions of the UK Corporate Governance Code specified for our review. Our additional responsibilities with respect to the corporate governance statement as other information are described in the Reporting on other information section of this report.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the corporate governance statement, included within the governance report is materially consistent with the financial statements and our knowledge obtained during the audit, and we have nothing material to add or draw attention to in relation to:

- The directors' confirmation that they have carried out a robust assessment of the emerging and principal risks;
- The disclosures in the Annual Report that describe those principal risks, what procedures are in place to identify emerging risks and an explanation of how these are being managed or mitigated;
- The directors' statement in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the group's and company's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements;
- The directors' explanation as to their assessment of the group's and company's prospects, the period this assessment covers and why the period is appropriate; and
- The directors' statement as to whether they have 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 its assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Our review of the directors' statement regarding the longer-term viability of the group and company was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statement; checking that the statement is in alignment with the relevant provisions of the UK Corporate Governance Code; and considering whether the statement is consistent with the financial statements and our knowledge and understanding of the group and company and their environment obtained in the course of the audit.

In addition, based on the work undertaken as part of our audit, we have concluded that each of the following elements of the corporate governance statement is materially consistent with the financial statements and our knowledge obtained during the audit:

- The directors' statement that they consider the Annual Report, taken as a whole, is fair, balanced and understandable, and provides the information necessary for the members to assess the group's and company's position, performance, business model and strategy;
- The section of the Annual Report that describes the review of effectiveness of risk management and internal control systems; and
- The section of the Annual Report describing the work of the Audit Committee.

We have nothing to report in respect of our responsibility to report when the directors' statement relating to the company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified under the Listing Rules for review by the auditors.

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Statement of Directors' responsibilities in respect of the Financial Statements, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

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

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

Based on our understanding of the group and industry, we identified that the principal risks of non-compliance with laws and regulations related to the regulations of country aviation authorities such as the Civil Aviation Authority, import and export restrictions including sanctions, and the UK Bribery Act, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the financial statements such as the Listing Rules of the UK Financial Conduct Authority, the Companies Act 2006 and tax legislation. We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to (1) posting inappropriate journal entries to manipulate financial results; (2) management bias in accounting estimates such as long-term contract accounting and associated provisions, the recoverability of intangible programme assets, and deferred tax asset recognition; (3) the sale of Civil engines to joint ventures for no clear commercial purpose or above market prices; and (4) inappropriately including or excluding transactions from the group's underlying or free cash flow alternative performance metrics. The group engagement team shared this risk assessment with the component auditors so that they could include appropriate audit procedures in response to such risks in their work. Audit procedures performed by the group engagement team and/or component auditors included:

- Discussions throughout the year with management, internal audit, the group's internal and external legal counsel, and the head of ethics and compliance, including consideration of known or suspected instances of non-compliance with laws and regulation and fraud;
- Reading the minutes of the group's Safety, Ethics & Sustainability committee and assessment of 'speak-up' matters reported through the group's Ethics Line and the results of management's investigation of such matters;
- Reading the minutes of Board meetings to identify any inconsistencies with other information provided by management;
- Reviewing legal expense accounts to identify significant legal spend that may be indicative of non-compliance with laws and regulations;
- Challenging assumptions and judgements made by management in determining significant accounting estimates (because of the risk of management bias), in particular in relation to long-term contract accounting and associated provisions, the recoverability of programme assets, and the recoverability of deferred tax assets (see related key audit matters above);
- Identifying and testing unusual journal entries, in particular journal entries posted with unusual account combinations, and testing all material consolidation journals; and
- Challenging why certain items are excluded or included from underlying profit or free cash flow and review of disclosures included in the Annual Report explaining and reconciling alternative performance measures to statutory metrics.

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

Our audit testing might include testing complete populations of certain transactions and balances, possibly using data auditing techniques. However, it typically involves selecting a limited number of items for testing, rather than testing complete populations. We will often seek to target particular items for testing based on their size or risk characteristics. In other cases, we will use audit sampling to enable us to draw a conclusion about the population from which the sample is selected.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not obtained all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the company financial statements and the part of the Remuneration Committee Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the Audit Committee, we were appointed by the members on 3 May 2018 to audit the financial statements for the year ended 31 December 2018 and subsequent financial periods. The period of total uninterrupted engagement is five years, covering the years ended 31 December 2018 to 31 December 2022.

Other matter

In due course, as required by the Financial Conduct Authority Disclosure Guidance and Transparency Rule 4.1.14R, these financial statements will form part of the ESEF-prepared annual financial report filed on the National Storage Mechanism of the Financial Conduct Authority in accordance with the ESEF Regulatory Technical Standard ('ESEF RTS'). This auditors' report provides no assurance over whether the annual financial report will be prepared using the single electronic format specified in the ESEF RTS.

Ian Chambers (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London
23 February 2023

SUSTAINABILITY ASSURANCE STATEMENT

Independent Limited Assurance Statement

To the stakeholders of Rolls-Royce Holdings plc

Introduction and objectives of work

Bureau Veritas UK Limited ('Bureau Veritas') has been engaged by Rolls-Royce Holdings plc (Rolls-Royce) to provide assurance to limited level of its selected sustainability performance indicators for inclusion in its 2022 Annual Report and website at www.rolls-royce.com/sustainability (the Report). The objective is to provide assurance to Rolls-Royce and its stakeholders over the accuracy and reliability of the reported information and data.

Scope of work

The scope of our work was limited to assurance over the following information included within the Report ('the Report') for the period 1 January to 31 December 2022 (the 'Selected Information'):

- Total Energy consumption;
- Total Scope 1 and 2 greenhouse gases (GHG) emissions (location based);
- Total waste;
- Total Reportable Injuries;
- Number of people reached through the Science, Technology, Engineering and Mathematics (STEM) education outreach programmes; and
- Employee engagement score 'grand mean' and increase compared to 2021.

Reporting criteria

The Selected Information are reported according to the Rolls-Royce "Basis of Reporting", a copy of which is available from https://www.rolls-royce.com/sustainability.aspx.

Limitations and exclusions

Excluded from the scope of our work is assurance of information relating to:

- Activities outside the defined assurance period;
- Positional statements of a descriptive or interpretative nature, or of opinion, belief, aspiration or commitment to undertake future actions; and
- Other information included in the Report other than the Selected Information.

The following limitations should be noted:

- This limited assurance engagement relies on a risk based selected sample of sustainability data and the associated limitations that this entails.
- This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist.
- The waste and energy data for Magdaburg site were assumed based on 2021 actuals and normalised against 2022 production figures due to operational challenges.
- Total Annual Waste, GHG and Energy Calculation – Roll Royce Total annual GHG, Energy and Waste values are estimates based on ten months of actual data (January to October), since it is not possible to provide the complete full year data within the engagement timeframe.

Responsibilities

This preparation and presentation of the Selected Information in the Report are the sole responsibility of the management of Rolls-Royce.

Bureau Veritas was not involved in the drafting of the Report or of the Reporting Criteria. Our responsibilities were to:

- obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria;
- form an independent conclusion based on the assurance procedures performed and evidence obtained; and
- report our conclusions to the directors of Rolls-Royce.

Assessment Standard

We performed our work to a limited level of assurance in accordance with International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after December 15, 2015), issued by the International Auditing and Assurance Standards Board.

Summary of work performed

As part of our independent assurance, our work included:

1. Conducting interviews with relevant personnel of Rolls-Royce;
2. Reviewing the data collection and consolidation processes used to compile Selected Information, including assessing assumptions made, and the data scope and reporting boundaries;
3. Reviewing documentary evidence provided by Rolls-Royce;
4. Agreeing a selection of the Selected Information to the corresponding source documentation;
5. Reviewing Rolls-Royce systems for quantitative data aggregation and analysis;
6. Assessing the disclosure and presentation of the Selected Information to ensure consistency with assured information;
7. Carrying out 9 site visits, selected on a risk based basis to United Kingdom, United States, Germany, Canada and Singapore. These sites are within the top 25 sites to contribute over the Selected Information;
8. Confirmation of accuracy of information with third parties and/or external stakeholders;
9. Re-performing a selection of aggregation calculations of the Selected Information;
10. Re-performing greenhouse gas emissions conversions calculations.

A 5% materiality threshold was applied to this assurance. It should be noted that the procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Conclusion

On the basis of our methodology and the activities and limitations described above nothing has come to our attention to indicate that the Selected Information is not fairly stated in all material respects.

Statement of Independence, Integrity and Competence

Bureau Veritas is an independent professional services company that specialises in quality, environmental, health, safety and social accountability with over 190 years history. Its assurance team has extensive experience in conducting verification over environmental, social, ethical and health and safety information, systems and processes.

Bureau Veritas operates a certified [1] Quality Management System which complies with the requirements of ISO 9001:2015, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, quality reviews and applicable legal and regulatory requirements which we consider to be equivalent to ISQM 1 & 2 [2].

Bureau Veritas has implemented and applies a Code of Ethics, which meets the requirements of the International Federation of Inspections Agencies (IFIA) [3], across the business to ensure that its employees maintain integrity, objectivity, professional competence and due care, confidentiality, professional behaviour and high ethical standards in their day-to-day business activities. We consider this to be equivalent to the requirements of the IESBA code [4]. The assurance team for this work does not have any involvement in any other Bureau Veritas projects with Rolls-Royce.

BUREAU VERITAS

Bureau Veritas UK Limited
14 February 2023

Registered in England & Wales, Company Number: 1758622
Registered Office: Suite 206 Fort Dunlop, Fort Parkway, Birmingham, B24 9FD

[1] Certificate available on request
[2] International Standard on Quality Management 1 (Previously International Standard on Quality Control 1) & International Standard on Quality Management 2
[3] International Federation of Inspection Agencies – Compliance Code – Third Edition
[4] Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants

GREENHOUSE GAS EMISSIONS

In 2022, our total gross scope 1 + 2 greenhouse gas (GHG) emissions were 409,926 tonnes of carbon dioxide equivalent (tCO_2e). This represents an increase of 3% compared with 398,474 tCO_2e in 2021.

Aspect	tCO_2e	2018	2019	2020	2021	2022
Emissions from activities for which the Company own or control including the combustion of fuel and operation of facilities. [Direct GHG Emissions (Scope 1)]	Global (excluding UK)	155,196	159,317	154,517	150,974	**134,707**
	UK	84,865	92,355	86,116	70,952	**105,646**
Emissions from the purchase of electricity, heat, steam and cooling purchased for our own use. [Indirect GHG Emissions (Scope 2) location-based]	Global (excluding UK)	152,158	140,661	116,296	118,568	**114,864**
	UK	100,807	86,803	65,909	57,980	**54,708**
Total gross GHG emissions	Global (excluding UK)	307,354	299,978	270,813	269,542	**249,571**
	UK	185,672	179,158	152,025	128,932	**160,355**
Energy consumption used to calculate above emissions – kWh	Global (excluding UK)	1,141,524,427	1,135,142,297	1,029,872,641	990,872,135	**923,555,501**
	UK	761,794,270	775,039,189	685,752,411	602,608,220	**758,009,765**
Intensity Ratio (total GHG emissions per £m revenue)	Total	33.8	29.9	36.8	35.5	**30.4**
Emissions from the purchase of electricity, heat, steam and cooling purchased for our own use. [Indirect GHG Emissions (Scope 2) market-based]	Global (excluding UK)	0	303	2,023	203	**4,337**
	UK	4	1,833	2,043	1,972	**1,128**
Outside of Scopes	Global (excluding UK)	0	0	0	0	**0**
	UK	0	20,743	45,213	23,614	**0**
Additional Supporting Information						
Electricity purchased from renewable sources – kWh	Global (including UK)	0	245,314,593	304,067,206	297,013,845	**306,978,404**
Energy generated on-site from renewable sources kWh	Global (including UK)	5,076,053	7,517,844	7,401,115	3,350,779	**9,209,251**

The above figures include 306,978,404 kWh of renewable energy purchases either backed by the Renewable Energy Guarantees of Origin (REGO) scheme in the UK or the Guarantees of Origin (GoO) from a relevant EU Member State. This energy is used by the majority of our facilities in the UK and Germany. The source in the UK includes a proportion of electricity that was generated by the combustion of biofuel. The associated emissions are included above under the location-based Scope 2 emissions (using grid average emission factors). They are also reported separately as market-based Scope 2 emissions (covering the emissions of nitrous oxide and methane) and Outside of Scopes (covering the emissions of carbon dioxide). In addition, the above figures include 9,209,251 kWh of electricity and heat generated on-site from renewable energy sources, including solar panels and ground source heat pumps.

We include the reporting of fugitive emissions of hydrofluorocarbons (HFCs), associated with air conditioning equipment, into our GHG emissions figures. These include emissions from our facilities in the US and Canada only. We do not anticipate that emissions from other facilities will have a significant impact on the above figures.

With the exceptions noted above, we have reported on the underlying energy use and emission sources required under the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018. In accordance with these regulations, the above statement includes emissions associated with the ITP Aero business which was classified as a discontinued business on 30 June 2021, since Rolls-Royce remained responsible for its activities until it was sold on 15 September 2022. All these sources fall within the scope of our Consolidated Financial Statements

We have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) as of 31 December 2014 utilising the operational control approach, supplemented by the GHG Reporting Guidance for the Aerospace Industry (version 3) and emission factors from the UK Government's GHG Conversion Factors for Company Reporting 2022. We report our emissions of: carbon dioxide; methane; nitrous oxide; hydrofluorocarbons and perfluorocarbons on a carbon dioxide equivalent basis. We had no emissions of sulphur hexafluoride or nitrogen trioxide.

Further details on our methodology for reporting and the criteria used can be found within our basis of reporting, available to download at www.rolls-royce.com

OTHER FINANCIAL INFORMATION

Foreign exchange

Foreign exchange rate movements influence the reported income statement, the cash flow and closing net funds balance. The average and spot rates for the principal trading currencies of the Group are shown in the table below:

		2022	2021	Change
	Year-end spot rate	**1.20**	1.35	-11%
USD per GBP	Average spot rate	**1.24**	1.38	-10%
	Year-end spot rate	**1.13**	1.19	-5%
EUR per GBP	Average spot rate	**1.17**	1.16	+1%

The Group's global corporate income tax contribution

The Group's total corporation tax payments in 2022 were £174m. Around 90% of this is paid in the US, Germany, Singapore and Canada. Together with the UK, where tax losses are currently generated (see note 5), the operations in these countries are where the majority of the Group's business is undertaken and employees are based. The balance of tax payments are made in around 40 other countries.

In common with most multinational groups, the total of all profits and losses for corporate income tax purposes is not the same as the consolidated loss before taxation reported on page 102.

The main reasons for this are:

(i) the consolidated income statement is prepared under IFRS, whereas the corporate income tax profits and losses for each company are determined by local tax accounting rules;

(ii) accounting rules require certain income and costs relating to our commercial activities to be eliminated from, or added to, the aggregate of all the profits of the Group companies when preparing the consolidated income statement (consolidation adjustments); and

(iii) specific tax rules including exemptions or incentives as determined by the tax laws in each country.

In most cases, paragraphs (i) and (ii) above are only a matter of timing and therefore tax will be paid in an earlier or later year. The impact of paragraph (iii) above will often be permanent depending on the relevant tax law. Further information on the tax position of the Group can be found as follows:

- Audit Committee Report (page 73) – updates given to the Audit Committee during the year;
- note 1 to the Consolidated Financial Statements (page 118) – details of key areas of uncertainty and accounting policies for tax;
- note 5 to the Consolidated Financial Statements (pages 133 to 136)
- Details of the tax balances in the Consolidated Financial Statements together with a tax reconciliation. This explains the main drivers of the tax rate and the impact of our assessment on the recovery of UK deferred tax assets.

Information on the approach to managing the Group's tax affairs can be found at www.rolls-royce.com.

Investments and capital expenditure

The Group subjects all major investments and capital expenditure to a rigorous examination of risks and future cash flows to ensure that they create shareholder value. All major investments, including the launch of major programmes, require Board approval.

The Group has a portfolio of projects at different stages of their lifecycles. All of our major investments and projects are assessed using a range of financial metrics, including discounted cash flow and return on investment.

Financial risk management

The Board has established a structured approach to financial risk management. The Financial risk committee (Frc) is accountable for managing, reporting and mitigating the Group's financial risks and exposures. These risks include the Group's principal counterparty, currency, interest rate, commodity price, liquidity and credit rating risks outlined in more depth in note 20. The Frc is chaired by the Chief Financial Officer. The Group has a comprehensive financial risk policy that advocates the use of financial instruments to manage and hedge business operations risks that arise from movements in financial, commodities, credit or money markets. The Group's policy is not to engage in speculative financial transactions. The Frc sits quarterly to review and assess the key risks and agree any mitigating actions required.

Capital structure

£m	2022	2021
Total equity	**(6,016)**	(4,636)
Cash flow hedges	**(26)**	45
Group capital	**(6,042)**	(4,591)
Net debt	**(3,251)**	(5,157)

Operations are funded through various shareholders' funds, bank borrowings, bonds and notes. The capital structure of the Group reflects the judgement of the Board as to the appropriate balance of funding required. Funding is secured by the Group's continued access to the global debt markets. Borrowings are funded in various currencies using derivatives where appropriate to achieve a required currency and interest rate profile. The Board's objective is to retain sufficient financial investments and undrawn facilities to ensure that the Group can both meet its medium-term operational commitments and cope with unforeseen obligations and opportunities.

The Group holds cash and short-term investments which, together with the undrawn committed facilities, enable it to manage its liquidity risk.

During the year, the Group repaid the £2.0bn loan, supported by an 80% guarantee from UK Export Finance.

During the year, the Group entered into a new £1.0bn loan, maturing in 2027 (supported by an 80% guarantee from UK Export Finance (UKEF)).

The £2.5bn revolving credit facility, the £1.0bn UKEF-supported loan, the £1.0bn sustainability linked UKEF-supported loan and £1.0bn bank loan were undrawn at the year end.

At the year end, the Group retained aggregate liquidity of £8.1bn, including cash and cash equivalents of £2.6bn and undrawn borrowing facilities of £5.5bn.

The Group has no material debt maturities until 2024. The maturity profile of the borrowing facilities is regularly reviewed to ensure that refinancing levels are manageable in the context of the business and market conditions. There are no rating triggers in any borrowing facility that would require the facility to be accelerated or repaid due to an adverse movement in the Group's credit rating. The Group conducts some of its business through a number of joint ventures. A major proportion of the debt of these joint ventures is secured on the assets of the respective companies and is non-recourse to the Group. This debt is further outlined in note 17.

Credit rating

£m	Rating	Outlook
Moody's Investors Service	Ba3	Stable
Standard & Poor's	BB-	Positive
Fitch	BB-	Positive

The Group subscribes to Moody's, Standard & Poor's and Fitch for independent long-term credit ratings with the ratings in the table above being applicable at the date of this report.

Accounting

The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the UK.

No new accounting standards had a material impact in 2022. During the year, the Group adopted the amendment to IAS 37 *Provisions, contingent liabilities and contingent assets* for Onerous Contracts – Cost of Fulfilling a Contract on 1 January 2022. As a result of the amendment, the cumulative effect of adopting the amendment has been recognised as an adjustment to opening balance of retained earnings and provisions. See page 112 for further detail.

Other than IFRS 17 *Insurance Contracts* described on page 125, where the Group is in the process of concluding its analysis of whether there is any further impact as a result of adopting the new standard, the Group does not consider that any other standards, amendments or interpretations issued by the IASB, but not yet applicable will have a significant impact on the Consolidated Financial Statements in 2023.

ALTERNATIVE PERFORMANCE MEASURES

Alternative performance measures (APMs)

Business performance is reviewed and managed on an underlying basis. These alternative performance measures reflect the economic substance of trading in the year/period, including the impact of the Group's foreign exchange activities. In addition, a number of other APMs are utilised to measure and monitor the Group's performance.

Definitions and reconciliations to the relevant statutory measure are included below.

Underlying results from continuing operations

Underlying results include underlying revenue, underlying operating profit and underlying EPS. Underlying results are presented by recording all relevant revenue and cost of sales transactions at the average exchange rate achieved on effective settled derivative contracts in the period that the cash flow occurs. Underlying results also exclude: the effect of acquisition accounting and business disposals, impairment of goodwill and other non-current assets where the reasons for the impairment are outside of normal operating activities, exceptional items and certain other items which are market driven and outside of managements control. Statutory results have been adjusted for discontinued operations and underlying results from continuing operations have been presented on the same basis. Further detail can be found in notes 2, 6 and 27.

Revenue from continuing operations	2022 £m	2021 £m
Statutory revenue	13,520	11,218
Derivative and FX adjustments	(829)	(271)
Underlying revenue	12,691	10,947

Operating profit from continuing operations		
Statutory operating profit	837	513
Derivative and FX adjustments	(264)	40
Programme exceptional charges	(69)	(105)
Restructuring exceptional charges/(credits)	47	(45)
Acquisition accounting and M&A	58	50
Impairments	65	(9)
Pension past-service credit	(22)	(47)
Other underlying adjustments	–	17
Underlying operating profit	652	414

Basic EPS from continuing operations	2022 pence	2021 pence
Statutory basic EPS	(14.24)	1.48
Effect of underlying adjustments to (loss)/profit before tax	20.45	3.96
Related tax effects	(4.26)	(5.33)
Basic underlying EPS	1.95	0.11

Underlying results from discontinued operations

Results from discontinued operations	2022 £m	2021 £m
Profit for the period from discontinued operations on ordinary activities	68	36
Costs of disposal on discontinued operations prior to disposal	–	(39)
Loss on disposal of discontinued operations	(148)	–
Statutory operating loss	(80)	(3)
Derivative and FX adjustments	(1)	5
Restructuring exceptional charges	–	(1)
Acquisition accounting & M&A	179	64
Related tax effects	(31)	(14)
Underlying operating profit	67	51

Organic change

Organic change is the measure of change at constant translational currency applying full year 2021 average rates to 2022. The movement in underlying change to organic change is reconciled on page 204 and 205.

All amounts are shown on an underlying basis and reconciled to the nearest statutory measure above.

Total Group income statement

	2022 £m	2021 £m	Change £m	FX £m	Organic Change £m	Organic Change %
Underlying revenue	12,691	10,947	1,744	210	1,534	14%
Underlying gross profit	2,477	1,996	481	45	436	22%
Underlying operating profit	652	414	238	41	197	48%
Net financing costs	(446)	(378)	(68)	(3)	(65)	17%
Underlying profit before taxation	206	36	170	38	132	367%
Taxation	(48)	(26)	(22)	(6)	(16)	62%
Underlying profit for the year from continuing operations	158	10	148	32	116	1,160%

Civil Aerospace

	2022 £m	2021 £m	Change £m	FX £m	Organic Change £m	Organic Change %
Underlying revenue	5,686	4,536	1,150	24	1,126	25%
Underlying OE revenue	1,982	1,612	370	(4)	374	23%
Underlying services revenue	3,704	2,924	780	28	752	26%
Underlying gross profit	853	474	379	20	359	76%
Commercial and administrative costs	(371)	(297)	(74)	(3)	(71)	24%
Research and development costs	(452)	(434)	(18)	(3)	(15)	3%
Joint ventures and associates	113	85	28	5	23	27%
Underlying operating profit/(loss)	143	(172)	315	19	296	nm

Defence

	2022 £m	2021 £m	Change £m	FX £m	Organic Change £m	Organic Change %
Underlying revenue	3,660	3,368	292	214	78	2%
Underlying OE revenue	1,634	1,411	223	87	136	10%
Underlying services revenue	2,026	1,957	69	127	(58)	(3)%
Underlying gross profit	726	721	5	33	(28)	(4)%
Commercial and administrative costs	(174)	(161)	(13)	(7)	(6)	4%
Research and development costs	(122)	(105)	(17)	(8)	(9)	9%
Joint ventures and associates	2	2	–	1	(1)	–
Underlying operating profit	432	457	(25)	19	(44)	(10)%

Power Systems

	2022 £m	2021 £m	Change £m	FX £m	Organic Change £m	Organic Change %
Underlying revenue	3,347	2,749	598	(28)	626	23%
Underlying OE revenue	2,187	1,744	443	(19)	462	26%
Underlying services revenue	1,160	1,005	155	(9)	164	16%
Underlying gross profit	918	778	140	(8)	148	19%
Commercial and administrative costs	(441)	(383)	(58)	4	(62)	16%
Research and development costs	(204)	(157)	(47)	2	(49)	31%
Joint ventures and associates	8	4	4	–	4	–
Underlying operating profit	281	242	39	(2)	41	17%

New Markets

	2022 £m	2021 £m	Change £m	FX £m	Organic Change £m	Organic Change %
Underlying revenue	**3**	2	1	–	1	50%
Underlying OE revenue	**1**	–	1	–	1	–
Underlying services revenue	**2**	2	–	–	–	–
Underlying gross (loss)/profit	**(1)**	1	(2)	–	(2)	nm
Commercial and administrative costs	**(23)**	(3)	(20)	–	(20)	667%
Research and development costs	**(108)**	(68)	(40)	–	(40)	59%
Joint ventures and associates	**–**	–	–	–	–	–
Underlying operating loss	**(132)**	(70)	(62)	–	(62)	89%

Trading cash flow

Trading cash flow is defined as free cash flow (as defined below) before the deduction of recurring tax and post-retirement benefit expenses. Trading cash flow per segment is used as a measure of business performance for the relevant segments. For a reconciliation of group trading cash flow to free cash flow, see note 28.

	2022 £m	2021 £m
Civil Aerospace	**226**	(1,670)
Defence	**426**	377
Power Systems	**158**	219
New Markets	**(57)**	(56)
Total reportable segments trading cash flow	**753**	(1,130)
Other businesses	**5**	(43)
Central and inter-segment	**(49)**	(38)
Trading cash flow from continuing operations	**709**	(1,211)
Discontinued operations	**(12)**	46
Trading cash flow	**697**	(1,165)
Underlying operating profit charge exceeded by contributions to defined benefit schemes	**(32)**	(92)
Taxation [1]	**(174)**	(185)
Free cash flow	**491**	(1,442)

[1] See page 105 for taxation paid in the statutory cash flow statement

Free cash flow

Free cash flow is a measure of financial performance of the businesses' cash flow to see what is available for distribution among those stakeholders funding the business (including debt holders and shareholders). Free cash flow is cash flows from operating activities, including capital expenditure and movements in investments, capital elements of lease payments, interest paid and excluding amounts spent or received on activity related to business acquisitions or disposals, financial penalties paid and exceptional restructuring payments. Free cash flow from continuing operations has been presented to remove free cash flow from discontinued operations, as defined in note 27. For further detail, see note 28.

	2022 £m	2021 £m
Statutory cash flows from operating activities	**1,850**	(259)
Capital investment (including investment from NCI and movement in joint ventures, associates and other investments)	**(512)**	(489)
Capital element of lease payments	**(218)**	(374)
Interest paid	**(352)**	(331)
Settlement of excess derivatives	**(326)**	(452)
Exceptional restructuring costs	**76**	231
M&A costs	**2**	50
Financial penalties paid	**–**	156
Other	**(29)**	26
Free cash flow	**491**	(1,442)
Discontinued operations free cash flow [1]	**14**	(43)
Free cash flow from continuing operations	**505**	(1,485)

[1] Discontinued operations free cash excludes: transactions with parent company of £(65)m (2021: £(15)m), movements in borrowings of £22m (2021: £22m), exceptional restructuring costs of £nil (2021: £8m), M&A costs of £44m (2021: £44m) and other of £(6)m (2021: £29m)

Group R&D expenditure

R&D expenditure during the year, excluding the impact of contributions and fees, which include government funding, amortisation and impairment of capitalised costs and amounts capitalised during the year. For further detail, see note 3.

	2022 £m	2021 £m
Statutory research and development costs	**(891)**	(778)
Amortisation and impairment of capitalised costs	**94**	70
Capitalised as intangible assets	**(131)**	(105)
Contributions and fees	**(359)**	(366)
Gross R&D expenditure	**(1,287)**	(1,179)

Key performance indicators

The following measures are key performance indicators and are calculated using APMs or statutory results. See below for calculation of these key performance indicators.

Order Backlog

Order backlog, also known as unrecognised revenue, is the amount of revenue on current contracts that is expected to be recognised in future periods. Civil Aerospace OE orders where the customer has retained the right to cancel (for deliveries in the next seven to 12 months) are excluded. Further details are included in note 2 on page 129.

Self-funded R&D as a proportion of underlying revenue

Self-funded cash expenditure on R&D before any capitalisation or amortisation relative to underlying revenue. Self-funded R&D and underlying revenue are presented for continuing operations in line with presentation in the statutory income statement.

	2022 £m	2021 £m
Gross R&D expenditure	**(1,287)**	(1,179)
Contributions and fees	**359**	366
Self-funded R&D	**(928)**	(813)
Underlying revenue	**12,691**	10,947
	%	%
Self-funded R&D as a proportion of underlying revenue	**7.3**	7.4

Capital expenditure as a proportion of underlying revenue

Cash purchases of PPE in the year relative to underlying revenue presented for continuing operations. All proposed investments are subject to rigorous review to ensure that they are consistent with forecast activity and will provide value for money. The Group measures annual capital expenditure as the cash purchases of PPE acquired during the period.

	2022 £m	2021 £m
Purchases of PPE (CFS)	**359**	328
Less: capital expenditure from discontinued operations	**(14)**	(24)
Net capital expenditure	**345**	304
Underlying revenue	**12,691**	10,947
	%	%
Capital expenditure as a proportion of underlying revenue	**2.7**	2.8

DIRECTORS' REPORT

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Board of Directors

The Directors of the Company who were in office during the year and up to the date of signing the financial statements were Dame Anita Frew, Tufan Erginbilgic, Panos Kakoullis, Paul Adams, George Culmer, Lord Jitesh Gadhia, Beverly Goulet, Nick Luff, Mike Manley, Wendy Mars, Sir Kevin Smith, and Dame Angela Strank. In addition, Warren East, Lee Hsien Yang and Irene Dorner served as Directors during the year, before stepping down from the Board. Their respective resignation dates can be found on page 70.

Directors' indemnities

The Directors have the benefit of an indemnity provision contained in the Articles. In addition, the Directors have been granted a qualifying third-party indemnity provision which was in force throughout the financial year and remains in force. Also, throughout the year, the Company purchased and maintained directors' and officers' liability insurance in respect of the Company and its subsidiaries and for their directors and officers.

Share price

During the year, the share price decreased by 25% from 122p to 92p, compared to an 11% increase in the FTSE aerospace and defence sector and a 1% increase in the FTSE 100. The Company's share price ranged from 130p in January 2022 to 64p in September 2022.

Share capital

On 31 December 2022, the Company's issued share capital comprised:

8,367,596,989	Ordinary Shares	20p each
23,854,740,218	C Shares	0.1p each
1	Special Share	£1

The Ordinary Shares are listed on the London Stock Exchange.

The Company issues non-cumulative redeemable preference shares (C Shares) as an alternative to paying a cash dividend. Further information on payments to shareholders is on page 210.

Share class rights

The full share class rights are set out in the Company's Articles, which are available at www.rolls-royce.com. The rights are summarised below.

Ordinary shares

Each member has one vote for each Ordinary Share held. Holders of Ordinary Shares are entitled to: receive the Company's Annual Report; attend and speak at general meetings of the Company; appoint one or more proxies or, if they are corporations, corporate representatives; and exercise voting rights. Holders of Ordinary Shares may receive a bonus issue of C Shares or a dividend and on liquidation may share in the assets of the Company.

C Shares

C Shares have limited voting rights and attract a preferential dividend, paid on a twice-yearly basis. On a return of capital on a winding-up, the holders of C Shares shall be entitled, in priority to any payment to the holders of Ordinary Shares, to the repayment of the nominal capital paid-up or credited as paid-up on the C Shares held by them, together with a sum equal to the outstanding preferential dividend which will have been accrued but not paid until the date of return of capital. The holders of C Shares are only entitled to attend, speak and vote at a general meeting if a resolution to wind up the Company is to be considered, in which case they may vote only on that resolution. The Company has the option to redeem the C Shares compulsorily, at any time if: the aggregate number of C Shares in issue is less than 10% of the aggregate number of all C Shares issued on or prior to that time or the event of a capital restructuring of the Company; the introduction of a new holding company; the acquisition of the Company by another company; or a demerger from the Group.

Special Share

Certain rights attach to the special rights non-voting share (Special Share) issued to the UK Secretary of State for Business, Energy & Industrial Strategy (Special Shareholder). These rights are set out in the Articles. Subject to the provisions of the Companies Act 2006 (the Act), the Treasury Solicitor may redeem the Special Share at par value at any time. The Special Share confers no rights to dividends but, in the event of a winding-up, it shall be repaid at its nominal value in priority to any other shares.

Certain provisions of the Articles (in particular those relating to the foreign shareholding limit, disposals and the nationality of the Company's Directors) that relate to the rights attached to the Special Share may only be altered with the consent of the Special Shareholder. The Special Shareholder is not entitled to vote at any general meeting or any other meeting of any class of shareholders.

Restrictions on transfer of shares and limitations on holdings

There are no restrictions on transfer or limitations on the holding of the Ordinary Shares or C Shares other than under the Articles (as described here), under restrictions imposed by law or regulation (for example, UK Market Abuse Regulations) or pursuant to the Company's inside information and share dealing policy. The Articles provide that the Company should be and remain under UK control. As such, an individual foreign shareholding limit is set at 15% of the aggregate votes attaching to the share capital of all classes (taken as a whole) and capable of being cast on a poll and to all other shares that the Directors determine are to be included in the calculation of that holding. The Special Share may only be issued to, held by and transferred to the Special Shareholder or their successor or nominee.

Shareholder agreements and consent requirements

No disposal may be made to a non-Group member which, alone or when aggregated with the same or a connected transaction, constitutes a disposal of the whole or a material part of either the nuclear propulsion business or the assets of the Group as a whole, without the consent of the Special Shareholder.

Authority to issue shares

At the 2022 AGM, an ordinary resolution was passed authorising the Directors to allot new ordinary shares up to a nominal value of £557,839,799, equivalent to one-third of the issued share capital of the Company. This resolution also authorised the Directors to allot up to two-thirds of the total issued share capital of the Company, although only in the case of a rights issue. A further special resolution was passed to effect a disapplication of pre-emption rights for a maximum of 5% of the issued share capital of the Company. These authorities are valid until the 2023 AGM or 30 June 2023, whichever is sooner, and the Directors propose to renew each of them at the 2023 AGM to be held on 11 May 2023. The Board believes that these authorities will allow the Company to retain flexibility to respond to circumstances and opportunities as they arise.

Authority to purchase own shares

At the 2022 AGM, the Company was authorised by shareholders to purchase up to 836,759,698 of its own ordinary shares, representing 10% of its issued ordinary share capital.

The authority for the Company to purchase its own shares expires at the conclusion of the 2023 AGM or 30 June 2023, whichever is sooner. A resolution to renew the authority will be proposed at the 2023 meeting.

The Company did not purchase any of its own ordinary shares under this authority during 2022.

Deadlines for exercising voting rights

Electronic and paper proxy appointments, together with voting instructions, must be received by the Registrar not less than 48 hours before a general meeting.

Voting rights for employee share plan shares

Shares are held in an employee benefit trust for the purpose of satisfying awards made under the various employee share plans. For shares held in a nominee capacity or if plan/trust rules provide the participant with the right to vote in respect of specifically allocated shares, the trustee votes in line with the participants' instructions. For shares that are not held absolutely on behalf of specific individuals, the general policy of the trustees, in accordance with investor protection guidelines, is to abstain from voting in respect of those shares.

Major shareholdings

At 31 December 2022, the following shareholders had notified an interest in the issued ordinary share capital of the Company in accordance with section 5.1.2 of the Disclosure and Transparency Rules:

Shareholder	Date of change in interest	% of issued ordinary share capital
Blackrock, Inc.	17 November 2022	6.39
Causeway Capital Management LLC	10 November 2022	8.95
Harris Associates L.P.	16 November 2020	4.99
Massachusetts Financial Services Company	28 March 2022	4.94
The Capital Group Companies, Inc.	3 February 2022	4.98

Changes to the Articles of Association

The Articles may be amended or new articles may be adopted by a special resolution of the shareholders of the Company, subject to the provisions of the Act.

Change of control

Contracts and joint venture agreements

There are a number of contracts and joint venture agreements which would allow the counterparties to terminate or alter those arrangements in the event of a change of control of the Company. These arrangements are commercially confidential and their disclosure could be seriously prejudicial to the Company.

Borrowings and other financial instruments

The Group has a number of borrowing facilities provided by various banks. These facilities generally include provisions which may require any outstanding borrowings to be repaid or the alteration or termination of the facility upon the occurrence of a change of control of the Company. At 31 December 2022, these facilities were 27% drawn (2021: 47%).

The Group has entered into a series of financial instruments to hedge its currency, interest rate and commodity exposures. These contracts provide for termination or alteration in the event that a change of control of the Company materially weakens the creditworthiness of the Group.

Employee share plans

In the event of a change of control of the Company, the effect on the employee share plans would be as follows:

— Incentive Plan – deferred share awards will normally vest immediately, and may be time pro-rated. The new controlling company might

offer an award in exchange instead (normally on substantially equivalent terms to the existing award).

— ShareSave – options would become exercisable immediately. The new controlling company might offer an equivalent option in exchange for cancellation of the existing option.

— Share Purchase Plan (SPP) – consideration received as shares would be held within the SPP, if possible, otherwise the consideration would be treated as a disposal from the SPP.

— LTIP – awards would vest on the change of control, subject to the Remuneration Committee's judgement of performance and may be reduced pro rata to service in the vesting period. Any applicable holding period will cease in the event of a change of control.

Political donations

The Company's policy is that it does not, directly or through any subsidiary, make what are commonly regarded as donations to any political party. However, the Act defines political donations very broadly and so it is possible that normal business activities, such as sponsorship, subscriptions, payment of expenses, paid leave for employees fulfilling certain public duties and support for bodies representing the business community in policy review or reform, which might not be thought of as political expenditure in the usual sense, could be captured. Activities of this nature would not be thought of as political donations in the ordinary sense of those words. The resolution to be proposed at the 2023 AGM, authorising political donations and expenditure, is to ensure that the Group does not commit any technical breach of the Act.

During the year, expenses incurred by Rolls-Royce North America, Inc. in providing administrative support for the Rolls-Royce North America political action committee (PAC) was US$ 59,169.05 (2021: US$41,852). PACs are a common feature of the US political system and are governed by the Federal Election Campaign Act.

The PAC is independent of the Group and independent of any political party. The PAC funds are contributed voluntarily by employees and the Group cannot affect how they are applied, although under US law, the business expenses are paid by the employee's company. Such contributions do not count towards the limits for political donations and expenditure for which shareholder approval will be sought at this year's AGM to renew the authority given at the 2022 AGM.

Disclosures in the Strategic Report

The Board has taken advantage of section 414C(11) of the Act to include disclosures in the Strategic Report including:

— employee involvement;

— the employment of disabled people;

— the future development, performance and position of the Group; and

— research and development activities.

Information required by UK Listing Rule (LR) 9.8.4

There are no disclosures to be made under LR 9.8.4.

Management report

The Strategic Report and the Directors' Report together are the management report for the purposes of Rule 4.1.8R of the DTR.

By order of the Board
Pamela Coles
Chief Governance Officer
23 February 2023

Voluntary disclosures required under Listing Rule 9.8.6 as at 31 December 2022

Gender identity

	Number of Board members	Percentage of the Board	Number of senior positions on the Board	Number in executive management	Percentage of executive management
Men	8	66.7%	Chief Executive, CFO and the SID	7	77.8%
Women	4	33.3%	Chair	2	22.2%
Other categories	–	–	–	–	–
Not specified/prefer not to say	–	–	–	–	–

Ethnic background

	Number of Board members	Percentage of the Board	Number of senior positions on the Board	Number in executive management	Percentage of executive management
White British or other White (including minority-white groups)	11	91.7%	Chair, Chief Executive, CFO and the SID	9	100%
Mixed/multiple ethnic groups	–	–	–	–	–
Asian/Asian British	1	8.3%	–	–	–
Black/African/Caribbean/Black British	–	–	–	–	–
Other ethnic group, including Arab	–	–	–	–	–
Not specified/prefer not to say	–	–	–	–	–

SHAREHOLDER INFORMATION

Managing your shareholding

Your shareholding is managed by Equiniti Limited (the Registrar). When making contact with the Registrar, please quote your shareholder reference number (SRN). This is an 11-digit number that can be found on your share certificate or in any other shareholder correspondence.

You can manage your shareholding at www.shareview.co.uk, speak to the Registrar on +44 (0)371 384 2637 (8.30am to 5.30pm Monday to Friday) or you can write to the Registrar at Equiniti, Aspect House, Spencer Road, Lancing, West Sussex BN99 6DA.

If you hold your shares in a share dealing account (sometimes referred to as a nominee account), then you must contact your account provider with any questions about your shareholding.

Payments to shareholders

The Company makes payments to shareholders by issuing redeemable C Shares of 0.1p each. You can redeem C Shares for cash and either take the cash or reinvest the proceeds in the C Share Reinvestment Plan (CRIP) to purchase additional Ordinary Shares providing you complete a payment instruction form, which is available from the Registrar. Once you have submitted your payment instruction form, you will receive cash or additional ordinary shares each time the Company issues C Shares. If you choose to receive cash, we strongly recommend that you include your bank details on the payment instruction form and have payments credited directly to your bank account. This removes the risk of a cheque going astray and means that cleared payments will be credited to your bank account on the payment date.

We had a ten year track record of payments to shareholders prior to the pandemic but we had to cease payments in 2020 to protect our balance sheet. We are still restricted by some of the conditions attached to our loan facilities from making payments to shareholders at this time. We are committed to returning to an investment grade credit rating through performance improvement and to resuming shareholder payments.

Shareholders wishing to redeem their existing C Shares, or participate in the CRIP must lodge instructions with the Registrar to arrive no later than 5.00pm on 1 June 2023 (CREST holders must submit their election in CREST by 2.55pm). The payment of C Share redemption monies will be made on 5 July 2023 and the CRIP purchase will begin as soon as practicable after 6 July 2023.

Share dealing

The Registrar offers shareholders an internet dealing service at www.shareview.co.uk and a postal dealing service. Real-time dealing is available during market hours, 8.00am to 4.30pm, Monday to Friday excluding bank holidays. Orders can still be placed outside of market hours. The fee for internet dealing is 1.5% of the transaction value, subject to a minimum fee of £45. The fee for telephone dealing is 1.5% of the transaction value, subject to a minimum fee of £60. The fee for postal dealing is 1.9% of the transaction value, subject to a minimum fee of £70. This service is only available to shareholders resident in certain jurisdictions. Before you can trade you must register to use the service. Other share dealing facilities are available but you should always use a firm regulated by the FCA (see www.fca.org.uk/register).

Your share certificate

Your share certificate is an important document. If you sell or transfer your shares you must make sure that you have a valid share certificate in the name of Rolls-Royce Holdings plc. If you place an instruction to sell your shares and cannot provide a valid share certificate, the transaction cannot be completed and you may be liable for any costs incurred by the broker. If you are unable to find your share certificate, please inform the Registrar immediately.

American Depositary Receipts (ADR)

ADR holders should contact the depositary, JP Morgan, by calling +1(800) 990 1135 (toll free within the US) or +1(651) 453 2128 (outside the US) or via www.adr.com/contact/jpmorgan

Warning to shareholders – investment scams

We are aware that some of our shareholders have received unsolicited telephone calls or correspondence, offering to buy or sell their shares at very favourable terms. The callers can be very persuasive and extremely persistent and often have professional websites and telephone numbers to support their activities.

These callers will sometimes imply a connection to Rolls-Royce and provide incorrect or misleading information. This type of call should be treated as an investment scam – the safest thing to do is hang up. Remember: if it sounds too good to be true, it probably is.

You should always check that any firm contacting you about potential investment opportunities is properly authorised by the FCA. If you deal with an unauthorised firm you will not be eligible for compensation under the Financial Services Compensation Scheme. You can find out more about protecting yourself from investment scams by visiting the FCA's website at www.fca.org.uk/consumers, or by calling the FCA's consumer helpline on 0800 111 6768 (overseas callers dial +44 20 70661000). If you have already paid money to share fraudsters, contact Action Fraud immediately on 0300 123 2040, whose website is www.actionfraud.police.uk

Visit Rolls-Royce online

Visit www.rolls-royce.com to find out more about the latest financial results, the share price, payments to shareholders, the financial calendar and shareholder services.

Communication preferences

You can sign up to receive the latest news updates to your phone or email by visiting www.rolls-royce.com and registering for our alert service. If you do not wish to receive a hard copy Annual Report in future, please email customer@equiniti.com

Annual general meeting (AGM)

AGMs must be convened each year within six months of the Company's accounting reference date with 21 clear days' advance written notice given to shareholders. Under the Articles, any other general meeting may be convened provided at least 14 clear days' written notice is given, subject to annual approval by shareholders. In certain limited circumstances, the Company can convene a general meeting at shorter notice. The notice must specify, amongst other things, the nature of the business to be transacted, the place, the date and time of the meeting.

The 2023 AGM will be held at 11.00am on 11 May 2023 as a hybrid meeting. Full details are available on our website at www.rolls-royce.com

Analysis of Ordinary shareholders at 31 December 2022

Type of holder	Number of shareholders	% of total shareholders	Number of shares	% of total shares
Individuals	160,346	98.94	205,772,144	2.46
Institutional and other investors	1,719	1.06	8,161,825,920	97.54
Total	162,065	100.00	8,367,598,064	100.00
Size of holding (number of ordinary shares)				
1 – 150	48,327	29.82	4,248,695	0.05
151 – 500	57,056	35.21	15,280,234	0.18
501 – 10,000	52,276	32.26	99,864,264	1.19
10,001 – 100,000	3,589	2.21	86,898,053	1.04
100,001 – 1,000,000	485	0.30	161,879,330	1.93
1,000,001 and over	332	0.20	7,999,427,488	95.60
Total	162,065	100.00	8,367,598,064	100.00

GLOSSARY

AAM	advanced air mobility
ABC	anti-bribery and corruption
AGM	annual general meeting
APM	alternative performance measure
Articles	Articles of Association of Rolls-Royce Holdings plc
bps	basis points
C&A	commercial and administrative
CBI	Confederation of British Industry
CFO	Chief Financial Officer
C Shares	non-cumulative redeemable preference shares
Our Code	Global Code of Conduct
the Code	UK Corporate Governance Code 2018
Company	Rolls-Royce Holdings plc
CPS	cash flow per share
CRIP	C Share Reinvestment Plan
D&I	diversity & inclusion
DJSI	Dow Jones Sustainability Index
DoJ	US Department of Justice
DPAs	deferred prosecution agreements
DTR	the FCA's Disclosure Guidance and Transparency Rules
EASA	European Aviation Safety Agency
EFH	engine flying hours
EIS	entry into service
ELG	Enterprise Leadership Group
EPS	earnings per share
ERG	employee resource group
ESG	environment, social, governance
EU	European Union
EUR	euro
EVTOL	electric vertical take-off and landing
FCA	Financial Conduct Authority
FCF	free cash flow
FRC	Financial Reporting Council
FTE	full time equivalent
FX	foreign exchange
GBP	Great British pound or pound sterling
GHG	greenhouse gas
Group	Rolls-Royce Holdings plc and its subsidiaries
HPT	high pressure turbine
HSE	health, safety and environment
HVAC	heating, ventilation and air conditioning
IASB	International Accounting Standards Board
ICAO	International Civil Aviation Organisation
IFRS	International financial reporting standards
KPIs	key performance indicators
$ktCO_2e$	kilotonnes carbon dioxide equivalent
kW	kilowatts
LGBTQ+	lesbian, gay, bisexual, transgender and queer/questioning
LIBOR	London inter-bank offered rate
LTIP	long-term incentive plan
LTSA	long-term service agreement
M&A	mergers & acquisitions
MoU	memorandum of understanding
MRO	maintenance repair and overhaul
MWh	megawatt-hour
NCI	non-controlling interest
NED	Non-Executive Director
NPI	New product introduction
OCI	other comprehensive income
OE	original equipment
OECD	Organisation for Economic Co-operation and Development
P&L	profit and loss
PBT	profit before tax
PPE	property, plant and equipment
PSMS	product safety management system
PSP	performance share plan
R&D	research and development
R&T	research and technology
REACH	registration, evaluation, authorisation and restriction of chemicals
Registrar	Equiniti Limited
RMS	risk management system
RRMS	Rolls-Royce management system
RRSAs	risk and revenue sharing arrangements
SAF	sustainable aviation fuel
SBTs	Science-Based Targets
SID	Senior Independent Director
SFO	UK Serious Fraud Office
SMR	small modular reactors
STEM	science, technology, engineering and mathematics
TCFD	Taskforce on Climate-related Financial Disclosures
TRI	total reportable injuries
TSR	total shareholder return
UKEF	UK Export Finance
UNFCCC	United Nations Framework Convention on Climate Change
UNSDG	United Nations Sustainable Development Goals
USAF	United States Air Force
USD/US$	United States dollar
WHI	the CBI's Work Health Index

Trade marks

The following trade marks which appear throughout this Annual Report are trade marks registered and owned by companies within the Rolls-Royce Group:

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Pearl®
TotalCare®
Trent®
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