23 February 2023

ROLLS-ROYCE HOLDINGS PLC - 2022 Full Year Results

Improved profit and cash in 2022; transformation programme underway to create a high-performing, growing and competitive business

- **Improved orders, revenue, profit and cash flow in 2022**
  - Strong new order wins in Civil Aerospace and Defence and a record order book in Power Systems
  - Underlying operating profit of £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, £2.0bn higher than the prior year, led by engine flying hour recovery
  - Net debt of £3.3bn, down from £5.2bn at end 2021, due to disposals and improved cash flow
- **Focused on delivering significant performance improvement in 2023 and beyond**
  - Transformation programme in place to deliver further performance improvements from 2023, informed by rigorous benchmarking
  - Underlying operating profit guidance of £0.8-£1.0bn and free cash flow of £0.6-£0.8bn in 2023; includes early benefits from transformation
  - Strategic review underway to identify investment priorities; medium-term financial targets to be set in the second half of 2023

Tufan Erginbilgic, CEO said: "It is an honour to lead Rolls-Royce, one of the world's most trusted brands and a business with strong positions in growing markets. Our people take tremendous pride in our innovation and engineering solutions. Together, we must now move at pace and harness that pride to create a high-performing, growing and competitive business.

While our performance improved in 2022, we are capable of much more. Our transformation programme will improve our efficiency and commercial outcomes, and deliver a sustainable reduction in working capital. This will require a winning culture, underpinned by more effective performance management and a shared determination to deliver cash and reduce debt. Our success will enable us to reward investors for their support and invest in future growth.

Our transformation programme is already underway and is moving at pace. It will include a strategic review so that we can prioritise our investment towards the most profitable opportunities. We will report the findings together with our medium-term goals in the second half of this year."

Full Year 2022 Group continuing operations

£ million	**Underlying 2022**	Underlying 2021	**Statutory 2022**	Statutory 2021
Revenue	**12,691**	10,947	**13,520**	11,218
Operating profit	**652**	414	**837**	513
Operating margin (%)	**5.1%**	3.8%	**6.2%**	4.6%
Profit/(loss) before taxation	**206**	36	**(1,502)**	(294)
Earnings/(loss) per share (pence)	**1.95**	0.11	**(14.24)**	1.48
Free cash flow	**505**	(1,485)		
Net cash flow from operating activities [1]			**1,850**	(259)
Net debt [1]			**(3,251)**	(5,157)

[1] *Includes discontinued operations*

A reconciliation of alternative performance measures to their statutory equivalent is provided on pages 48 to 51

2022 performance summary

- **Recovering demand.** Large engine flying hours (EFH) in Civil Aerospace grew by 35% year on year as recovery in international travel continued. New large engine orders were received from Malaysia Aviation Group, Norse Atlantic Airways and Qantas. The Bell V-280 Valor, powered by our AE1107F engines, was selected by the US Army for the Future Long Range Assault Aircraft programme. Order intake in Power Systems grew 29% to £4.3bn.

- **Higher profit and margins**. The year on year increase in Group operating profit was driven by higher profits in Civil Aerospace and Power Systems, partly offset by lower profit in Defence and increased investment in New Markets. The higher Group margin versus the prior year was driven by 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.

- **Stronger cash flows.** 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. Free cash flow benefitted from higher Civil Aerospace LTSA invoiced flying hour receipts of £3,564m (2021: £2,289m), the collection of overdue balances in Civil Aerospace (c£180), and a customer advance in Defence (£63m) and Power Systems (year on year increase of c£150m).

- **Lower net debt.** Net debt was reduced from £5.2bn to £3.3bn, as we completed our disposal programme. We have £4.1bn of drawn debt, of which £0.5bn matures in 2024, £0.8bn in 2025 and £2.8bn in 2026-2028, and £1.8bn of lease liabilities. We have £2.6bn cash and £5.5bn undrawn facilities.

- **Shareholder payments** will not be made for 2022. We are committed to returning to an investment grade credit rating through performance improvement, and to resuming shareholder payments.

Transformation programme and strategic review

We have carried out extensive work to benchmark our performance against that of our peers. This work shows that there is significant scope for us to deliver materially higher profit, cash flows and returns. We will create a stronger, growing business with a clear proposition for investors based upon delivering:

- a high quality and competitive business, focused on profitable performance and operational efficiency;
- growing sustainable cash flows, generated from operations and disciplined capital investment; and
- a strong balance sheet and growing shareholder returns.

We have already begun an ambitious transformation programme to deliver a step-change in our performance. It consists of seven workstreams, each led by a senior executive:

Efficiency and simplification - delivering sustainable cost efficiencies.

Commercial optimisation - getting the right reward for the risks we take and the value we create for customers.

Working capital – delivering a significant and structural reduction across the Group.

Business improvement – each business unit building and delivering plans to address performance gaps to realise its potential.

Strategic review – enabling prioritisation of investment opportunities.

Performance management – delivering on our expectations of high performance from all businesses and employees.

Purpose and culture – instilling our people with the right mindset to be confident, proactive and timely in our actions.

The outcomes of these workstreams will drive a clear and granular plan. We will communicate this to you alongside medium-term financial targets in the second half of the year.

Outlook and 2023 Guidance

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.

Underlying 2023 financial guidance	
Operating profit	£0.8bn-£1.0bn
Free cash flow	£0.6bn-£0.8bn

Our 2023 operating profit guidance of £0.8-1.0bn assumes £100-200m of targeted contract improvements (2022: £319m).

Our 2023 free cash flow guidance of £0.6-0.8bn is based on c£500-700m growth in the Civil LTSA Creditor (2022: £792m), a year on year headwind of approximately £200m associated with legacy Boeing OE concessions and a c£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.

In 2023, we assume large engine flying hours at 80-90% of 2019's level and 1,200-1,300 total shop visits.

Additional detail is included in the results presentation and supplementary data slides.

Underlying financial performance by business

£ million	Underlying revenue	Organic Change [1]	Underlying operating profit/(loss)	Organic change [1]	Underlying operating margin	Margin change (pts)
Civil Aerospace	**5,686**	25%	**143**	nm	2.5%	6.3pt
Defence	**3,660**	2%	**432**	(10)%	11.8%	(1.8)pt
Power Systems	**3,347**	23%	**281**	17%	8.4%	(0.4)pt
New Markets	**3**	nm	**(132)**	nm	nm	nm
Other businesses	**–**	nm	**(31)**	nm	nm	nm
Corporate/eliminations	**(5)**	nm	**(41)**	nm	nm	nm
Total (continuing operations)	**12,691**	14%	**652**	48%	5.1%	1.3pt

[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*

All results are shown for Group continuing operations, on an underlying basis, excluding discontinued operations (ITP Aero). For more details, see note 2 of the Condensed Consolidated Financial Statements (page 22).

nm is defined as not measurable.

Trading cash flow

£ million	2022	2021
Civil Aerospace	**226**	(1,670)
Defence	**426**	377
Power Systems	**158**	219
New Markets	**(57)**	(56)
Other businesses	**5**	(43)
Corporate/eliminations	**(49)**	(38)
Total trading cash flow (continuing operations)	**709**	(1,211)
Taxation	**(172)**	(182)
Underlying operating profit charge exceeded by contributions to defined benefit schemes	**(32)**	(92)
Total free cash flow (continuing operations)	**505**	(1,485)

Civil Aerospace

2022 key Civil operational metrics:	Large engine	Business aviation/ Regional	Total	Change
OE deliveries	190	165	355	15%
LTSA engine flying hours (millions)	10.0	3.2	13.2	29%
Total LTSA shop visits	703	341	1,044	10%
…of which major shop visits	248	328	576	8%

Our Civil Aerospace business continues to recover from the impact of COVID-19. Large engine flying hours were up 35% year on year at 65% of 2019 levels, with an improvement at the end of the year as travel restrictions in China eased. We expect large EFH at 80-90% of 2019 levels in 2023. Business aviation demand continues to remain above 2019 levels.

We saw new large engine orders from Malaysia Aviation Group, Norse Atlantic Airways and Qantas in 2022 and we welcomed the launch of the new A350 freighter. In February 2023, we received an order from Air India for 68 Trent XWB-97 engines, plus options for 20 more, and 12 Trent XWB-84 engines.

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 10-15% 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.

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.

Defence

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.

Power Systems

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.

New Markets

Investment increased in both Electrical and Small Modular Reactors (SMR), which resulted in an increased operating loss of £132m versus £70m last year. In 2022, Rolls-Royce Electrical entered into an agreement with Hyundai Motor Group to bring all-electric propulsion and hydrogen fuel cell technology for the Advanced Air Mobility market. We also entered into partnership with Embraer EVE to develop propulsion systems for their platform. Technologies developed in our Electrical business can be leveraged across the Group.

We have shortlisted three possible sites which will be home to one of our major factories in the production of our SMRs, whilst we await our first order in the UK or abroad. This supports our ambitions to manufacture the first fully operational SMR before 2030.

Statistical and underlying Group financial performance from continuing operations

£ million	2022 Statutory	2022 Impact of hedge book [1]	2022 Impact of acquisition accounting	2022 Impact of non-underlying items	2022 Underlying	2021 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:USD 1.24; 2021: GBP:USD 1.38) and underlying revenue being measured at the hedge book achieved rate during the year (2022 GBP:USD 1.50; H1 2021: GBP:USD 1.39; H2 2021: GBP:USD 1.59).

- **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 businesses 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	2022 Impact of hedge book	2022 Impact of acquisition accounting	2022 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			
USD 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.

Results meeting and conference call

Our results presentation will be held at the London Stock Exchange and webcast live at 08:30 (GMT) today. Downloadable materials will also be available on the Investor Relations section of the Rolls-Royce website. https://www.rolls-royce.com/investors/results-and-events.aspx
To register for the webcast, including Q&A participation, please visit the following link: https://app.webinar.net/0LPb3yGpVaO
Please use this same link to access the webcast replay which will be made available shortly after the event concludes.
Photographs and broadcast-standard video are available at www.rolls-royce.com

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Notes:

Statutory results were referred to as “reported” results in the 2021 full year results statement.

Condensed Consolidated Financial Statements

Condensed 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	10	**48**	45
Operating profit		**837**	513
Gain arising on disposal of businesses	23	**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	23	**68**	36
Costs of disposal of discontinued operations prior to disposal	23	**–**	(39)
Loss on disposal of discontinued operations	23	**(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
Underlying earnings per ordinary share are shown in note 6.			

[1] Cost of sales includes a net charge for expected credit losses of £73m (2021: £78m). Further details can be found in note 12

[2] Included within financing are fair value changes on derivative contracts. Further details can be found in notes 2, 4 and 18

Condensed 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	20	**(156)**	254
Revaluation to fair value of other investments	10	**(4)**	(2)
Share of OCI of joint ventures and associates	10	**2**	1
Related tax movements		**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	23	**65**	(1)
Hedging reserves reclassified to income statement on disposal of businesses	23	**111**	–
NCI disposed of on disposal of businesses	23	**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	10	**–**	44
Related tax movements		**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. See note 18 and 23 for further detail

Condensed consolidated balance sheet
At 31 December 2022

	Notes	2022 £m	2021 £m
ASSETS			
Intangible assets	7	**4,098**	4,041
Property, plant and equipment	8	**3,936**	3,917
Right-of-use assets	9	**1,061**	1,203
Investments – joint ventures and associates	10	**422**	404
Investments – other	10	**36**	36
Other financial assets	18	**542**	361
Deferred tax assets		**2,731**	2,249
Post-retirement scheme surpluses	20	**613**	1,148
Non-current assets		**13,439**	13,359
Inventories	11	**4,708**	3,666
Trade receivables and other assets	12	**6,936**	5,383
Contract assets	13	**1,481**	1,473
Taxation recoverable		**127**	90
Other financial assets	18	**141**	46
Short-term investments		**11**	8
Cash and cash equivalents	14	**2,607**	2,621
Current assets		**16,011**	13,287
Assets held for sale	23	**–**	2,028
TOTAL ASSETS		**29,450**	28,674
LIABILITIES			
Borrowings and lease liabilities	15	**(358)**	(279)
Other financial liabilities	18	**(1,016)**	(689)
Trade payables and other liabilities	19	**(6,983)**	(6,016)
Contract liabilities	13	**(4,825)**	(3,599)
Current tax liabilities		**(104)**	(101)
Provisions for liabilities and charges	19	**(632)**	(475)
Current liabilities		**(13,918)**	(11,159)
Borrowings and lease liabilities	15	**(5,597)**	(7,497)
Other financial liabilities	18	**(3,230)**	(2,715)
Trade payables and other liabilities	17	**(2,364)**	(1,575)
Contract liabilities	13	**(7,337)**	(6,710)
Deferred tax liabilities		**(286)**	(451)
Provisions for liabilities and charges	19	**(1,701)**	(1,107)
Post-retirement scheme deficits	20	**(1,033)**	(1,373)
Non-current liabilities		**(21,548)**	(21,428)
Liabilities associated with assets held for sale	23	**–**	(723)
TOTAL LIABILITIES		**(35,466)**	(33,310)
NET LIABILITIES		**(6,016)**	(4,636)
EQUITY			
Called-up share capital		**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)

Condensed 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	23	**86**	(43)
Operating profit		**923**	470
Loss on disposal of property, plant and equipment		**18**	9
Share of results of joint ventures and associates	10	**(48)**	(45)
Dividends received from joint ventures and associates	10	**73**	27
Amortisation and impairment of intangible assets		**287**	290
Depreciation and impairment of property, plant and equipment		**430**	462
Depreciation and impairment of right-of-use assets		**287**	257
Adjustment of amounts payable under residual value guarantees within lease liabilities [1]	16	**(3)**	(4)
Impairment of and other movements on investments	10	**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	20	**27**	23
Cash funding of defined benefit post-retirement schemes	20	**(81)**	(162)
Share-based payments		**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	10	**(5)**	(26)
Additions of intangible assets		**(237)**	(231)
Disposals of intangible assets	7	**8**	5
Purchases of property, plant and equipment		**(359)**	(328)
Disposals of property, plant and equipment		**48**	61
Disposal of businesses	23	**1,398**	99
Movement in investments in joint ventures and associates	10	**(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 leases		**(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)
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

Condensed consolidated cash flow statement continued

Year ended 31 December 2022

[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 15

[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 condensed consolidated cash flow statement, movements in balance sheet line 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 22.

	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 business	**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)

Condensed 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 debt on disposal £m	Exchange differences £m	Fair value adjustments £m	Reclassifi-cations [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 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 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)

Condensed consolidated statement of changes in equity

Year ended 31 December 2022

	Notes	Attributable to ordinary shareholders									
		share capital	Share premium	Capital redemption reserve	Hedging reserves [1]	Merger reserve	Translation reserve	Accumulated losses [2]	Total	NCI	Total equity
		£m	£m	£m	£m	£m	£m	£m	£m	£m	£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	23	–	–	–	**111**	–	–	–	**111**	–	**111**
Foreign exchange translation differences reclassified to income statement on disposal of businesses	23	–	–	–	–	–	**65**	–	**65**	–	**65**
NCI disposed of on disposal of businesses	23	–	–	–	–	–	–	–	–	**1**	**1**
Movement on post-retirement schemes	20	–	–	–	–	–	–	**(156)**	**(156)**	–	**(156)**
Fair value movement on 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	10	–	–	–	–	–	–	**(4)**	**(4)**	–	**(4)**
OCI of joint ventures and associates	10	–	–	–	–	–	–	**2**	**2**	–	**2**
Related tax movements		–	–	–	**12**	–	**2**	**89**	**103**	–	**103**
Total comprehensive income/(expense) for the year		–	–	–	**71**	–	**519**	**(1,338)**	**(748)**	**(4)**	**(752)**
Redemption of C Shares		–	–	**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)**
At 1 January 2021		1,674	1,012	162	(94)	650	524	(8,825)	(4,897)	22	(4,875)
Loss for the year		–	–	–	–	–	–	120	120	1	121
Foreign exchange translation differences on foreign operations		–	–	–	–	–	(178)	–	(178)	–	(178)
Foreign exchange translation differences classified to income statement on disposal of businesses		–	–	–	–	–	(1)	–	(1)	–	(1)
Movement on post-retirement schemes	20	–	–	–	–	–	–	254	254	–	254
Fair value movement on 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	10	–	–	–	–	–	–	(2)	(2)	–	(2)
OCI of joint ventures and associates	10	–	–	–	44	–	–	1	45	–	45
Related tax movements		–	–	–	(2)	–	(3)	(79)	(84)	–	(84)
Total comprehensive income/(expense) for the year		–	–	–	49	–	(182)	294	161	1	162
Redemption of C Shares		–	–	3	–	–	–	(3)	–	–	–
Share-based payments - direct to equity [3]		–	–	–	–	–	–	28	28	–	28
Dividends to NCI		–	–	–	–	–	–	–	–	(1)	(1)
Transactions with NCI [4]		–	–	–	–	–	–	29	29	1	30
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 the 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

Notes to the year-end financial statements

1 Basis of preparation and accounting policies

Reporting entity

Rolls-Royce Holdings plc (the 'Company') is a public company limited by shares incorporated under the Companies Act 2006 and domiciled in the UK. These Condensed Consolidated Financial Statements of the Company as at and for the year ended 31 December 2022 consist of the consolidation of the financial statements of the Company and its subsidiaries (together referred to as the 'Group') and include the Group's interest in jointly controlled and associated entities.

The Consolidated Financial Statements of the Group as at and for the year ended 31 December 2022 (2022 Annual Report) are available upon request from the Company Secretary, Rolls-Royce Holdings plc, Kings Place, 90 York Way, London, N1 9FX.

Statement of compliance

These Condensed Consolidated Financial Statements have been prepared in accordance with UK adopted International Accounting Standards (IAS) and interpretations issued by the IFRS Interpretations Committee applicable to companies reporting under UK adopted IFRS. They do not include all the information required for full annual statements and should be read in conjunction with the 2022 Annual Report.

The Board of Directors approved the Condensed Consolidated Financial Statements on 23 February 2023. They are not statutory accounts within the meaning of section 435 of the Companies Act 2006.

The Group's financial statements for the year ended 31 December 2022 were approved by the Board on 23 February 2023. They have been reported on by the Group's auditors and will be delivered to the registrar of companies in due course. The report of the auditors was (i) unqualified, (ii) did not include a reference to any matters to which the auditors drew attention by way of emphasis without qualifying their report, and (iii) did not contain a statement under section 498(2) or (3) of the Companies Act 2006.

The comparative figures for the financial year 31 December 2021 have been extracted from the Group's statutory accounts for that financial year. The Board of Directors approved the Group financial statements on 24 February 2022. The report of the auditors was (i) unqualified, (ii) did not include a reference to any matters to which the auditors drew attention by way of emphasis without qualifying their report, and (iii) did not contain a statement under section 498(2) or (3) of the Companies Act 2006.

Changes to accounting policies

IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*

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 long-term service agreements (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 19). 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.

Revision to IFRS not applicable in 2022

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 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 Condensed 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 Condensed Consolidated Financial Statements.

Other

IBOR reform transition

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.

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.

1 Basis of preparation and accounting policies continued

Going concern

Overview

In adopting the going concern basis for preparing these Condensed 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. The Directors consider an 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 approved plans 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 49 of the 2022 Annual Report. 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 'stress' 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. 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 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 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 GCP information Oxford Economics Global Climate Service Net Zero scenario aligned to IPCC SSP1-19. 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 in 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, this 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 financial statements.

1 Basis of preparation and accounting policies continued

Climate change

In preparing the Condensed 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 Condensed 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
- 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 Condensed 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 Condensed 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 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 20) 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 1.5ºC and 3.6ºC 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 7.

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 20.

Further detail is set out in note 1 to the Financial Statements in the 2022 Annual Report.

1 Basis of preparation and 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 areas of judgement and sources of estimation uncertainty as at 31 December 2022, that were assessed as having a significant risk of causing material adjustments to the carrying amount of assets and liabilities, are set out in note 1 to the financial statements in the 2022 Annual Report and are summarised below.

Area	Key judgements	Key sources of estimation uncertainty	Sensitivities performed
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, including customer pricing, and costs of long-term contractual arrangements including the impact of climate change.	Based upon the stage of completion of all large engine LTSA contracts within Civil Aerospace as at 31 December 2022, the following changes in estimate 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 impact of around £20m. - 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)	Determination of the nature of entry fees received.		
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.	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 in respect of UK losses of around £130m. If only 90% of assumed future cost increases are passed on to customers, this would result in a decrease in the deferred tax asset of around £50m, and if the potential impact of carbon prices on the Group's cost base was to double, this would be around £80m.
Discontinued operations and business disposals	The assets, liabilities and associated consolidation adjustments of the ITP Aero business recognised on disposal.		
Research and development	Determination of the point in time where costs incurred on an internal programme development meet the criteria for capitalisation or ceasing capitalisation. Determination of the basis for amortising capitalised development costs.		
Impairment of non-current assets	Determination of cash-generating units for assessing impairment of goodwill.		
Leases	Determination of the lease term.	Estimates of the payments required to meet residual value guarantees at the end of engine leases.	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.

Area	Key judgements	Key sources of estimation uncertainty	Sensitivities performed
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.	A 12-month delay in the availability of the modified HPT blade could lead to a £40-70m increase in the Trent 1000 wastage costs provision. An increase in Civil Aerospace large engines estimates of LTSA costs of 1% over the remaining term of the contracts could lead to a £100-125m increase in the provision for contract losses across all programmes. A 1% change in the discount rates used could lead to around a £80-100m change in the provision.
Post-retirement benefits		Estimates of the assumptions for valuing the net defined benefit obligation.	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.

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 and 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 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 of 1.39. In the second half of 2021, the Group was a net seller of USD at an achieved exchange rate of 1.59) based on the USD hedge book.

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 excludes the following:

- the effect of acquisition accounting and business disposals;
- impairment of goodwill and 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.

2 Segmental analysis continued

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 condensed 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)**
NCI	**(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
NCI	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

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)/credits [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)
Gains arising on the 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 condensed 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 reported 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 the 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 7,8 and 9

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

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/(losses) arising on the acquisitions and disposals of businesses are set out in note 23

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 Analysis by business segment continued

Balance sheet analysis

	Civil Aerospace £m	Defence £m	Power Systems £m	New Markets £m	Total reportable segments £m
At 31 December 2022					
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)**
At 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)

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 are classified as held for sale. For further details see note 23

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 the 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 7 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 results

[2] The condensed consolidated income statement shows the net fair value gains/(losses) 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)

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

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 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 Organisation for Economic Co-operation and Development (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 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 tax (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 Intangible assets

	Goodwill £m	Certification costs £m	Development expenditure £m	Customer relationships £m	Software [1] £m	Other £m	Total £m
Cost:							
At 1 January 2022	**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 2022	**34**	**425**	**1,760**	**342**	**650**	**420**	**3,631**
Charge for the year [2]	**–**	**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:							
31 December 2022	**1,099**	**488**	**1,692**	**106**	**303**	**410**	**4,098**
1 January 2022	**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] Charged to cost of sales and commercial and administrative costs except development costs, which are charged to research and development costs

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 our 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 1.5ºC 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.

7 Intangible assets continued

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 risks above) would cause the FVLCOD of the business to fall below its carrying value of goodwill.

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;
- 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%); and
- 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 risks above) would cause the value in use of the goodwill to fall below its carrying value.

Other cash generating units

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) being recognised at 31 December 2022.

The carrying amount and the residual life of the material intangible assets (excluding goodwill) for the Group are as follows:

	Residual life [1]	**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. 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 *Impairment of Assets*. 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 risks are considered when making these estimates consistent with the assumptions above.

There have been no (2021: no) individually material impairment charges or reversals recognised during the year.

8 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 2022	**1,865**	**4,986**	**1,046**	**300**	**8,197**
Additions	**34**	**127**	**26**	**162**	**349**
Disposals/write-offs	**(38)**	**(142)**	**(81)**	**(1)**	**(262)**
Reclassifications [1]	**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 2022	**614**	**3,244**	**414**	**8**	**4,280**
Charge for the year [2]	**79**	**296**	**55**	**–**	**430**
Impairment [3]	**5**	**(5)**	**–**	**–**	**–**
Disposals/write-offs	**(24)**	**(142)**	**(57)**	**–**	**(223)**
Reclassifications [1]	**(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:					
31 December 2022	**1,241**	**1,718**	**586**	**391**	**3,936**
1 January 2022	**1,251**	**1,742**	**632**	**292**	**3,917**

[1] 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

[2] Depreciation is charged to cost of sales and commercial and administrative costs or included in the cost of inventory as appropriate

[3] 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 7. 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 7. 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

9 Right-of-use assets

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	Total £m
Cost:				
At 1 January 2022	**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 2022	**186**	**66**	**929**	**1,181**
Charge for the year	**43**	**37**	**190**	**270**
Impairment [1]	**(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:				
31 December 2022	**276**	**78**	**707**	**1,061**
1 January 2022	**270**	**77**	**856**	**1,203**

[1] 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 7. 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 7). 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

10 Investments

Equity accounted and other investments

	Equity accounted			Other [1]
	Joint ventures £m	Associates £m	Total £m	£m
At 1 January 2022	**403**	**1**	**404**	**36**
Additions [2]	**29**	**–**	**29**	**7**
Disposals	**–**	**(1)**	**(1)**	**(2)**
Impairment [3]	**(74)**	**–**	**(74)**	**(1)**
Share of retained loss [4]	**(25)**	**–**	**(25)**	**–**
Reclassification of deferred profit to deferred income [5]	**(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] 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 120 of the 2022 Annual Report. 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, Rolls-Royce and Air China established a joint venture called Beijing Aero Engine Services Company Limited

[3] 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 for the Civil Aerospace business). 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

[4] See table on page 35

[5] 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

10 Investments continued

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 venture 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

11 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

12 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

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 expected credit losses (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: increased by £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 movements of the Group's 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)

13 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

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.

14 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 within assets held for sale (note 23)	**–**	25
Overdrafts (note 15)	**(2)**	(7)
Cash and cash equivalents per cash flow statement (page 13)	**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.

15 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 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.

16 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 9 and 15 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 condensed 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 income statement	**(350)**	(299)

[1] Included in cost of sales and commercial and administration costs depending on the nature and 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. 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
[5] Variable lease payments primarily arise on a small number of contracts where engine lease payments are solely 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.

17 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

[1] Includes payables due from ITP Aero that were previously eliminated on consolidation
[2] Customer concession credits are a form of discount and are reported within revenue
[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 and payables associated with business disposals

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 to 120 days. The Group offers reduced payment terms for smaller suppliers, so that they are paid in 30 days. In line with civil aviation industry practice, the Group offers a supply chain financing (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 of suppliers. At 31 December 2022, suppliers had drawn £422m under the SCF scheme (2021: £540m).

18 Financial assets and liabilities

Carrying value of other financial assets and liabilities

	Derivatives							
	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
At 31 December 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)**
At 31 December 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

Derivative financial instruments

Movements in fair value 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 risk and revenue sharing arrangements (RRSAs) and other financial assets and liabilities

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:						
Changes in forecast payments [1]	**(7)**	(7)	**–**	–	**–**	–
Cash paid	**5**	3	**(3)**	–	**8**	3
Other	**–**	–	**–**	–	**9**	1
Reclassification to held for sale	**–**	69	**–**	–	**–**	–
At 31 December	**(22)**	(12)	**25**	15	**(101)**	(75)

[1] Included in financing

18 Financial assets and liabilities continued

Fair values of financial instruments equate to book values with the following exceptions:

	2022		2021	
	Book value £m	**Fair value £m**	Book value £m	Fair value £m
Borrowings – Level 1	**(4,095)**	**(3,812)**	(4,038)	(4,106)
Borrowings – Level 2	**(13)**	**(15)**	(1,994)	(2,122)
Financial RRSAs – Level 3	**(22)**	**(22)**	(12)	(13)

Fair values

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 arms-length transaction. There have been no transfers during the period 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.

- Non-current investments primarily comprise unconsolidated companies where fair value approximates to the book value. Listed investments are valued using Level 1 methodology.
- Money market funds, included within cash and cash equivalents, are valued using Level 1 methodology. Fair values are assumed to approximately equal 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.
- The fair values of held to collect trade receivables and similar items, trade payables and other similar items, other non-derivative financial assets and liabilities, short-term investments and cash and cash equivalents 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.
- Fair values of derivative financial assets and liabilities and trade receivable held to collect or sell are estimated by discounting expected future contractual cash flows using prevailing interest rate curves or cost of borrowing, as appropriate. 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 as defined by IFRS 13 *Fair Value Measurement*).
- 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 as defined by IFRS 13) or by discounting contractual future cash flows (Level 2 as defined by IFRS 13).
- The fair values 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 as defined by IFRS 13).
- Other assets are included on the balance sheet at fair value, derived from observable market prices or latest forecast (Level 2/3 as defined by IFRS 13). At 31 December 2022, Level 3 assets totalled £25m (2021: £15m).
- 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 as defined by IFRS 13).

Effect of hedging instruments on the financial position and performance

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 0.8339. £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.

19 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 and includes £157m which arose from the sale of ITP Aero resulting in the recognition of the 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.

19 Provisions for liabilities and charges continued

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 21.

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.

20 Post-retirement benefits

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

Amounts recognised in the balance sheet in respect of defined benefit schemes

	UK schemes £m	**Overseas schemes £m**	**Total £m**
At 1 January 2022	**1,118**	**(1,343)**	**(225)**
Exchange adjustments	**–**	**(88)**	**(88)**
Current service cost and administrative expenses	**(8)**	**(44)**	**(52)**
Past service credit	**6**	**24**	**30**
Settlement cost	**–**	**(7)**	**(7)**
Financing recognised in the income statement	**21**	**(26)**	**(5)**
Contributions by employer	**1**	**80**	**81**
Actuarial gains recognised in OCI [1]	**3,207**	**599**	**3,806**
Returns on plan assets excluding financing recognised in OCI [1]	**(3,751)**	**(207)**	**(3,958)**
Transfers	**–**	**(2)**	**(2)**
At 31 December 2022	**594**	**(1,014)**	**(420)**
Post-retirement scheme surpluses – included in non-current assets [2]	**594**	**19**	**613**
Post-retirement scheme deficits – included in non-current liabilities	**–**	**(1,033)**	**(1,033)**

[1] A net loss of £156m has been recognised in OCI in the year to 31 December 2022 which has been driven by market conditions at 31 December 2022, in particular due to higher discount rates across the various schemes and realised inflation being higher than expected

[2] The surplus in the Rolls-Royce UK Pension Fund (RRUKPF) is recognised as, on 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

Changes to defined benefit schemes

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.

Sensitivities

A reduction in the discount rate by 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% from RPI of 3.5% 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 RR UK Pension Fund by approximately £165m.

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.

21 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.

22 Related party transactions

	2022 £m	2021 £m
Sale 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).

23 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 Airtanker 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 had 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 has recycled the Group's share of hedging reserve and the cumulative currency translation reserve through the income statement during the year. 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 from the acquisition 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 cash flow hedge reserve 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 tax	**(148)**	**76**	**(72)**

[1] As 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

23 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 on disposal of (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 of businesses (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 represents a separate major line of business and was classified as a disposal group held for sale. Therefore, in line with IFRS 5, ITP Aero has 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	2021
	£m	£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 on disposal of 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 gains	–	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: included in operating activities of £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

24 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 50.

Reconciliation of Alternative Performance Measures (APMs) to their statutory equivalent

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, 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 including 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 note 2, note 6 and note 23.

	2022 £m	2021 £m
Revenue from continuing operations		
Statutory revenue	**13,520**	11,218
Derivative & FX adjustments	**(829)**	(271)
Underlying revenue	**12,691**	10,947
Operating profit from continuing operations		
Statutory operating profit	**837**	513
Derivative & FX adjustments	**(264)**	40
Programme exceptional credits	**(69)**	(105)
Restructuring exceptional charges/(credits)	**47**	(45)
Acquisition accounting & M&A	**58**	50
Impairments	**65**	(9)
Pension past service credit	**(22)**	(47)
Other underlying adjustments	**–**	17
Underlying operating profit	**652**	414

	2022 pence	2021 pence
Basic EPS from continuing operations		
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

	2022 £m	2021 £m
Results from discontinued operations		
Profit for the period on ordinary activities	**68**	36
Costs of disposal of discontinued operations prior to disposal	**–**	(39)
Loss on disposal of discontinued operations	**(148)**	–
Statutory operating loss	**(80)**	(3)
Derivative & FX adjustments	**(1)**	5
Restructuring exceptional charges	**–**	(1)
Acquisition accounting & M&A	**179**	64
Related tax effects	**(31)**	(14)
Underlying profit	**67**	51

Reconciliation of Alternative Performance Measures (APMs) to their statutory equivalent continued

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 below.

All amounts below 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%

Reconciliation of Alternative Performance Measures (APMs) to their statutory equivalent continued

Trading cash flow

Trading cash flow is defined as free cash flow (as defined below) before the deduction of recurring tax and post-employment 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 and statutory cash flow, see note 24.

	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)
Tax [1]	**(174)**	(185)
Free cash flow	**491**	(1,442)

[1] See page 13 for tax 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 23. For further detail, see note 24.

	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, including 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 cost	**94**	70
Capitalised as intangible assets	**(131)**	(105)
Contributions and fees	**(359)**	(366)
Gross R&D expenditure	**(1,287)**	(1,179)

Reconciliation of Alternative Performance Measures (APMs) to their statutory equivalent continued

Key performance indicators

The following measures are key performance indicators and are calculated using alternative performance measures or statutory results. See below for calculation of these amounts.

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-12 months are excluded.

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 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 (cash flow statement)	**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

Principal risks and uncertainties

Our risk management system is described on pages 42 to 47 of our 2022 Annual Report as a continuous process that requires risk owners to constantly reassess risks and include learning from incidents to drive improvements in our control environment.

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.

Climate change

We recognise the urgency of the climate challenge and 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.

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.

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.

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 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.

Strategic transformation

We see significant opportunities in leading the transition to net zero. Our strategy is to focus on delivering on our plans for existing and nascent business and to focus on exploiting opportunities to grow into new net zero areas, both organically and inorganically. Failure to execute this plan will prevent us from achieving our longer term ambitions.

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.

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.

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.

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.

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.

Payments to shareholders

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.

Shareholders wishing to redeem their existing C Shares must lodge instructions with the Registrar to arrive no later than 5.00pm on 01 June 2023 (CREST holders must submit their election in CREST by 2.55pm). The payment of C Share redemption monies will be made on 05 July 2023 and the CRIP purchase will begin as soon as practicable after 06 July 2023.

Statement of Directors' responsibilities

The statements below have been prepared in connection with the Company's full Annual Report for the year ended 31 December 2022. Certain parts are not included in this announcement.

The Directors consider that the Annual Report, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's and Company 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, financial position of the Company;
- 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; and

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 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 or Company's auditor are aware of that information.

By order of the Board

Tufan Erginbilgic	Panos Kakoullis
Chief Executive	Chief Financial Officer
23 February 2023	23 February 2023