

ROLLS-ROYCE HOLDINGS PLC - 2022 Half Year Results

Focused on operational and commercial drivers to address risks and deliver better performance

- **Good progress with growth in order intake, revenue and cash flow**
 - Another record quarter in Q2 for order intake in Power Systems
 - £1.1bn free cash flow improvement due to commercial discipline and increased flying hours
 - Underlying profit margins were lower in the first half, but are expected to improve in the second half
- **Managing external challenges with operational and commercial discipline**
 - Concentrating spend with leading suppliers; increased inventory to address supply constraints
 - Controlling costs and applying contractual and pricing discipline to limit inflation risk
- **Delivering on our commitments**
 - 2022 Group guidance unchanged with focus on managing risks
 - ITP Aero disposal received regulatory clearance and is progressing towards completion
 - Medium-term Civil Aerospace targets reflect commitment to become leaner and more agile

Warren East, Chief Executive said: “We have progressed well in the first half of the year, with more than a £1bn improvement in free cash flow, strong order intake in Power Systems, increased engine flying hours and commercial discipline in Civil Aerospace, and targeted investment to support longer-term growth in Defence and New Markets. We are actively managing the impacts of a number of challenges, including rising inflation and ongoing supply chain disruption, with a sharper focus on pricing, productivity and costs. As a result of the actions we have taken over the last few years, our Civil Aerospace business is becoming leaner and more agile, and we are executing on the levers of value creation we shared at our investor event in May. This is setting us up to deliver on our commitments this year and in the future. We are making choices to manage the current challenges, deliver better returns, reduce debt, and generate long-term sustainable value.”

Half Year 2022 Group financial performance

£ million, continuing operations	Statutory 2022 H1	Statutory 2021 H1	Underlying 2022 H1	Underlying 2021 H1
Revenue	5,600	5,159	5,308	5,227
Gross profit	1,062	814	942	1,097
Operating profit	223	38	125	307
Operating margin %	4.0%	0.7%	2.4%	5.9%
(Loss)/profit for the period	(1,611)	394	(188)	104
(Loss)/earnings per share (pence)	(19.29)	4.73	(2.24)	1.25
£ million	2022 H1	2021 H1		
Free cash flow from continuing operations	(68)	(1,174)		
Group free cash flow	(77)	(1,151)		
£ million	2022 H1	2021 H1		
Net cash inflow/(outflow) from operating activities	597	(679)		
£ million	30 Jun 2022	31 Dec 2021		
Net debt	(5,142)	(5,157)		

Good progress with growth in order intake, revenue and cashflow

Demand for our products and services is growing with another period of record order intake in Power Systems, continued recovery in Civil Aerospace engine flying hours and high visibility of future revenues in Defence with a strong order book. We are focusing on operational and commercial drivers to drive better performance. For example, we are strategically partnering with key suppliers, robustly applying contractual pricing protection in long-term contracts and utilising commodity hedges and fixed price purchasing agreements. We are also focused on maximising efficiency and productivity in manufacturing, such as increasing the repair and reuse of spare parts in services and de-risking original equipment (OE) deliveries with a temporary increase in inventory.

Our underlying profit margins fell in the period. Adjusting for foreign exchange movements, contract catch-ups and provision movements our underlying profit margins slightly increased in the period. The prior period included legacy spare parts sales in Defence, which had a £45m positive profit impact, and a foreign exchange movement in Civil Aerospace of approximately £270m reflecting a one-off transactional revaluation credit.

Free cash outflow from continuing operations of £68m improved by £1.1bn on the prior period, led mostly by increased flying hour receipts in Civil Aerospace. Working capital (excluding long term service agreement (LTSA) balance movements) was a £269m outflow in 2022 H1 with higher inventory resulting from the impact of supply chain disruption partly offset by improved payables performance.

Managing external challenges with operational and commercial discipline

The external environment remains challenging, with the war in Ukraine, inflationary pressures, and supply chain constraints all impacting our business. We expect these issues will persist into 2023 and have been managing our business to address and minimise the impact.

We are tightly controlling costs and have consolidated our supply chain, focusing on the best performing suppliers, and we have long-term agreements and hedges in place that offer reasonable protection against near-term price increases. Inventory has increased across the Group, due to supply chain constraints, and we aim to reduce inventories in the second half of the year. In many of our long-term contracts we are able to pass on a proportion of higher input costs to our customers through commercial discipline on pricing and robust contract management.

We have faced some challenges in hiring, particularly for experienced engineers with certain skills and technical expertise. We are addressing this with actions to attract, train and retain talent. Our early years recruitment has been strong and our retention rates are good.

Delivering on our commitments

We are working across the Group to increase the productivity and efficiency of our operations and improve commercial discipline to drive a better and more balanced financial performance.

In May, we hosted an investor day at our Civil Aerospace operations in Derby and committed to medium-term financial targets for the business founded on five value drivers (see page 6). We have focused on these in the first half of 2022, with rigorous supply chain management, leaner manufacturing, and strong commercial discipline helping to address supply chain and inflation challenges. Our new engine programmes are driving fleet growth and will, as they mature, need less engineering time, enabling us to spend less and shift our focus towards extending time on wing and lowering shop visit costs.

We have committed to rebuilding our balance sheet in the medium-term. Our liquidity position remains strong with £7.3bn of liquidity including £2.8bn in cash at the period end. Net debt of £(5.1)bn included £1.9bn leases and we have no significant debt maturities before 2024. No interim shareholder payment will be made for 2022.

We have received all the required regulatory approvals for the sale of ITP Aero and expect the transaction to complete in the coming weeks. The proceeds will be used to reduce debt by repaying early the £2bn loan, which is supported by an 80% guarantee from UK Export Finance. This loan expires in 2025 and is our only drawn debt exposed to interest rate movements.

Outlook and financial guidance

Our Group guidance for 2022, as first set out on 24 February, is unchanged. We continue to expect:

- low-to-mid-single digit underlying revenue growth
- full year underlying operating profit margin to be broadly unchanged on the prior year (2021 FY: 3.8%)
- modestly positive free cash flow in 2022

Our full year guidance is based on expected improvement in Civil Aerospace in the second half driven by planned higher spare large engine sales and large engine shop visits.

We are well positioned to deliver on our near and medium-term commitments despite the increasing challenges and risks around the pace of global economic growth, supply chain disruption and rising inflation that are expected to persist into next year.

Results webcast and conference call

A webcast will be held at 09:00 (BST) today and details of how to join are provided below. Conference call details are also available for those who would prefer to dial-in. Downloadable materials will be available on the Investor Relations section of the Rolls-Royce website.

Webcast details

To register for the webcast, including Q&A participation, visit the following link:

<https://edge.media-server.com/mmc/p/crfwe8bs>

The same link will provide access to a replay of the webcast shortly after the event concludes.

Conference call details

To register for the conference call, visit the following link:

<https://register.vevent.com/register/B1b3ce38aad37f417d92343128228fb6bc>

After registering you will receive a list of dial-in details and a personal PIN code.

Downloadable materials

Please visit the Investor Relations section of the Rolls-Royce website to download our Half Year Results materials: <https://www.rolls-royce.com/investors/results-and-events.aspx>

Trading update

Our next scheduled trading update will be on 3 November 2022.

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Photographs and broadcast-standard video are available at www.rolls-royce.com.

A PDF copy of this report can be downloaded from www.rolls-royce.com/investors.

This results announcement contains forward-looking statements. Any statements that express forecasts, expectations and projections are not guarantees of future performance and will not be updated. By their nature, these statements involve risk and uncertainty, and a number of factors could cause material differences to the actual results or developments. This report is intended to provide information to shareholders, is not designed to be relied upon by any other party, or for any other purpose and Rolls-Royce Holdings plc and its directors accept no liability to any other person other than under English law.

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Underlying income statement ¹

£ million	2022 H1	2021 H1	Change	Organic Change ²	M&A ³	FX
Underlying revenue	5,308	5,227	81	223	(148)	6
Underlying OE revenue	2,194	2,239	(45)	42	(76)	(11)
Underlying services revenue	3,114	2,988	126	181	(72)	17
Underlying gross profit	942	1,097	(155)	(135)	(19)	(1)
<i>Gross margin %</i>	<i>17.7%</i>	<i>21.0%</i>	<i>(3.3)%pt</i>	<i>(3.4)%pt</i>		
Commercial and administrative costs	(499)	(444)	(55)	(71)	10	6
Research and development costs	(371)	(386)	15	8	4	3
Joint ventures and associates	53	40	13	11	–	2
Underlying operating profit	125	307	(182)	(187)	(5)	10
<i>Underlying operating margin %</i>	<i>2.4%</i>	<i>5.9%</i>	<i>(3.5)%pt</i>	<i>(3.8)%pt</i>		
Financing costs	(236)	(174)	(62)	(62)	1	(1)
Underlying (loss)/profit before taxation	(111)	133	(244)	(249)	(4)	9
Taxation	(77)	(29)	(48)	(50)	1	1
(Loss)/profit for the period	(188)	104	(292)	(299)	(3)	10
Underlying (loss)/earnings per share (pence)	(2.24)	1.25	(3.49)	(3.61)		

Note: H1 2021 transactions were translated at an achieved rate of £\$1.39, close to the average prevailing exchange rate, whereas H1 2022 transactions were translated at £\$1.50, close to the average rate of our hedge book.

Underlying revenue of £5.3bn was 4% higher led by market recovery in Power Systems and improvement in Civil Aerospace including a £241m LTSA catch up (2021 H1: £160m). Defence revenue was lower against a strong comparative partly due to the non-repeat of legacy spare parts sales in the prior period.

Underlying gross profit of £942m included a £219m Civil Aerospace LTSA catch up (2021 H1: £166m) partly offset by a £(29)m charge in Other businesses related to a legacy business and a £(22)m negative contract charge in Defence due to inflation risk. The £(135)m organic change also included the non-recurrence of legacy spare parts sales in Defence, which had a £45m positive profit impact in the prior period, a foreign exchange movement in Civil Aerospace of approximately £270m reflecting a one-off transactional revaluation credit in the prior period, and other movements which had a positive profit impact in the current period. After taking these items into account, gross profit was slightly ahead period on period.

Underlying operating profit was £125m, due to lower underlying gross profit and included £(371)m in research and development costs with an increase in spend in Defence, Power Systems and New Markets balanced by lower spend in Civil Aerospace. Commercial and administrative costs increased by 16% reflecting the absence of furlough assistance received in 2021, increased activity as markets recover in Power Systems and Civil Aerospace and the ramp-up of activity in New Markets.

Underlying loss before taxation of £(111)m included net financing costs of £(236)m of which £(162)m related to interest bearing debt.

Underlying loss for the year of £(188)m included a tax charge of £(77)m (2021 H1: £(29)m).

Underlying loss per share of (2.24)p was based on 8,345m weighted average shares in issue.

Business unit underlying performance

£ million	Underlying revenue	Organic Change ²	Underlying operating (loss)/profit	Organic Change ²	Trading cash flow	Change
Civil Aerospace	2,339	174	(79)	(124)	63	1,127
Defence	1,609	(164)	189	(86)	89	–
Power Systems	1,371	229	119	80	(76)	(147)
New Markets ⁴	1	–	(48)	(20)	(30)	1
Other businesses ⁴	(7)	(11)	(29)	(25)	(1)	21
Corporate/eliminations ⁴	(5)	(5)	(27)	(12)	(24)	(2)
Total (continuing operations)	5,308	223	125	(187)	21	1,000

For footnotes referenced in tables on pages 4-13, see page 13.

Civil Aerospace

£ million	2022 H1	Organic Change ²	FX	2021 H1	Change	Organic Change ²
Underlying revenue	2,339	174	(3)	2,168	8%	8%
Underlying OE revenue	660	(56)	(6)	722	(9)%	(8)%
Underlying services revenue	1,679	230	3	1,446	16%	16%
Underlying gross profit	256	(127)	3	380	(33)%	(33)%
<i>Gross margin %</i>	<i>10.9%</i>			<i>17.5%</i>	<i>(6.6)%pt</i>	<i>(6.7)%pt</i>
Commercial and administrative costs	(183)	(38)	–	(145)	26%	26%
Research and development costs	(202)	33	2	(237)	(15)%	(14)%
Joint ventures and associates	50	8	1	41	22%	20%
Underlying operating (loss)/profit	(79)	(124)	6	39		
<i>Underlying operating margin %</i>	<i>(3.4)%</i>			<i>1.8%</i>	<i>(5.2)%pt</i>	<i>(5.4)%pt</i>
	2022 H1	2021 H1	Change			
Trading cash flow	63	(1,064)	1,127			

2022 H1 key operational metrics:	Large Engine	Business Aviation/Regional	Total	Change
OE deliveries	78	71	149	1
LTSA engine flying hours (EFH) (000's)	4,524	1,593	6,117	1,521
Total LTSA shop visits	321	156	477	27
...of which major shop visits	113	150	263	15

Note: H1 2021 transactions were translated at an achieved rate of £\$1.39, close to the average prevailing exchange rate, whereas H1 2022 transactions were translated at £\$1.50, close to the average rate of our hedge book.

Large engine LTSA flying hours were 4.5m, up 43% year on year. We are still in a relatively early stage of recovery at around 60% of 2019 levels. Total LTSA engines flying hours (which includes Business Aviation and Regional flying hours) of 6.1m were up 33% year on year. Inflation and supply chain challenges have increased and we are addressing the impact through tight cost control and robust long-term contracts with suppliers and customers that aim to pass through inflation risk. Shop visit volumes and OE deliveries were lower than planned in the period, mainly due to supply chain constraints and delays in spare engine sales. Shop visits and OE deliveries are both expected to accelerate in the second half as supply chain actions take effect and assembly rates improve.

- **Underlying revenue** of £2.3bn, up 8% on the prior period. OE revenue of £660m was down 8% reflecting the mix of engine deliveries with fewer large spare engines sold and more Business Aviation engines. Services revenue of £1,679m was up 16% on the prior period and included £241m positive LTSA catch-ups (2021 H1: £160m).
- **Underlying gross profit** of £256m was £127m lower than the prior period and included £219m of LTSA catch-ups (2021 H1: £166m) and other movements which had a positive profit impact in the current period. These were offset by a foreign exchange movement in Civil Aerospace of approximately £270m reflecting a one-off transactional revaluation credit in the prior period. As a result, gross profit was broadly flat on the prior period. Approximately half of the revaluation unwound in 2021 H2.
- **Underlying operating loss** of £(79)m reflected the lower gross profit and included £(183)m in commercial and administrative costs, £(38)m more than the prior period due to business recovery and the absence of government furlough assistance schemes. This was partly offset by a £33m reduction in research and development costs.
- **Trading cash flow** was £63m, £1.1bn better than 2021 H1 driven mostly by higher EFH receipts. Shop visits also increased but at a slower pace. Working capital was modestly negative, but significantly better than the prior period, with higher inventory partly offset by increased payables with higher RRSP payables and warranties reflecting the recovery in flying hour and shop visit volumes in the first half. Trading cash flow included £(265)m outflow related to the settlement of excess foreign exchange derivative contracts and there was limited net impact from OE concessions in the period.

Outlook

Engine flying hours are expected to maintain the current trajectory and return to pre-pandemic levels in 2024 as global travel restrictions are lifted. In 2022, we expect 350-400 total OE deliveries and 1,100-1,200 total shop visits. We are focused on keeping costs low and maintaining productivity gains as shop visits increase. This supports our updated expectation for good (previously modest) revenue growth and improved profitability as well as a substantial improvement in trading cash flow in 2022, compared with the prior year.

Civil Aerospace medium-term outlook

On 13 May we announced new medium-term targets for our Civil Aerospace business based on a simplified value drivers framework and supported by expected flying hours recovery by 2024. A replay of the event is available on our website. We have guided:

- Underlying revenue growth at a low double-digit percentage compound annual growth rate
- Underlying operating profit margin expansion to high single digit percentage
- Trading cash flow to comfortably exceed operating profit

Our five Civil Aerospace value drivers highlight the operational side of our business and provide a deeper understanding of how the changes we have implemented are making it a better quality, more resilient, and more agile business which is set up to increase returns and deliver long-term sustainable growth.

1. Maximise service receipts with better pricing on customer contracts on a growing fleet as the market recovers
2. Reduce service costs by extending the time between shop visits (time on wing) as engine programmes mature and reducing shop visit costs with more repair and reuse of spare parts
3. Improve OE margins through increased productivity, controlled overhead costs and a focused purchasing strategy to reduce the cost of components and assembly
4. Grow Business Aviation with the ramp-up of the Pearl engine programme and market share gains
5. Investment cycle has passed its peak with less intense new product introduction, and the nature of spend reflects increased partnering to reduce capital intensity and a rebalancing towards cost reduction and product maturity work

Medium-term Civil Aerospace guidance summary	FY 2021	Medium-term
DRIVERS		
Engine deliveries (large and business engines)	309	Mid teens CAGR
Shop visit volumes (large, business and regional engines)	953	Low double-digit CAGR
LTSA engine flying hours (large, business and regional engines)	10.3m	Approaching 2019 levels
FINANCIAL (underlying)		
OE revenue	£1,612m	Low teens CAGR
Services revenue	£2,924m	High single-digit CAGR
Total revenue	£4,536m	Low double-digit CAGR
R&D charge as % of sales	10%	~5%
Operating profit margin	(4)%	High single-digit
Change in net LTSA balance	£66m	~£500m average pa
Trading cash flow	£(1,670)m	Comfortably exceeding operating profit

Base year for medium-term compound average growth rate (CAGR) is 2021

Defence

£ million	2022 H1	Organic Change ²	FX	2021 H1	Change	Organic Change ²
Underlying revenue	1,609	(164)	52	1,721	(7)%	(9)%
Underlying OE revenue	697	(42)	20	719	(3)%	(6)%
Underlying services revenue	912	(122)	32	1,002	(9)%	(12)%
Underlying gross profit	326	(77)	8	395	(17)%	(19)%
Gross margin %	20.3%			23.0%	(2.7)%pt	(2.5)%pt
Commercial and administrative costs	(86)	(6)	(1)	(79)	9%	8%
Research and development costs	(53)	(5)	(1)	(47)	13%	11%
Joint ventures and associates	2	2	–	–	–	–
Underlying operating profit	189	(86)	6	269	(30)%	(32)%
<i>Underlying operating margin %</i>	<i>11.7%</i>			<i>15.6%</i>	<i>(3.9)%pt</i>	<i>(3.9)%pt</i>
	2022 H1	2021 H1	Change			
Trading cash flow	89	89	–			

Our Defence business continued to perform well, with the business cycle normalising in 2022 following two years of increased support from customers to offset COVID-19 challenges. We achieved our first milestone on the B-52 programme with the completion of a review in support of the F130 integration activities onto the airframe. The rapid twin pod test to validate our integrated design for the B-52 will commence in the coming months on our outdoor test stand at NASA's Stennis site in Mississippi.

Our Defence portfolio of long-cycle products is not immediately exposed to short term changes in defence demand, but the increase in military activity and spending this year has further underpinned the longer-term outlook for the business. We have seen continued impetus on key future programmes including Tempest, the new fighter jet programme which is targeting entry into service in 2035, and the next generation nuclear submarine programmes for the UK. We await the decision on the Future Long-Range Assault Aircraft (FLRAA) programme in the US, with the outcome expected in the coming months.

- **Order intake** was £1.4bn with a book-to-bill ratio of 0.9x. Our £6.5bn order book and the long operational life of our products give high visibility of future revenue. Order intake in the first half included a new 11-year contract to support the Adour engine, which powers the Hawk jet trainer aircraft.
- **Underlying revenue** decreased 9% to £1.6bn. Timing on the signature of the next tranche for the F-35B and lower spare engine sales in Naval led to a 6% reduction in OE revenue. Services revenue was £122m (12%) lower partly due to the non-repeat of a large legacy spare parts sales in 2021. The remainder of the decline related to engine flying hours and delays from suppliers.
- **Underlying gross profit** of £326m was £77m (19%) lower than the prior period including the non-recurrence of legacy spare parts sales in Defence, which had a £45m positive profit impact in the prior period. The 20.3% gross margin in 2022 H1 reflected a more normal mix of activity. Product margin remained strong through the period despite supply chain and labour inflationary challenges, and a £(22)m charge in respect of inflationary increases to the costs to deliver long term services contracts.
- **Underlying operating profit** was £189m, a decrease of 32% compared with 2021 H1 mostly due to the lower gross profit. Commercial and administrative costs increased by £6m. Research and development costs were up by £5m including investment in directed energy and future programmes. We are also playing a key role in Project Pele which will deliver the first advanced microreactor in the US.
- **Trading cash flow** at £89m was flat year on year. The increase in inventory reflected supply chain challenges and lower deliveries. This was offset by higher payables and a one-off customer receipt.

Outlook

We expect modest revenue growth in 2022, helped by an easier comparable in the second half of the year, with strong order book cover securing near term activity in all our end markets. We are increasing investment to support future growth and recent orders, develop products that will help decarbonise the military, and modernise our facilities. This, combined with a return to more usual levels of spare parts sales in 2022, is expected to result in a low double digit operating margin (new guidance) and strong cash conversion.

Power Systems

£ million	2022 H1	Organic Change ²	M&A ³	FX	2021 H1	Change	Organic Change ²
Underlying revenue	1,371	229	2	(41)	1,181	16%	20%
Underlying OE revenue	849	153	2	(24)	718	18%	21%
Underlying services revenue	522	76	—	(17)	463	13%	17%
Underlying gross profit	401	110	1	(11)	301	33%	37%
Gross margin %	29.2%				25.5%	3.7%pt	3.7%pt
Commercial and administrative costs	(204)	(19)	—	5	(190)	7%	10%
Research and development costs	(79)	(12)	—	2	(69)	14%	17%
Joint ventures and associates	1	1	—	1	(1)		
Underlying operating profit	119	80	1	(3)	41	190%	195%
<i>Underlying operating margin %</i>	<i>8.7%</i>				3.5%	5.2%pt	5.1%pt
	2022 H1	2021 H1		Change			
Trading cash flow	(76)	71	(147)				

Demand for our products remains very strong with continued record order intake in the first half. Demand has been strongest for power generation with orders including mission critical backup power for data centres for very large customers worldwide. Global supply chain challenges have continued to impact the availability of key components. This is restricting our pace of revenue recovery and drove a substantial increase in inventory in the first half which we aim to reduce in the second half. We have a dedicated taskforce in place to mitigate risk and accelerate OE deliveries with actions such as increased risk monitoring to identify and resolve supply chain issues early, and technical substitution of certain cast parts with 3D printed alternatives.

- **Order intake** of £2.1bn was 53% higher than the prior period and included our highest quarter for order intake on record. The book-to-bill ratio was 1.5x with strongest growth in demand in power generation governmental and industrial end markets. Our order cover for 2023 is building well and we are already at full capacity for 2023 in some market segments.
- **Underlying revenue** of £1.4bn was up 20%. Aftermarket services grew 17% with increased activity in both stationary and mobile solutions. OE revenue was up 21% with particularly strong sales in power generation, marine and governmental end markets.
- **Underlying gross profit** grew by 37% to £401m and gross margin increased by 3.7%pt. This reflected the mix of activity with an increase in higher margin services and lower warranty costs as well as improved utilisation in our manufacturing facilities compared with the prior period when we were in the earlier stages of recovery.
- **Underlying operating profit** was £119m, up £80m giving an operating margin of 8.7%. The increase in commercial and administrative costs reflected higher employee costs as activity increased as well as wage inflation pressures. The 17% increase in research and development costs reflects investment in new product development and transitioning products to sustainable fuel alternatives as we help our customers towards net-zero emissions.
- **Trading cash outflow** was £(76)m (2021 H1: £71m), with a negative cash conversion as inventory increased to meet growth demand and to manage the supply chain challenges. It also reflected our investment in a 54% non-controlling stake in electrolysis stack specialist Hoeller Electrolyzer.

Outlook

We expect good revenue growth in 2022 supported by record order intake, partly held back by the current global supply chain constraints. We expect our operating margin to be broadly flat, with higher activity levels utilisation offset by continued inflationary pressures and increased research and development in net zero solutions. Cash conversion is expected to improve in the second half with some of the recent inventory build unwind, but is still expected to be lower for the full year.

New Markets

£ million	2022 H1	Organic Change ²	FX	2021 H1	Change	Organic Change ²
Underlying revenue	1	-	(1)	2	(50)%	-
Underlying services revenue	1	-	(1)	2	(50)%	-
Underlying gross loss	(2)	(2)	-	-	-	-
Commercial and administrative costs	(9)	(9)	-	-	-	-
Research and development costs	(37)	(9)	-	(28)	32%	32%
Underlying operating loss	(48)	(20)	-	(28)	71%	71%
	2022 H1	2021 H1		Change		
Trading cash flow	(30)	(31)		1		

New Markets is our reporting segment for investment phase businesses focused on addressing the opportunities being created by the transition to net zero and addressing the climate change challenge. This segment comprises two businesses with no significant revenues but high future potential: Rolls-Royce SMR and Rolls-Royce Electrical.

Our small modular reactor (SMR) design is going through the UK Generic Design Assessment (GDA) process, which is expected to take several years to complete. The estimated costs are mostly covered by third party investment and a UK Government grant in addition to £50m (approximately 10% of the total) self-funded by the Group. Factory sites where we will make the heavy vessel modules for our SMR are being identified in preparation for the build process, with minimal infrastructure investment prior to receipt of first order. We welcomed the decision by the European Parliament this year to categorise nuclear power as an environmentally sustainable energy source in the EU taxonomy for sustainable activities.

Our Electrical business supports electrical engineering projects across the Group enabling us to take an agile approach to specialist engineering resource. In the first half, we announced the development of turbogenerator technology which includes a new small engine designed for hybrid-electric applications in Civil Aerospace and Defence. In July we signed an agreement with Hyundai Motor Group to collaborate on bringing all-electric propulsion and hydrogen fuel cell technology to the advanced air mobility market. Our urban air mobility customers are targeting entry into service by 2026, using our torque dense, compact, and highly reliable electrical propulsion units.

- **Underlying operating loss** of £(48)m was £(20)m greater than the prior period comparative as we grew the workforce in both businesses with a focus on engineering capability for research and development activities. The rate of cost increase is slightly lower than expected as a result of a tight labour market in experienced engineers with certain skills and technical expertise.
- **Trading cash flow** of £(30)m was £18m better than operating losses mainly due to the receipt of third party funding and investment for the SMR programme.

Outlook

Investment in research and development will continue to increase in the second half of the year as we add to the engineering teams and take our new products through development and regulatory processes. Trading cash outflow guidance has been updated, and is now expected to be around two thirds of the underlying operating loss in 2022 (previously £100m better), with the difference mainly due to the phased receipt of secured third party equity investment in Rolls-Royce SMR.

Statutory income statement

£ million	2022 H1	2021 H1	Change
Revenue	5,600	5,159	441
Gross profit	1,062	814	248
Operating profit	223	38	185
Gain/(loss) on disposal/acquisition of businesses	77	(7)	84
Net financing (costs)/income	(2,054)	83	(2,137)
(Loss)/profit before taxation	(1,754)	114	(1,868)
Taxation	143	280	(137)
(Loss)/profit from continuing operations	(1,611)	394	(2,005)
(Loss)/earnings per share from continuing operations (pence)	(19.29)	4.73	(24.02)

The adjustments between the underlying income statement and the statutory income statement are set out in note 2 to the condensed consolidated interim financial statements.

Statutory revenue of £5.6bn was 9% higher than the prior period. Along with the improvements in underlying revenue, statutory revenue benefited from strengthening USD exchange rates.

Gross profit of £1.1bn was 30% higher than the prior period. Gross profit included a £219m LTSA catch-up in Civil Aerospace (2021 H1: £166m) and other movements which had a positive profit impact in the current period, partly offset by a lower contribution from Defence due to the non-repeat of legacy spare parts sales in the prior period. Gross profit also benefited from strengthening USD exchange rates.

Operating profit improved to £223m from £38m in the prior period. Research and development costs were 4% lower. Commercial and administrative costs increased on the prior period with strengthening USD exchange rates, non-repeat of furlough assistance received in 2021, increased activity as markets recover in Power Systems and Civil Aerospace and increased headcount in New Markets as we grow our SMR and Electrical businesses.

Loss before taxation of £(1.8)bn included £(2.1)bn of net financing costs, of which £(1.8)bn were mark-to-market on derivative contracts and in year foreign exchange losses, and £(0.2)bn net interest payable. It also included a £76m gain on the disposal of AirTanker Holdings.

Loss from continuing operations of £(1.6)bn included a tax credit of £143m. The tax credit mainly relates to the increase in the UK deferred tax asset on unrealised foreign exchange losses on derivative contracts together with tax on profits and losses in overseas jurisdictions. The £280m credit in the prior period mostly related to movements in deferred tax balances due to the UK tax rate change from 19% to 25%, effective from April 2023.

Balance sheet

£ million	30 Jun 2022	31 Dec 2021	Change
Intangible assets	4,054	4,041	13
Property, plant and equipment	3,899	3,917	(18)
Right-of-use assets	1,116	1,203	(87)
Joint ventures and associates	466	404	62
Contract assets and liabilities	(9,646)	(8,836)	(810)
Working capital ⁵	1,870	1,458	412
Provisions	(2,248)	(1,582)	(666)
Net debt ⁶	(5,126)	(5,110)	(16)
Net financial assets and liabilities ⁶	(4,003)	(3,034)	(969)
Net post-retirement scheme surpluses/(deficits)	48	(225)	273
Taxation	1,953	1,787	166
Held for sale	1,320	1,305	15
Other net assets and liabilities	36	36	–
Net liabilities	(6,261)	(4,636)	(1,625)
Other items			
USD hedge book (USDbn)	21	22	(1)
Civil LTSA asset	928	915	13
Civil LTSA liability	(7,664)	(7,129)	(535)
Civil net LTSA liability	(6,736)	(6,214)	(522)

Key drivers of balance sheet movements are detailed below:

Contract assets and liabilities: The £(810)m movement in the net liability balance was mainly driven by Civil Aerospace LTSA revenue billed being ahead of revenue recognised in the period, together with foreign exchange movements. In addition, there was an increase in advance payments received in Defence.

Working capital: The £412m increase reflected a £780m increase in inventory driven by supply chain issues, delayed outputs and a ramp up in preparation for second half sales with the largest increases in Civil Aerospace and Power Systems with a more modest increase in Defence. A £610m increase in receivables reflected increased sales volumes and foreign exchange impacts. A £(978)m increase in payables reflected higher levels of purchases to support expected sales growth in future periods, as well as foreign exchange impacts due to the stronger USD.

Provisions: The £666m 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 £723m 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: Remained broadly flat at £5.1bn.

Net financial assets and liabilities: £(969)m movement was primarily driven by the change in the fair value of foreign exchange contracts due to the impact of the movement in £:US\$ exchange rates from £:\$1.35 at 31 December 2021 to £:\$1.21 at 30 June 2022.

Net post-retirement scheme surpluses: £273m movement primarily driven by an increase in discount rates on pension liabilities.

Taxation: The net tax asset increased by £166m, driven by £213m related to the increase in the deferred tax asset on unrealised losses on derivative contracts, which was partially offset by a reduction in net deferred tax assets on movements in post-retirement schemes (£85m).

Funds flow statement ⁷

£ million	2022 H1	2021 H1 ⁸	Change
Underlying operating profit	125	307	(182)
Operating profit/(loss) from discontinued operations	68	(93)	161
Depreciation, amortisation and impairment	455	504	(49)
Lease payments (capital plus interest)	(114)	(171)	57
Expenditure on intangible assets	(82)	(71)	(11)
Capital expenditure (PPE)	(115)	(124)	9
Movement in inventory	(692)	(219)	(473)
Movement in receivables/payables/contract balances (excluding Civil LTSA)	423	(400)	823
Civil Aerospace net LTSA balance change	433	(108)	541
Movement in provisions	(116)	(136)	20
Cash flows on settlement of excess derivative contracts	(265)	(303)	38
Fees on undrawn facilities	(23)	(35)	12
Net interest received and paid	(114)	(81)	(33)
Cash flow on financial instruments net of realised losses included in operating profit	35	(52)	87
Other	(6)	27	(33)
Trading cash flow	12	(955)	967
<i>.... Of which relates to continuing operations</i>	21	(979)	1,000
Contributions to defined benefit pensions in excess of underlying charge	(1)	(94)	93
Taxation paid	(88)	(102)	14
Group free cash flow	(77)	(1,151)	1,074
<i>.... Of which relates to continuing operations</i>	(68)	(1,174)	1,106
Disposals and acquisitions	(18)	(22)	4
Exceptional Group restructuring	(48)	(134)	86
Payment of financial penalties	–	(156)	156
Excluding: settlement of excess derivative contracts	265	303	(38)
Excluding: capital expenditure (including investment from non-controlling interests and movement in investments)	213	223	(10)
Excluding: capital element of lease payments	95	147	(52)
Excluding: interest paid	172	150	22
Other	(5)	(39)	34
Net cash inflow/(outflow) from operating activities	597	(679)	1,276

Key changes in the funds flow items are described below:

Expenditure on intangible assets: expenditure of £(82)m in the period (2021 H1: £(71)m) included £(48)m capitalised research and development (2021 H1: £(41)m), which was modestly higher than the prior period reflecting the mix of spend across Civil Aerospace engine programmes.

Capital expenditure: investment of £(115)m was £9m lower than the prior period, largely reflecting reduced spend in Civil Aerospace, primarily due to timing impacts, partly offset by higher investment in Power Systems and in New Markets.

Increase in inventory: global supply chain constraints and parts supply shortages resulted in a £(692)m outflow as inventory increased in the first half, with the largest increases in Civil Aerospace and Power Systems. In Civil Aerospace work-in-progress inventory grew, as engine output delays more than offset the impact of lower incoming parts from suppliers, alongside a higher level of assembled engines held in inventory due partly to the timing of spare engine sales. Power Systems inventory also grew, with higher work-in-progress due to parts shortages as well as planned inventory build to support the expected increase in sales in the second half. There was a more modest increase in Defence.

Movement in receivables/payables/contract balances (excluding Civil LTSA): inflow of £423m in the period (2021 H1: £(400)m) driven mainly by Civil Aerospace including higher trade payables and joint venture payables due largely to timing at the end of 2021, as well as higher RRSP payables and warranties due to the recovery in flying hours in the first half and planned increase in shop visit volumes in the second half. Defence also saw an increase in contract liabilities in the period, reflecting advance payments and engine deposits.

Movement in Civil Aerospace net LTSA creditor: the £433m movement (2021 H1: £(108)m) reflected EFH invoiced receipts of £1,648m (2021 H1: £1,002m) offset by Civil Aerospace LTSA revenue in the income statement of £1,215m (2021 H1: £1,110m). The increase in EFH invoiced receipts reflected higher engine flying hours, recovery in customer invoicing of minimum utilisation clauses, and modest timing benefits, while the higher LTSA revenue was driven by £81m higher positive LTSA catch-ups year-on-year, and £24m due to modestly higher shop visit volumes.

Movement in provisions: the £(116)m movement (2021 H1: £(136)m) was largely in Civil Aerospace. It included a small net increase in the Trent 1000 provision reflecting delays in certification, more than offset by a reduction of contract loss provisions primarily due to a reversal reflecting a change in the discount rate due to higher inflation and interest rates. £143m of provisions were utilised in the period, mainly for warranty and guarantees, contract losses and Trent 1000 costs.

Cash flows on settlement of excess derivative contracts: relates to the cash settlement costs in the period for the offsetting foreign exchange contracts that were entered into to reduce the size of the US Dollar hedge book in 2020. The cash settlement costs of £1.7bn occur across 2020-2026, of which £0.8bn remains to be paid in future periods including £(61)m due to be settled in the second half.

Interest: the net payment of £(114)m in the year was higher than the prior period (2021 H1: £(81)m), reflecting the full impact during the period of the drawdown of the £2bn UK Export Finance (UKEF) facility in June 2021.

Contributions to defined benefit pensions: cash contributions were broadly in line with the income statement charge in the first half. In the prior period cash contributions were £94m higher than the income statement charge, reflecting payment deferrals from 2020.

Notes to financial tables and commentary on pages 4-13:

¹ Underlying performance excludes the impact of period end mark-to-market adjustments, the effect of acquisition accounting and business disposals, impairment of goodwill and other non-current and current assets, and exceptional items. Adjustments between the underlying income statement and the reported income statement are set out in note 2 in the condensed consolidated interim financial statements on page 32.

² Organic change at constant translational currency (constant currency) applying FY21 average rates to 2021 and 2022, excluding M&A. All commentary is provided on an organic basis unless otherwise stated.

³ M&A includes 2021 Power Systems acquisitions comprising of Shanghai, Cooltech and joint venture Kowry and Other businesses 2021 disposals of Bergen Engines AS and Civil Nuclear Instrumentation & Controls.

⁴ 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. The trading results of the UK Civil Nuclear business have been included in Other businesses. The underlying results of Other businesses and Corporate and Inter-segment activities for 30 June 2021 have been restated to reclassify the results of the Group's SMR and electrical activities as New Markets.

⁵ Net working capital includes inventory, trade receivables and payables and similar assets and liabilities.

⁶ Net debt includes £102m (31 Dec 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. Net debt has been adjusted to exclude net debt held for sale.

⁷ The derivation of the summary funds flow statement above from the reported cash flow from operating activities is included on page 53.

⁸ The comparative information for the period ended 30 June 2021 has been re-presented to be on a comparable basis with the definition of underlying results. There is no change to trading or group free cash flow.

A reconciliation of alternative performance measures to their statutory equivalent is provided on pages 52 and 53.

Condensed consolidated interim financial statements

Condensed consolidated income statement

For the half-year ended 30 June 2022

	Notes	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
Continuing operations			
Revenue	2	5,600	5,159
Cost of sales ¹		(4,538)	(4,345)
Gross profit	2	1,062	814
Commercial and administrative costs	2	(514)	(424)
Research and development costs	2, 3	(373)	(390)
Share of results of joint ventures and associates		48	38
Operating profit		223	38
Gain/(loss) arising on acquisition and disposal of businesses	19	77	(7)
Profit before financing and taxation		300	31
Financing income ²	4	215	280
Financing costs ²	4	(2,269)	(197)
Net financing (costs)/income		(2,054)	83
(Loss)/profit before taxation		(1,754)	114
Taxation	5	143	280
(Loss)/profit for the period from continuing operations		(1,611)	394
Discontinued operations			
Profit for the period		60	16
Costs of disposal of discontinued operations		(4)	(17)
Profit/(loss) for the period from discontinued operations	19	56	(1)
(Loss)/profit for the period		(1,555)	393
Attributable to:			
Ordinary shareholders		(1,554)	393
Non-controlling interests (NCI)		(1)	-
(Loss)/profit for the period		(1,555)	393
Other comprehensive income/(expense)		610	(145)
Total comprehensive (expense)/income for the period		(945)	248
(Loss)/earnings per ordinary share attributable to ordinary shareholders:	6		
From continuing operations:			
Basic		(19.29)p	4.73p
Diluted		(19.29)p	4.72p
From continuing and discontinued operations:			
Basic		(18.62)p	4.72p
Diluted		(18.62)p	4.71p

Underlying earnings per ordinary share are shown in note 6.

¹ Cost of sales includes a charge for expected credit losses of £28m (30 June 2021: £48m). Further details can be found in note 10.

² Included within financing are fair value changes on derivative contracts. Further details can be found in notes 2, 4 and 12.

Condensed consolidated statement of comprehensive income

For the half-year ended 30 June 2022

	Notes	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
(Loss)/profit for the period		(1,555)	393
Other comprehensive income/(expense) (OCI)			
Actuarial movements in post-retirement schemes	16	329	(12)
Revaluation to fair value of other investments		(5)	–
Share of OCI of joint ventures and associates		1	(4)
Related tax movements		(85)	16
Items that will not be reclassified to profit or loss		240	–
Foreign exchange translation differences on foreign operations		375	(174)
Cash flow hedge reserve reclassified to income statement on disposal of businesses	19	62	–
Movement on fair values debited to cash flow hedge reserve		8	(41)
Reclassified to income statement from cash flow hedge reserve		(88)	38
Costs of hedging		4	–
Share of OCI of joint ventures and associates		–	32
Related tax movements		9	–
Items that will be reclassified to profit or loss		370	(145)
Total other comprehensive income/(expense)		610	(145)
Total comprehensive (expense)/income for the period		(945)	248
Attributable to:			
Ordinary shareholders		(944)	248
Non-controlling interests		(1)	–
Total comprehensive (expense)/income for the period		(945)	248
Total comprehensive (expense)/income for the period attributable to ordinary shareholders arises from:			
Continuing operations		(1,001)	316
Discontinued operations		57	(68)
Total comprehensive (expense)/income for the period attributable to ordinary shareholders		(944)	248

Condensed consolidated balance sheet

At 30 June 2022

	Notes	30 June 2022 £m	31 December 2021 £m
ASSETS			
Intangible assets	7	4,054	4,041
Property, plant and equipment	8	3,899	3,917
Right-of-use assets	9	1,116	1,203
Investments – joint ventures and associates		466	404
Investments – other		36	36
Other financial assets	12	433	361
Deferred tax assets		2,433	2,249
Post-retirement scheme surpluses	16	1,157	1,148
Non-current assets		13,594	13,359
Inventories		4,446	3,666
Trade receivables and other assets	10	5,993	5,383
Contract assets	11	1,498	1,473
Taxation recoverable		97	90
Other financial assets	12	136	46
Short-term investments		1	8
Cash and cash equivalents		2,747	2,621
Current assets		14,918	13,287
Assets held for sale	19	2,101	2,028
TOTAL ASSETS		30,613	28,674
LIABILITIES			
Borrowings and lease liabilities	13	(321)	(279)
Other financial liabilities	12	(992)	(689)
Trade payables and other liabilities	14	(6,681)	(6,016)
Contract liabilities	11	(4,214)	(3,599)
Current tax liabilities		(113)	(101)
Provisions for liabilities and charges	15	(567)	(475)
Current liabilities		(12,888)	(11,159)
Borrowings and lease liabilities	13	(7,655)	(7,497)
Other financial liabilities	12	(3,478)	(2,715)
Trade payables and other liabilities	14	(1,888)	(1,575)
Contract liabilities	11	(6,930)	(6,710)
Deferred tax liabilities		(464)	(451)
Provisions for liabilities and charges	15	(1,681)	(1,107)
Post-retirement scheme deficits	16	(1,109)	(1,373)
Non-current liabilities		(23,205)	(21,428)
Liabilities associated with assets held for sale	19	(781)	(723)
TOTAL LIABILITIES		(36,874)	(33,310)
NET LIABILITIES		(6,261)	(4,636)
EQUITY			
Called-up share capital		1,674	1,674
Share premium		1,012	1,012
Capital redemption reserve		166	165
Hedging reserves		(50)	(45)
Merger reserve		650	650
Translation reserve		717	342
Accumulated losses		(10,460)	(8,460)
Equity attributable to ordinary shareholders		(6,291)	(4,662)
Non-controlling interests		30	26
TOTAL EQUITY		(6,261)	(4,636)

Condensed consolidated cash flow statement

For the half-year ended 30 June 2022

	Notes	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
Reconciliation of cash flows from operating activities			
Operating profit from continuing operations		223	38
Operating profit/(loss) from discontinued operations	19	68	(93)
Operating profit/(loss)		291	(55)
Loss on disposal of property, plant and equipment		16	2
Share of results of joint ventures and associates		(48)	(38)
Dividends received from joint ventures and associates		19	14
Amortisation and impairment of intangible assets	7	138	159
Depreciation and impairment of property, plant and equipment	8	203	243
Depreciation and impairment of right-of-use assets	9	127	128
Adjustment of amounts payable under residual value guarantees within lease liabilities ¹		(1)	(3)
Impairment of and other movements on investments		–	2
Decrease in provisions		(94)	(211)
Increase in inventories		(692)	(219)
Movement in trade receivables/payables and other assets/liabilities		183	(136)
Movement in contract assets/liabilities		682	(178)
Financial penalties paid ²		–	(156)
Cash flows on other financial assets and liabilities held for operating purposes		(167)	(45)
Interest received		6	3
Net defined benefit post-retirement cost recognised in profit before financing	16	27	26
Cash funding of defined benefit post-retirement schemes	16	(29)	(131)
Share-based payments		24	18
Net cash inflow/(outflow) from operating activities before taxation		685	(577)
Taxation paid		(88)	(102)
Net cash inflow/(outflow) from operating activities		597	(679)
Cash flows from investing activities			
Net movement in other investments		(5)	(6)
Additions of intangible assets		(94)	(89)
Disposals of intangible assets	7	5	2
Purchases of property, plant and equipment		(125)	(126)
Disposals of property, plant and equipment		25	5
Disposal of businesses	19	179	(8)
Movement in investments in joint ventures and associates and other movements on investments		(14)	(2)
Movement in short-term investments		7	(1)
Net cash outflow from investing activities		(22)	(225)
Cash flows from financing activities			
Repayment of loans		(23)	(942)
Proceeds from increase in loans		1	2,003
Capital element of lease payments		(95)	(147)
Net cash flow from (decrease)/increase in borrowings and leases		(117)	914
Interest paid		(120)	(84)
Interest element of lease payments		(29)	(31)
Fees paid on undrawn facilities		(23)	(35)
Cash flows on settlement of excess derivative contracts ³	4	(265)	(303)
Transactions with NCI ⁴		25	–
NCI on formation of subsidiary		–	2
Redemption of C Shares		(1)	(2)
Net cash (outflow)/inflow from financing activities		(530)	461
Change in cash and cash equivalents		45	(443)
Cash and cash equivalents at 1 January		2,639	3,496
Exchange gains/(losses) on cash and cash equivalents		98	(75)
Cash and cash equivalents at 30 June ⁵		2,782	2,978

Condensed consolidated cash flow statement continued

For the half-year ended 30 June 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 During the period, the Group incurred a cash outflow of £265m as a result of settling foreign exchange contracts that were originally in place to sell \$1,600m receipts. Further detail is provided in note 4.
- 4 Relates to NCI investment received in the period, in respect of Rolls-Royce SMR Limited.
- 5 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 period includes the sale of goods and services to joint ventures and associates.

	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
Reconciliation of movements in cash and cash equivalents to movements in net debt		
Change in cash and cash equivalents	45	(443)
Cash flow from decrease/(increase) in borrowings and leases	117	(914)
Less: settlement of related derivatives included in fair value of swaps below	–	6
Cash flow from (decrease)/increase in short-term investments	(7)	1
Change in net debt resulting from cash flows	155	(1,350)
New leases and other non-cash adjustments to lease liabilities and borrowings	(67)	(17)
Exchange (losses)/gains on net debt	(162)	2
Fair value adjustments	24	144
Reclassifications	–	19
Movement in net debt	(50)	(1,202)
Net debt at 1 January	(5,194)	(3,827)
Net debt at 30 June excluding the fair value of swaps	(5,244)	(5,029)
Fair value of swaps hedging fixed rate borrowings	102	57
Net debt at 30 June	(5,142)	(4,972)

Condensed consolidated cash flow statement continued

For the half-year ended 30 June 2022

The movement in net debt (defined by the Group as including the items shown below) is as follows:

	At 1 January	Funds flow	Exchange differences	Fair value adjustments	Reclassifications ¹	Other movements	At 30 June
	£m	£m	£m	£m	£m	£m	£m
2022							
Cash at bank and in hand	795	182	29	–	–	–	1,006
Money market funds	49	174	–	–	–	–	223
Short-term deposits	1,777	(327)	68	–	–	–	1,518
Cash and cash equivalents (per balance sheet)	2,621	29	97	–	–	–	2,747
Cash and cash equivalents included within assets held for sale	25	11	1	–	–	–	37
Overdrafts	(7)	5	–	–	–	–	(2)
Cash and cash equivalents (per cash flow statement)	2,639	45	98	–	–	–	2,782
Short-term investments	8	(7)	–	–	–	–	1
Other current borrowings	(2)	1	–	–	–	–	(1)
Non-current borrowings	(6,023)	–	(98)	25	–	(23)	(6,119)
Borrowings included within liabilities held for sale	(59)	21	(1)	(1)	–	–	(40)
Lease liabilities	(1,744)	91	(157)	–	–	(44)	(1,854)
Lease liabilities included within liabilities held for sale	(13)	4	(4)	–	–	–	(13)
Financial liabilities	(7,841)	117	(260)	24	–	(67)	(8,027)
Net debt excluding fair value of swaps	(5,194)	155	(162)	24	–	(67)	(5,244)
Fair value of swaps hedging fixed rate borrowings ²	37	–	98	(33)	–	–	102
Net debt³	(5,157)	155	(64)	(9)	–	(67)	(5,142)
2021							
Cash at bank and in hand	940	(122)	(13)	–	(38)	–	767
Money market funds	669	(527)	–	–	–	–	142
Short-term deposits	1,843	221	(58)	–	–	–	2,006
Cash and cash equivalents (per balance sheet)	3,452	(428)	(71)	–	(38)	–	2,915
Cash and cash equivalents included within assets held for sale	51	(16)	(4)	–	38	–	69
Overdrafts	(7)	1	–	–	–	–	(6)
Cash and cash equivalents (per cash flow statement)	3,496	(443)	(75)	–	–	–	2,978
Short-term investments	–	1	–	–	–	–	1
Other current borrowings	(1,006)	948	1	36	18	–	(3)
Non-current borrowings	(4,274)	(2,003)	45	108	88	(3)	(6,039)
Borrowings included within liabilities held for sale	–	–	–	–	(77)	–	(77)
Lease liabilities	(2,043)	145	31	–	15	(14)	(1,866)
Lease liabilities included within liabilities held for sale	–	2	–	–	(25)	–	(23)
Financial liabilities	(7,323)	(908)	77	144	19	(17)	(8,008)
Net debt excluding fair value of swaps	(3,827)	(1,350)	2	144	19	(17)	(5,029)
Fair value of swaps hedging fixed rate borrowings ²	251	(6)	(41)	(147)	–	–	57
Net debt³	(3,576)	(1,356)	(39)	(3)	19	(17)	(4,972)

¹ Reclassifications during the period to 30 June 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 (30 June 2022: £81m, 31 December 2021: £114m) and the element of fair value relating to exchange differences on the underlying principal of derivatives in cash flow hedges (30 June 2022: £21m, 31 December 2021: £(77)m).

³ As at 30 June 2022, net debt excluding lease liabilities was £(3,275)m (31 December 2021: £(3,400)m).

Condensed consolidated statement of changes in equity

For the half-year ended 30 June 2022

Notes	Attributable to ordinary shareholders										
	Called-up share capital	Share premium	Capital redemption reserve	Hedging reserves ¹	Merger reserve	Translation reserve	Accumulated losses ²	Total		Non-controlling interests (NCI)	Total equity
								£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 period	—	—	—	—	—	—	(1,554)	(1,554)	(1)	(1,555)	
Foreign exchange translation differences on foreign operations	—	—	—	—	—	375	—	375	—	375	
Cash flow hedge reserve reclassified to income statement on disposal of businesses	19	—	—	—	62	—	—	—	62	—	62
Movement on post-retirement schemes	16	—	—	—	—	—	—	329	329	—	329
Fair value movement on cash flow hedges	—	—	—	8	—	—	—	8	—	8	
Reclassified to income statement from cash flow hedge reserve	—	—	—	(88)	—	—	—	(88)	—	(88)	
Costs of hedging	12	—	—	—	4	—	—	—	4	—	4
Revaluation to fair value of other investments	—	—	—	—	—	—	(5)	(5)	—	(5)	
OCI of joint ventures and associates	—	—	—	—	—	—	—	1	1	—	1
Related tax movements	—	—	—	9	—	—	(85)	(76)	—	(76)	
Total comprehensive expense for the period	—	—	—	(5)	—	375	(1,314)	(944)	(1)	(945)	
Redemption of C Shares ³	—	—	1	—	—	—	(1)	—	—	—	
Share-based payments - direct to equity ⁴	—	—	—	—	—	—	24	24	—	24	
Transactions with NCI ⁵	—	—	—	—	—	—	20	20	5	25	
Other changes in equity in the period	—	—	1	—	—	—	43	44	5	49	
At 30 June 2022	1,674	1,012	166	(50)	650	717	(10,460)	(6,291)	30	(6,261)	
At 1 January 2021	1,674	1,012	162	(94)	650	524	(8,825)	(4,897)	22	(4,875)	
Profit for the period	—	—	—	—	—	—	393	393	—	393	
Foreign exchange translation differences on foreign operations	—	—	—	—	—	(174)	—	(174)	—	(174)	
Movement on post-retirement schemes	16	—	—	—	—	—	(12)	(12)	—	(12)	
Fair value movement on cash flow hedges	—	—	—	(41)	—	—	—	(41)	—	(41)	
Reclassified to income statement from cash flow hedge reserve	—	—	—	38	—	—	—	38	—	38	
OCI of joint ventures and associates	—	—	—	32	—	—	(4)	28	—	28	
Related tax movements	—	—	—	2	—	(2)	16	16	—	16	
Total comprehensive income for the period	—	—	—	31	—	(176)	393	248	—	248	
Redemption of C Shares ³	—	—	2	—	—	—	(2)	—	—	—	
Share-based payments - direct to equity ⁴	—	—	—	—	—	—	18	18	—	18	
NCI on formation of subsidiary	—	—	—	—	—	—	—	—	2	2	
Related tax movements	—	—	—	—	—	—	17	17	—	17	
Other changes in equity in the period	—	—	2	—	—	—	33	35	2	37	
At 30 June 2021	1,674	1,012	164	(63)	650	348	(8,399)	(4,614)	24	(4,590)	

¹ The hedging reserves include the cash flow hedge reserve of £(54)m and the costs of hedging reserve of £4m. See note 12.

² At 30 June 2022, 16,297,976 ordinary shares with a net book value of £39m (30 June 2021: 34,938,153 ordinary shares with a net book value of £78m) were held for the purpose of share-based payment plans and included in accumulated losses. During the period:

- 13,332,079 ordinary shares with a net book value of £27m (30 June 2021: 4,928,564 ordinary shares with a net book value of £11m) vested in share-based payment plans; and

- the Company acquired none (30 June 2021: none) of its ordinary shares via reinvestment of dividends received on its own shares and purchased none (30 June 2021: none) of its ordinary shares through purchases on the London Stock Exchange.

³ In Rolls-Royce Holdings plc's own financial statements, C Shares are issued from the merger reserve. This reserve was created by a scheme of arrangement in 2011. As this reserve is eliminated on consolidation in the consolidated financial statements, the C Shares are shown as being issued from the capital redemption reserve.

⁴ Share-based payments – direct to equity is the share-based payment charge for the period less the actual cost of vesting excluding those vesting from own shares and cash received on share-based schemes vesting.

⁵ Relates to NCI investment received in the period in respect of Rolls-Royce SMR Limited.

Notes to the interim 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 interim financial statements of the Company as at and for the six months to 30 June 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 2021 (2021 Annual Report) are available upon request from the Company Secretary, Rolls-Royce Holdings plc, Kings Place, 90 York Way, London, N1 9FX.

The Board of Directors approved the condensed consolidated financial statements on 4 August 2022.

Statement of compliance

These condensed consolidated financial statements have been prepared on the basis of the policies set out in the 2021 Annual Report, except for changes below, and in accordance with UK adopted IAS 34 *Interim Financial Reporting* and the Disclosure Guidance and Transparency Rules sourcebook of the UK's Financial Conduct Authority. They do not include all of the information required for full annual statements and should be read in conjunction with the Annual Report 2021.

The interim figures up to 30 June 2022 and 2021 are unaudited. The 2021 financial statements, which were 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 IAS, have been reported on by the Group's auditors and delivered to the registrar of companies. 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 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 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 that are used to support the delivery of our contractual commitments to customers under LTSAs.

The Group has assessed the impact of this amendment on its contracts and has included additional allocated costs that have increased the total contract loss provision by £723m as at 1 January 2022 (see note 15). 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.

Revision to IFRS not applicable in 2022

IFRS 17 Insurance Contracts

IFRS 17 is effective from 1 January 2023. The new standard established the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the Standard. The objective of IFRS 17 is to ensure that an entity provides relevant information that faithfully represents those contracts.

The Group has performed an assessment to establish where an impact is expected and, at this time, the Group believes that the impact is restricted to its captive insurance company. The process of assessing the financial impact on the condensed consolidated financial statements will continue during the second half of 2022.

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.

Post balance sheet events

On 3 August 2022, the Group announced that the Spanish government has approved the sale of ITP Aero to a consortium of investors led by Bain Capital Private Equity. As a result, the completion of the transaction is expected in the coming weeks.

1 Basis of preparation and accounting policies continued

Going concern

In assessing the adoption of the going concern basis in the condensed consolidated interim financial statements, the Directors have considered the Group's forecast cash flows and available liquidity over an 18-month period to February 2024, taking into account certain risks and uncertainties, including having regard to the Group's net liabilities of £6,261m.

Liquidity and borrowings

At 30 June 2022, the Group had liquidity of £7.3bn including cash and cash equivalents of £2.8bn (including £37m of cash included in Assets Held for Sale) and undrawn facilities of £4.5bn.

The Group's committed borrowing facilities at 30 June 2022 and 28 February 2024 are set out below. None of the facilities are subject to any financial covenants or rating triggers which could accelerate repayment.

(£m)	30 June 2022	28 February 2024
Issued Bond Notes ¹	3,995	3,995
Other loans	44	–
UKEF £2bn loan ²	2,000	2,000
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	10,539	9,495

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 £2,000m UKEF loan matures in August 2025.

³ The £1,000m UKEF loan matures in March 2026 (currently undrawn).

⁴ The £2,500m Revolving Credit Facility matures in March 2025 (currently undrawn).

⁵ The £1,000m Bank Loan Facility matures in January 2024 (currently undrawn).

Taking into account the maturity of borrowing facilities, the Group has committed facilities of at least £9.5bn available throughout the period to 28 February 2024.

Forecasts

The Group has modelled two forecasts in its assessment of going concern which have been considered by the Directors. The base case forecast reflects a best estimation of future trading. A stressed downside forecast has also been modelled.

The Group's base case forecast reflects the relaxation of travel restrictions and an ongoing increase in customer confidence coming out of the COVID-19 pandemic. This drives a steady recovery of trading, especially in the civil aviation industry. The modelling assumes Civil large engine EFHs recover to pre-pandemic levels during 2024.

The proceeds from the planned disposal of ITP Aero have been included in the base case forecast, together with an assumption that these proceeds would be used to repay debt facilities, although there is no formal or contractual commitment to do so.

The stressed downside forecast assumes no further recovery in Civil large engines, with EFHs modelled at average Q2 2022 levels over the 18-month going concern period. The stressed downside forecast also reflects additional near-term cost inflationary risk, load reduction through our factories, and possible supply chain challenges.

Conclusion

After reviewing the current liquidity position, the cash flow forecasts modelled under both the base case and stressed downside taking into account potential risks and uncertainties, 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. The Directors 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 interim financial statements, the Directors have continued to consider the impact of climate change, particularly in the context of the disclosures made in the Strategic Report in the 2021 Annual Report and the stated net zero targets. These considerations did not have a material impact on the financial reporting judgements and estimates, consistent with the assessment that climate change is not expected to have a significant impact on the Group's going concern assessment to February 2024 nor the viability of the Group over the next five years. The following specific points were considered:

- The Group continues to invest in new technologies including 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; and
- The Group continues to invest in onsite renewable energy generation solutions for the Group's facilities and investment is included in the five-year forecasts to enable the Group to meet its 2030 target for zero greenhouse gas emissions (scope 1 and 2) from operations and facilities.

The Directors have considered the impact of climate change on a number of key estimates within the financial statements, including:

- the estimates of future cash flows considered for trigger assessments or used in impairment assessments, where applicable, of the carrying value of non-current assets (such as programme intangible assets and goodwill);
- the estimates of future profitability used in assessing the recoverability of deferred tax assets in the UK (see note 5); and
- the long-term contract accounting assumptions, such as the level of EFHs assumed, which consider the future expectations of consumer and airline customer behaviour (see note 11).

As details of what 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. The approach is consistent with that disclosed in note 1 in the 2021 Annual Report.

The climate related estimates and assumptions that have been considered to be key areas of judgement or sources of estimation uncertainty for the period ended 30 June 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. However, there have been no significant changes to assumptions, including the potential impact of carbon prices on the Group's cost base, since the year ended 31 December 2021.

1 Basis of preparation and accounting policies continued

Ukraine crisis

The Directors have considered the impact on the condensed consolidated financial statements from Russia's invasion of Ukraine. The following areas have been considered in preparing the financial statements:

- the impact to operating profit as a result of ceasing operations and trading in Russia;
- the resultant costs associated with the cessation of operations in Russia, including severance costs, asset impairments, and the write-down of inventory and financial assets; and
- the impairment of non-current assets where the Russian invasion of Ukraine, and resulting sanctions, meets the definition of a triggering event and impairment reviews have been performed where required.

The impact on the financial statements based on the above considerations was not material during the period.

Economic outlook

The Directors recognise the challenges in the current economic environment including escalating inflation, energy costs and challenges in the supply chain. The Group is actively managing the impacts associated with inflation and supply chain disruption through a sharper focus on pricing, productivity and costs. The Directors have considered these impacts in the estimates included within the cash flow forecasts used for the going concern assessment, recognition of deferred tax assets and long-term contract accounting assumptions. There has been no material impact on the financial statements as a result of these considerations.

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 2021, 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 2021 Annual Report and are summarised below. During the period, the Group has reassessed these and where necessary updated the key judgements and estimation uncertainties. Sensitivities for key sources of estimation uncertainty are disclosed where this is appropriate and practical.

Area	Key judgements	Key sources of estimation uncertainty	Sensitivities performed
Revenue recognition and contract assets and liabilities	<p>Whether Civil Aerospace OE and aftermarket contracts should be combined.</p> <p>How performance on long-term aftermarket contracts should be measured.</p> <p>Whether any costs should be treated as wastage.</p> <p>Whether sales of spare engines to joint ventures are at fair value.</p> <p>When revenue should be recognised in relation to spare engine sales.</p>	<p>Estimates of future revenue, including customer pricing, and costs of long-term contractual arrangements including the impact of climate change.</p> <p>Estimates of the long-term foreign exchange rates.</p> <p>Uncertainty remains in the short-term over the timing of recovery of demand, in particular in relation to the civil aviation industry, coming out of the COVID-19 pandemic.</p> <p>Estimates of future revenue within Civil Aerospace are based upon future EFH forecasts, influenced by assumptions over the time period and profile over which the civil aviation industry will recover.</p>	<p>Based upon the stage of completion of all large engine LTSA contracts within Civil Aerospace as at 30 June 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):</p> <ul style="list-style-type: none"> - 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 £10m. This would be expected to be seen as a catch-up change in revenue or, to the extent it impacts onerous contracts, within cost of sales. - A 1% 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 £100m. - A 1% increase or decrease in shop visit costs over the life of the contracts would change the stage of completion and lead to a revenue catch-up adjustment in the next 12 months of around £25m.
Risk and revenue sharing arrangements (RRSAs)	Determination of the nature of entry fees received.		
Taxation		Estimates are necessary to assess whether it is probable that sufficient suitable taxable profits will arise in the UK to utilise the deferred tax assets. This is largely driven by the Civil Aerospace business and the estimates described above.	<p>A 5% change in margin or shop visits (which could be driven by fewer flying hours as a result of climate change) would result in an increase/decrease in the deferred tax asset in respect of UK losses of around £150m, which equates to around a £1.2bn increase/reduction in profit.</p> <p>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 £40m, and if the potential impact of carbon prices on the Group's cost base was to double, this would be around £110m.</p>
			Further detail is included in note 5.
Discontinued operations and assets held for sale	Whether the ITP Aero business and associated consolidation adjustments meets the criteria to be classified as held for sale and a discontinued operation.		

Area	Key judgements	Key sources of estimation uncertainty	Sensitivities performed
Research and development	<p>Determination of the point in time where costs incurred on an internal programme development meet the criteria for capitalisation or ceasing capitalisation.</p> <p>Determination of the basis for amortising capitalised development costs.</p>		
Leases	Determination of the lease term.	Estimates of the payments required to meet residual value guarantees at the end of engine leases. Amounts due can vary depending on the level of utilisation of the engines, overhaul activity prior to the end of the contract, and decisions taken on whether ongoing access to the assets is required at the end of the lease term.	The lease liability at 30 June 2022 included £452m relating to the cost of meeting these residual value guarantees in the Civil Aerospace business. Up to £119m is payable in the next 12 months, £125m is due over the following four years and the remaining balance after five years.
Impairment of non-current assets	Determination of cash-generating units for assessing impairment of goodwill.		
Provisions	Whether any costs relating to contracts with customers should be treated as wastage.	<p>Estimates of the time to resolve the technical issues on the Trent 1000, including the development of the modified high-pressure turbine (HPT) blade.</p> <p>Estimates of the future revenues and costs to fulfil onerous contracts.</p> <p>Estimates of the long-term foreign exchange rates.</p>	<p>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.</p> <p>An increase in Civil Aerospace large engines estimates of LTSA costs of 1% over the remaining term of the contracts could lead to a £90-110m increase in the provision for contract losses across all programmes.</p>
Post-retirement benefits	The valuation of the Group's defined benefit pension schemes are based on assumptions determined with independent actuarial advice. The size of the net surplus is sensitive to the actuarial assumptions, which include the discount rate used to determine the present value of the future obligation, longevity, and the number of plan members who take the option to transfer their pension to a lump sum on retirement or who choose to take the Bridging Pension Option (BPO).	<p>A reduction in the discount rate from 3.90% to 3.65% could lead to an increase in the defined benefit obligations of the RR UK Pension Fund of approximately £260m. 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.</p> <p>An increase in the assumed rate of inflation of 0.25% (RPI of 3.5% and CPI of 2.95%) could lead to an increase in the defined benefit obligations of the RR UK Pension Fund of approximately £90m.</p> <p>A one-year increase in life expectancy from 21.8 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 £215m.</p> <p>Where applicable, it is assumed that 50% (31 December 2021: 50%) of members of the RR UK Pension Fund will transfer out of the fund on retirement with a share of funds transfer. An increase of 5% in this assumption would increase the defined benefit obligation by £20m.</p>	

2 Analysis by business segment

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 divisions 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. The trading results of the UK Civil Nuclear business have also been included in Other businesses. The segmental analysis for the period to 30 June 2021 has been restated to reflect the 2022 definition of Other businesses.

ITP Aero has been classified as a disposal group held for sale and discontinued operation since 30 June 2021 and as such, the operating segment is no longer regularly reviewed by the Board as a basis for making decisions about the allocation of resources to the business or to assess its performance. In line with IFRS 8, ITP Aero is no longer considered to meet the definition of an operating segment and the segmental analysis for the period to 30 June 2021 has been restated to reflect the assessment of operating segments.

During the second half of the year to 31 December 2021, the Group assessed whether its New Markets activities met the criteria of an operating segment in accordance with IFRS 8. As the Group increases its investment in these important new technologies, the results of these activities have been combined and presented as an additional segment reflecting the differing characteristics and risk profile of these businesses in line with how performance is reviewed by the Board. These results were previously included within Other businesses and Corporate and Inter-segment. The segmental analysis for the period to 30 June 2021 has been restated to reflect the assessment of operating segments.

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 period to 30 June 2022, the Group was a net seller (30 June 2021: net purchaser) of USD at an achieved exchange rate GBP:USD of 1.50 (30 June 2021: 1.39) 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 statutory performance on the basis that the cumulative fair value changes on these derivative contracts are recognised as they arise.

In the period to 30 June 2022, cash settlement costs of £265m were incurred (30 June 2021: £303m).

2 Analysis by business segment continued

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

These are excluded from underlying results so that the current period 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 performance 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.

See page 32 for the reconciliation between underlying performance and statutory performance.

2 Analysis by business segment 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 ¹ £m	Other businesses ¹ £m	Corporate and Inter- segment ¹ £m	Total underlying £m
For the half-year ended 30 June 2022							
Underlying revenue from sale of original equipment	660	697	849	–	(7)	(5)	2,194
Underlying revenue from aftermarket services	1,679	912	522	1	–	–	3,114
Total underlying revenue	2,339	1,609	1,371	1	(7)	(5)	5,308
Gross profit/(loss)	256	326	401	(2)	(29)	(10)	942
Commercial and administrative costs	(183)	(86)	(204)	(9)	–	(17)	(499)
Research and development costs	(202)	(53)	(79)	(37)	–	–	(371)
Share of results of joint ventures and associates	50	2	1	–	–	–	53
Underlying operating (loss)/profit	(79)	189	119	(48)	(29)	(27)	125
 For the half-year ended 30 June 2021							
Underlying revenue from sale of original equipment	722	719	718	–	80	–	2,239
Underlying revenue from aftermarket services	1,446	1,002	463	2	75	–	2,988
Total underlying revenue	2,168	1,721	1,181	2	155	–	5,227
Gross profit	380	395	301	–	18	3	1,097
Commercial and administrative costs	(145)	(79)	(190)	–	(11)	(19)	(444)
Research and development costs	(237)	(47)	(69)	(28)	(5)	–	(386)
Share of results of joint ventures and associates	41	–	(1)	–	–	–	40
Underlying operating profit/(loss)	39	269	41	(28)	2	(16)	307

¹ The underlying results of Other businesses and Corporate and Inter-segment activities for 30 June 2021 have been restated to reclassify the results of the Group's SMR and electrical activities as New Markets.

2 Analysis by business segment continued

Reconciliation to statutory results

	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group statutory results £m
For the half-year ended 30 June 2022			
Revenue from sale of original equipment	2,194	118	2,312
Revenue from aftermarket services	3,114	174	3,288
Total revenue	5,308	292	5,600
Gross profit	942	120	1,062
Commercial and administrative costs	(499)	(15)	(514)
Research and development costs	(371)	(2)	(373)
Share of results of joint ventures and associates	53	(5)	48
Operating profit	125	98	223
Gain arising on the disposal of businesses	–	77	77
Profit before financing and taxation	125	175	300
Net financing	(236)	(1,818)	(2,054)
Loss before taxation	(111)	(1,643)	(1,754)
Taxation	(77)	220	143
Loss for the period from continuing operations	(188)	(1,423)	(1,611)
Discontinued operations ¹	59	(3)	56
Loss for the period	(129)	(1,426)	(1,555)
Attributable to:			
Ordinary shareholders	(128)	(1,426)	(1,554)
Non-controlling interests	(1)	–	(1)
For the half-year ended 30 June 2021			
Revenue from sale of original equipment	2,239	(4)	2,235
Revenue from aftermarket services	2,988	(64)	2,924
Total revenue	5,227	(68)	5,159
Gross profit/(loss)	1,097	(283)	814
Commercial and administrative costs	(444)	20	(424)
Research and development costs	(386)	(4)	(390)
Share of results of joint ventures and associates	40	(2)	38
Operating profit/(loss)	307	(269)	38
Loss arising on the disposal of businesses	–	(7)	(7)
Profit/(loss) before financing and taxation	307	(276)	31
Net financing	(174)	257	83
Profit/(loss) before taxation	133	(19)	114
Taxation	(29)	309	280
Profit for the period from continuing operations	104	290	394
Discontinued operations ¹	43	(44)	(1)
Profit for the period	147	246	393
Attributable to:			
Ordinary shareholders	147	246	393
Non-controlling interests	–	–	–

¹ Discontinued operations relate to the results of ITP Aero and are presented net of intercompany trading eliminations and related consolidation adjustments.

2 Analysis by business segment 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 ¹ £m	Other businesses ¹ £m	Corporate and Inter-segment ¹ £m	Total underlying £m
For the half-year ended 30 June 2022							
Original equipment recognised at a point in time	660	304	838	–	–	(5)	1,797
Original equipment recognised over time	–	393	11	–	(7)	–	397
Aftermarket services recognised at a point in time	433	354	483	1	–	–	1,271
Aftermarket services recognised over time	1,215	558	39	–	–	–	1,812
Total underlying customer contract revenue	2,308	1,609	1,371	1	(7)	(5)	5,277
Other underlying revenue	31	–	–	–	–	–	31
Total underlying revenue	2,339	1,609	1,371	1	(7)	(5)	5,308
For the half-year ended 30 June 2021							
Original equipment recognised at a point in time	721	301	707	–	80	–	1,809
Original equipment recognised over time	1	418	11	–	–	–	430
Aftermarket services recognised at a point in time	193	419	404	2	75	–	1,093
Aftermarket services recognised over time	1,197	583	59	–	–	–	1,839
Total underlying customer contract revenue	2,112	1,721	1,181	2	155	–	5,171
Other underlying revenue	56	–	–	–	–	–	56
Total underlying revenue	2,168	1,721	1,181	2	155	–	5,227

¹ The underlying results of Other businesses and Corporate and Inter-segment activities for 30 June 2021 have been restated to reclassify the results of the Group's SMR and electrical activities as New Markets.

	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group statutory results £m
For the half-year ended 30 June 2022			
Original equipment recognised at a point in time	1,797	118	1,915
Original equipment recognised over time	397	–	397
Aftermarket services recognised at a point in time	1,271	72	1,343
Aftermarket services recognised over time	1,812	97	1,909
Total customer contract revenue	5,277	287	5,564
Other revenue	31	5	36
Total revenue	5,308	292	5,600
For the half-year ended 30 June 2021			
Original equipment recognised at a point in time	1,809	(8)	1,801
Original equipment recognised over time	430	1	431
Aftermarket services recognised at a point in time	1,093	1	1,094
Aftermarket services recognised over time	1,839	(57)	1,782
Total customer contract revenue	5,171	(63)	5,108
Other revenue	56	(5)	51
Total revenue	5,227	(68)	5,159

2 Analysis by business segment continued

Underlying profit adjustments

	Half-year to 30 June 2022					Half-year to 30 June 2021					
	Revenue £m	Profit before financing £m	Net financing £m	Taxation £m	Revenue £m		Profit before financing £m	Net financing £m	Taxation £m		
					5,308	125	(236)	(77)	5,227	307	(174)
Total underlying performance											
Impact of settled derivative contracts on trading transactions ¹	A	292	124	(464)	7	(68)	(293)	164	10		
Unrealised fair value changes on derivative contracts held for trading ²	A	–	(5)	(1,442)	230	–	(4)	66	(1)		
Unrealised net gain on closing future over-hedged position ³	A	–	–	–	–	–	–	(8)	–		
Realised net gain on closing future over-hedged position ³	A	–	–	–	–	–	–	(7)	–		
Unrealised fair value change to derivative contracts held for financing ⁴	A	–	–	88	(24)	–	–	38	(10)		
Exceptional programme credits ⁵	B	–	22	(3)	–	–	–	–	–		
Exceptional restructuring charge ⁶	B	–	(32)	–	4	–	(11)	–	(6)		
Impairment reversals ⁷	C	–	11	–	–	–	1	–	–		
Effect of acquisition accounting ⁸	C	–	(23)	–	5	–	(26)	–	7		
Pension past-service credit ⁹	B	–	1	–	(1)	–	11	–	(4)		
Other	D	–	–	3	(1)	–	53	4	(15)		
Included in operating profit		292	98	(1,818)	220	(68)	(269)	257	(19)		
Gains/(losses) arising on the acquisitions and disposals of businesses ¹⁰	C	–	77	–	–	–	(7)	–	–		
Impact of tax rate change ¹¹	–	–	–	–	–	–	–	–	328		
Total underlying adjustments		292	175	(1,818)	220	(68)	(276)	257	309		
Statutory performance per condensed consolidated income statement		5,600	300	(2,054)	143	5,159	31	83	280		

A - FX, B - Exceptional, C - M&A and impairment, D - Other

¹ The impact of measuring revenues and costs and the impact of valuation of assets and liabilities using the period 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 £292m (30 June 2021: reduced by £68m) and increased profit before financing and taxation by £124m (30 June 2021: reduced profit by £293m). Underlying financing excludes the impact of revaluing monetary assets and liabilities at the period 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 in the period to 30 June 2021.

⁴ Includes the losses on hedge ineffectiveness in the period of £9m (30 June 2021: losses of £2m) and net fair value gains of £97m (30 June 2021: gains of £40m) on any interest rate swaps not designated into hedging relationships for accounting purposes.

⁵ During the period to 30 June 2022, 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. See note 15 for further details.

⁶ During the period to 30 June 2022, the Group recorded an exceptional restructuring charge of £32m (30 June 2021: charge of £11m) which includes £8m released from the provision and £40m which has been charged directly to the income statement in relation to a number of ongoing initiatives. Further details are provided in note 15.

⁷ The Group has assessed the carrying value of its assets. Further details are provided in notes 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 £1m includes 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 RR UK Pension Fund and a settlement loss of £5m on the Rolls-Royce North America retirement scheme.

¹⁰ Gains/(losses) arising on the acquisitions and disposals of businesses are set out in note 19.

¹¹ The 2021 tax credit relates to the increase in the UK tax rate from 19% to 25%.

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 30 June 2022					
Segment assets	16,769	3,196	3,915	105	23,985
Interests in joint ventures and associates	421	10	35	–	466
Segment liabilities	(24,183)	(2,922)	(1,620)	(47)	(28,772)
Net (liabilities)/assets	(6,993)	284	2,330	58	(4,321)
 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

	30 June 2022 £m	31 December 2021 £m
Reportable segment assets excluding held for sale	23,985	22,233
Other businesses	7	14
Corporate and inter-segment	(2,586)	(2,255)
Interests in joint ventures and associates	466	403
Assets held for sale ¹	2,101	2,028
Cash and cash equivalents and short-term investments	2,748	2,629
Fair value of swaps hedging fixed rate borrowings	205	135
Deferred and income tax assets	2,530	2,339
Post-retirement scheme surpluses	1,157	1,148
Total assets	30,613	28,674
Reportable segment liabilities excluding held for sale	(28,772)	(24,916)
Other businesses	(31)	(11)
Corporate and inter-segment	2,475	2,139
Liabilities associated with assets held for sale ¹	(781)	(723)
Borrowings and lease liabilities	(7,976)	(7,776)
Fair value of swaps hedging fixed rate borrowings	(103)	(98)
Deferred and income tax liabilities	(577)	(552)
Post-retirement scheme deficits	(1,109)	(1,373)
Total liabilities	(36,874)	(33,310)
Net liabilities	(6,261)	(4,636)

¹ At 30 June 2022, assets and liabilities relating to ITP Aero are classified as held for sale. At 31 December 2021, assets and liabilities relating to ITP Aero, the investment in Airtanker Holdings and other non-current assets related to the Group's site rationalisation activities were classified as held for sale. For further details see note 19.

3 Research and development

	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
Gross research and development costs	(599)	(549)
Contributions and fees ¹	218	153
Expenditure in the period	(381)	(396)
Capitalised as intangible assets	48	41
Amortisation and impairment of capitalised costs ²	(40)	(35)
Net cost recognised in the income statement	(373)	(390)
Underlying adjustments relating to the effects of acquisition accounting, impairment and foreign exchange ^{3, 4}	2	4
Net underlying cost recognised in the income statement	(371)	(386)

¹ Includes government funding.

² See note 7 for analysis of amortisation and impairment. During the prior period, amortisation of £5m has been incurred within the disposal group recognised as a discontinued operation.

³ During the period, no (30 June 2021: no) impairment of research and development was recorded.

⁴ Underlying adjustments relating to the effects of acquisition accounting, impairment and foreign exchange have been re-presented to align with the changes to segmental analysis. For further detail, see note 2.

4 Net financing

	Half-year to 30 June 2022		Half-year to 30 June 2021	
	Per consolidated income statement £m	Underlying financing ¹ £m	Per consolidated income statement £m	Underlying financing ¹ £m
Interest receivable	9	9	3	3
Net fair value gains on foreign currency contracts	–	–	25	–
Net fair value gains on non-hedge accounted interest rate swaps ²	97	–	40	–
Net fair value gains on commodity contracts	95	–	41	–
Financing on post-retirement scheme surpluses	14	–	7	–
Net foreign exchange gains	–	–	164	–
Realised net gains on closing over-hedged position ³	–	–	–	7
Unrealised net gains on closing over-hedged position ³	–	–	–	8
Financing income	215	9	280	18
Interest payable	(171)	(171)	(106)	(113)
Net fair value losses on foreign currency contracts	(1,537)	–	–	–
Finance charge relating to financial RRSAs	(6)	(6)	–	–
Financing on post-retirement scheme deficits	(12)	–	(10)	–
Net foreign exchange losses	(464)	–	–	–
Fees on undrawn facilities	(31)	(31)	(35)	(35)
Other financing charges	(48)	(37)	(46)	(44)
Financing costs	(2,269)	(245)	(197)	(192)
Net financing (costs)/income	(2,054)	(236)	83	(174)
Analysed as:				
Net interest payable	(162)	(162)	(103)	(110)
Net fair value (losses)/gains on derivative contracts	(1,345)	–	106	15
Net post-retirement scheme financing	2	–	(3)	–
Net foreign exchange (losses)/gains	(464)	–	164	–
Net other financing	(85)	(74)	(81)	(79)
Net financing (costs)/income	(2,054)	(236)	83	(174)

¹ See note 2 for definition of underlying results. Underlying financing has been re-presented to align with the changes to segmental analysis.

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, £186m was incurred in 2020, £452m was incurred in the year to 31 December 2021 and £265m was incurred in the period to 30 June 2022. The Group estimates that future cash outflows of £61m will be incurred in the remainder of 2022, £389m to be incurred in 2023 and £321m spread over 2024 to 2026.

5 Taxation

The income tax expense has been calculated by applying the annual effective tax rate for each jurisdiction to the half-year profits of each jurisdiction.

The tax credit for the half-year is £143m on a statutory loss before taxation of £1,754m (30 June 2021: tax credit of £280m on a statutory profit before taxation of £114m), giving a statutory rate of 8.1% (30 June 2021: (245.9%)). The key driver of the tax credit in 2022 is the increase in the UK deferred tax asset relating to the unrealised foreign exchange losses on derivative contracts. This is reduced by tax charges on profits, mainly in the US and Germany. The key driver of the tax credit in 2021 was the impact of the increase in the UK tax rate from 19% to 25% on deferred tax assets.

Tax reconciliation – continuing operations:

	Half-year to 30 June 2022		Half-year to 30 June 2021	
	£m	Tax rate	£m	Tax rate
(Loss)/profit before taxation	(1,754)		114	
Nominal tax (credit)/charge at UK corporation rate of 19%	(333)	19.0%	22	19.0%
Tax losses in period not recognised in deferred tax ¹	161	(9.2%)	(7)	(6.1%)
Increase in deferred taxes resulting from change in UK tax rate	–	–	(328)	(287.7%)
Other	29	(1.7%)	33	28.9%
Statutory tax credit and rate	(143)	8.1%	(280)	(245.9%)
Analysis of statutory tax credit:				
Underlying items	77		29	
Non-underlying items (see note 2)	(220)		(309)	
	(143)		(280)	

¹ Includes UK losses not recognised and movement on unrecognised deferred tax assets relating to foreign exchange and commodity financial assets and liabilities.

Deferred tax assets are recognised to the extent it is probable that future taxable profits will be available against which to recover the asset. Where necessary, this is based on the Directors' assumptions relating to the amounts and timing of future taxable profits. The Board continually reassesses the appropriateness of recovering deferred tax assets, which includes a consideration of the level of future profits and the time period over which they are recovered.

Sensitivity analyses are also performed as part of the assessment. At 30 June 2022, the following sensitivities have been modelled to demonstrate the impact of changes in assumptions on the recoverability of deferred tax assets:

- A 5% change in margin in the main Civil Aerospace large engine programmes;
- A 5% change in the number of shop visits driven by flying hours; and
- Assumed future cost increases from climate change expected to pass through to customers at 100% are restricted to 90% pass through.

A 5% change in margin or shop visits (which could be driven by fewer flying hours as a result of climate change) would result in an increase/decrease in the deferred tax asset in respect of UK losses of around £150m, which equates to around a £1.2bn increase/reduction in profit.

If only 90% of assumed future cost increases from climate change are passed on to customers, this would result in a decrease in the deferred tax asset of around £40m, and if the potential impact of carbon prices on the Group's cost base was to double, this would be around £110m. The assumptions for carbon prices are consistent to those at 31 December 2021.

As a consequence of the impact of COVID-19 on existing Civil Aerospace large engine programmes, taking into account the sensitivity analyses performed, and in light of the inherent uncertainty in estimating such long-term forecasts, the Group has not recognised a deferred tax asset in respect of 2022 UK losses. This includes losses arising from the IAS 37 amendment.

The reassessment of probable future taxable profits at the time the IAS 37 amendment came into effect was not materially different to the assessment performed at 31 December 2021. This is due to the timing of the utilisation and reflects that UK tax laws restrict the offset of carried forward losses to 50% of future profits. Therefore no deferred tax asset has been recognised on the transitional adjustment relating to the UK. The full details of the IAS 37 amendment are set out in note 1.

Deferred tax assets arising on additional unrealised losses on derivative contracts that remain hedged have also been assessed, resulting in a net increase in the deferred tax asset of £213m.

Both of these assessments are in line with the approach set out in note 5 of the 2021 Annual Report, and also take into account a 25% probability of there being a severe but plausible downside scenario.

The Group is reviewing the impact of the OECD Pillar Two (global minimum tax) rules and the associated UK draft legislation, which was released on 20 July 2022. These rules are expected to apply 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 period, excluding ordinary shares held under trust, which have been treated as if they had been cancelled.

As there is a loss during the period, the effect of potentially dilutive ordinary shares is anti-dilutive.

	Half-year to 30 June 2022			Half-year to 30 June 2021		
	Basic	Potentially dilutive share options		Basic	Potentially dilutive share options	
		Diluted	Diluted		Diluted	Diluted
(Loss)/profit attributable to ordinary shareholders (£m):						
Continuing operations	(1,610)		(1,610)	394		394
Discontinued operations	56		56	(1)		(1)
	(1,554)		(1,554)	393		393
Weighted average number of ordinary shares (millions)	8,345	–	8,345	8,331	18	8,349
EPS (pence):						
Continuing operations	(19.29)	–	(19.29)	4.73	(0.01)	4.72
Discontinued operations	0.67	–	0.67	(0.01)	–	(0.01)
	(18.62)	–	(18.62)	4.72	(0.01)	4.71

The reconciliation between underlying EPS and basic EPS is as follows:

	Half-year to 30 June 2022		Half-year to 30 June 2021	
	Pence	£m	Pence	£m
Underlying EPS / Underlying (loss)/profit from continuing operations attributable to ordinary shareholders	(2.24)	(187)	1.25	104
Total underlying adjustments to (loss)/profit before tax (note 2)	(19.69)	(1,643)	(0.23)	(19)
Related tax effects	2.64	220	3.71	309
EPS / (loss)/profit from continuing operations attributable to ordinary shareholders	(19.29)	(1,610)	4.73	394
Diluted underlying EPS from continuing operations attributable to ordinary shareholders	(2.24)		1.25	

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	—	1	48	—	30	9	88
Disposals	—	—	—	—	(22)	(1)	(23)
Exchange differences	48	1	35	25	8	15	132
At 30 June 2022	1,108	935	3,476	500	994	856	7,869
Accumulated amortisation and impairment:							
At 1 January 2022	34	425	1,760	342	650	420	3,631
Charge for the period ²	—	11	40	18	42	16	127
Impairment	—	—	—	—	9	2	11
Disposals	—	—	—	—	(17)	(1)	(18)
Exchange differences	3	—	24	22	6	9	64
At 30 June 2022	37	436	1,824	382	690	446	3,815
Net book value:							
30 June 2022	1,071	499	1,652	118	304	410	4,054
1 January 2022	1,026	508	1,633	133	328	413	4,041

¹ Includes £98m (31 December 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.

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.

The Group believes 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 areas that have been considered are demand for engines and their useful lives, utilisation of the products whilst in service, and the impact of market and regulatory change. 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 Greenhouse Gas (GHG) emissions is reflected in the forecasts used.

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. The uncertainty over the recovery from COVID-19 has been modelled by including downside forecasts at an appropriate weighting taking into account the business segment being considered.

There have been no individually material impairment charges or reversals recognised during the period.

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	10	42	11	37	100
Disposals/write-offs	(12)	(80)	(22)	(1)	(115)
Reclassifications ¹	4	54	—	(58)	—
Exchange differences	52	132	10	14	208
At 30 June 2022	1,919	5,134	1,045	292	8,390
Accumulated depreciation and impairment:					
At 1 January 2022	614	3,244	414	8	4,280
Charge for the period ²	33	152	27	—	212
Impairment ³	(1)	(8)	—	—	(9)
Disposals/write-offs	(7)	(77)	(15)	—	(99)
Exchange differences	18	84	5	—	107
At 30 June 2022	657	3,395	431	8	4,491
Net book value at:					
30 June 2022	1,262	1,739	614	284	3,899
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 period 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 period. The reversal in the period 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	5	20	20	45
Disposals	(25)	(4)	(19)	(48)
Exchange differences	25	1	2	28
At 30 June 2022	461	160	1,788	2,409
Accumulated depreciation and impairment:				
At 1 January 2022	186	66	929	1,181
Charge for the period	21	16	94	131
Impairment ¹	(3)	(1)	–	(4)
Disposals	(7)	(4)	(19)	(30)
Exchange differences	14	(1)	2	15
At 30 June 2022	211	76	1,006	1,293
Net book value at:				
30 June 2022	250	84	782	1,116
1 January 2022	270	77	856	1,203

¹ The carrying values of right-of-use assets have been assessed during the period 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 period. The reversal in the period 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.

10 Trade receivables and other assets

	Current		Non-current		Total	
	30 June 2022 £m	31 December 2021 £m	30 June 2022 £m	31 December 2021 £m	30 June 2022 £m	31 December 2021 £m
Trade receivables ¹	2,306	2,141	42	52	2,348	2,193
Receivables due on RRSAs	698	702	238	67	936	769
Amounts owed by joint ventures and associates	679	598	6	1	685	599
Costs to obtain contracts with customers	3	13	47	41	50	54
Other taxation and social security receivable	191	197	9	8	200	205
Other receivables ²	690	593	49	20	739	613
Prepayments	619	572	416	378	1,035	950
	5,186	4,816	807	567	5,993	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 Other receivables include unbilled recoveries relating to overhaul activity.

The Group has adopted the simplified approach to provide for expected credit losses, 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 expected credit losses for trade receivables and other assets has increased by £30m to £289m (31 December 2021: £259m). This movement is mainly driven by the Civil Aerospace business of £33m, of which £37m relates to specific customers and £(4)m relates to updates to the recoverability of other receivables.

The movements of the Group's expected credit losses provision are as follows:

	30 June 2022 £m	31 December 2021 £m
At 1 January	(259)	(252)
Increases in loss allowance recognised in the income statement during the period	(74)	(124)
Loss allowance utilised	22	46
Releases of loss allowance previously provided	46	46
Transferred to assets held for sale	–	2
Exchange differences	(24)	23
At 30 June/31 December	(289)	(259)

11 Contract assets and liabilities

	Current		Non-current ¹		Total ²	
	30 June 2022	31 December 2021	30 June 2022	31 December 2021	30 June 2022	31 December 2021
	£m	£m	£m	£m	£m	£m
Contract assets						
Contract assets with customers	591	586	670	641	1,261	1,227
Participation fee contract assets	27	27	210	219	237	246
	618	613	880	860	1,498	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.

Contract assets with customers includes £928m (31 December 2021: £915m) of Civil Aerospace LTSA assets, with most of the remaining balance relating to Defence. The main driver of the increase in the Group balance is revenue relating to performance obligations satisfied in previous years being adjusted by £32m in Civil Aerospace. No impairment losses in relation to these contract assets (31 December 2021: none) have arisen during the period to 30 June 2022.

Participation fee contract assets have reduced by £9m (31 December 2021: reduced by £188m) due to amortisation exceeding additions by £12m. The movement in 2021 was primarily due to ITP Aero being reclassified as a disposal group held for sale.

	Current		Non-current		Total	
	30 June 2022	31 December 2021	30 June 2022	31 December 2021	30 June 2022	31 December 2021
	£m	£m	£m	£m	£m	£m
Contract liabilities	4,214	3,599	6,930	6,710	11,144	10,309

Contract liabilities have increased by £835m. The movement in the Group balance is as a result of increases in Civil Aerospace of £667m and Defence of £168m.

The Civil Aerospace movement includes an increase in relation to LTSA liabilities of £535m to £7,664m (31 December 2021: £7,129m). LTSA revenue billed has been ahead of revenue recognised in the period and together with foreign exchange movements has increased the LTSA liabilities by £744m, offset by £209m of revenue recognised relating to performance obligations satisfied in previous years, which were principally driven by price escalation in business aviation and the impact of specific customer negotiations.

The movement in Defence is due to the receipt of deposits ahead of performance obligations being satisfied.

12 Financial assets and liabilities

Carrying value of other financial assets and liabilities

	Derivatives								Total £m
	Foreign exchange contracts £m	Commodity contracts £m	Interest rate contracts ¹ £m	Total derivatives £m	Financial RRSAs £m	Other £m	C Shares £m		
At 30 June 2022									
Non-current assets	34	32	349	415	—	18	—	433	
Current assets	67	58	—	125	—	11	—	136	
Assets	101	90	349	540	—	29	—	569	
Current liabilities	(934)	—	—	(934)	(11)	(23)	(24)	(992)	
Non-current liabilities	(3,318)	(3)	(95)	(3,416)	(7)	(55)	—	(3,478)	
Liabilities	(4,252)	(3)	(95)	(4,350)	(18)	(78)	(24)	(4,470)	
	(4,151)	87	254	(3,810)	(18)	(49)	(24)	(3,901)	
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:

	Half-year to 30 June 2022						Year-ended 31 December 2021	
	Foreign exchange instruments £m	Commodity instruments £m	Interest rate instruments – hedge accounted ¹ £m		Interest rate instruments – non-hedge accounted £m			
			Total £m	Total £m	Total £m	Total £m		
At 1 January	(3,039)	32	57	37	(2,913)	(2,706)		
Movements in fair value hedges	—	—	(23)	—	(23)	(143)		
Movements in cash flow hedges	(42)	—	91	—	49	(11)		
Movements in other derivative contracts ²	(1,537)	95	—	97	(1,345)	(538)		
Contracts settled	467	(40)	(7)	2	422	512		
Reclassification to held for sale	—	—	—	—	—	(27)		
At period/year end	(4,151)	87	118	136	(3,810)	(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

	Financial RRSAs		Other liabilities		Other assets		Year-ended 31 December 2021
	Half-year to 30 June 2022	Year-ended 31 December 2021	Half-year to 30 June 2022	Year-ended 31 December 2021	Half-year to 30 June 2022	Year-ended 31 December 2021	
	£m	£m	£m	£m	£m	£m	
At 1 January	(12)	(81)	(75)	(73)	15	15	
Exchange adjustments included in OCI	(2)	4	(2)	4	3	—	
Additions	—	—	(2)	(9)	—	—	
Financing charge ¹	(6)	—	—	(1)	—	—	
Excluded from underlying profit:							
Changes in forecast payments ¹	—	(7)	—	—	—	—	
Cash paid	2	3	1	3	—	—	
Other	—	—	—	1	—	—	
Reclassification to held for sale	—	69	—	—	—	—	
At period/year end	(18)	(12)	(78)	(75)	18	15	

¹ Included in net financing.

12 Financial assets and liabilities continued

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

	Half-year to 30 June 2022		Year-ended 31 December 2021	
	Book value £m	Fair value £m	Book value £m	Fair value £m
Borrowings – Level 1	(4,113)	(3,689)	(4,038)	(4,106)
Borrowings – Level 2	(2,009)	(2,019)	(1,994)	(2,122)
Financial RRSAs – Level 3	(18)	(18)	(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 (30 June 2022: £7m; 31 December 2021: £17m) 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*).
- Fair values of deal contingent derivative financial assets and liabilities are estimated by discounting expected future contractual cash flows using prevailing interest rate curves. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. The value of the contingent element has been considered and is dependent upon the occurrence and time of the closing. These financial instruments 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).
- 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 30 June 2022, Level 3 assets totalled £18m (31 December 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).

12 Financial assets and liabilities continued

Effect of hedging instruments on the financial position and performance

During the period to 30 June 2022, the Group has entered into transaction dependent foreign currency forward contracts (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 have been designated as the hedging instrument in cash flow hedges with hedge relationships of 1:1. At inception and on a continuing basis, 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. There was ineffectiveness of £4m recognised in net financing in the period. The forward element and basis were excluded from the hedging instrument designation and are separately accounted for in the equity reserve for cost of hedging.

	Hedged item		Hedging instrument ¹				Hedging reserves		
	Nominal	FV movement in the period	Nominal	Carrying amount (liability)	FV movement in the period	Hedge ineffectiveness in the period	Weighted average FX rate	Amount recognised in cash flow hedge reserve	Amount recognised in cost of hedging reserve
	£m	£m	£m	£m	£m	£m	£m	£m	£m
At 30 June 2022									
Euro	1,252	38	(1,252)	(42)	(42)	(4)	1.20	(42)	4

¹ Hedging instruments are included in other financial assets and liabilities in the balance sheet.

13 Borrowings and lease liabilities

	Current			Non-current			Total	
	30 June 2022	31 December 2021		30 June 2022	31 December 2021		30 June 2022	31 December 2021
	£m	£m		£m	£m		£m	£m
Unsecured								
Overdrafts	2	7	–	–	–	–	2	7
Bank loans	1	2	1,996	1,975	1,997	1,977		
Loan notes ¹	–	–	4,113	4,038	4,113	4,038		
Other loans	–	–	10	10	10	10		
Total unsecured	3	9	6,119	6,023	6,122	6,032		
Lease liabilities	318	270	1,536	1,474	1,854	1,744		
Total borrowings and lease liabilities	321	279	7,655	7,497	7,976	7,776		

¹ All outstanding items described above as notes are listed on the London Stock Exchange.

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 shareholders from redeeming C Shares issued in January 2020 or earlier.

14 Trade payables and other liabilities

	Current		Non-current		Total	
	30 June 2022 £m	31 December 2021 £m	30 June 2022 £m	31 December 2021 £m	30 June 2022 £m	31 December 2021 £m
Trade payables	1,669	1,272	—	—	1,669	1,272
Payables due on RRAs	1,025	739	—	—	1,025	739
Amounts owed to joint ventures and associates	612	486	—	—	612	486
Customer concession credits	854	1,106	726	399	1,580	1,505
Warranty credits	325	201	168	161	493	362
Accruals	1,412	1,361	199	192	1,611	1,553
Deferred receipts from RRSA workshare partners	15	23	490	484	505	507
Government grants	18	28	44	39	62	67
Other taxation and social security	41	40	—	—	41	40
Other payables ¹	710	760	261	300	971	1,060
	6,681	6,016	1,888	1,575	8,569	7,591

¹ Other payables includes parts purchase obligations, payroll liabilities, HM UK Government levies 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 90-120 days. The Group offers reduced payment terms for smaller suppliers, so that they are paid in 30 days. In line with aerospace industry practice, the Group offers a 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 to suppliers. At 30 June 2022, suppliers had drawn £524m under the SCF scheme (31 December 2021: £540m).

15 Provisions for liabilities and charges

	At 31 December		On 2021 as adoption of previously reported £m	At 1 January 2022 £m	Charged to income statement ¹		Exchange differences £m	At 30 June 2022 £m
	On 2021 as adoption of amendment to IAS 37 £m	Reversed £m			Utilised £m			
Trent 1000 wastage costs	157	—	157	64	—	(36)	—	185
Contract losses	845	723	1,568	181	(229)	(37)	3	1,486
Restructuring	21	—	21	—	(8)	(6)	1	8
Warranty and guarantees	305	—	305	33	(5)	(45)	12	300
Customer financing	17	—	17	—	—	(8)	—	9
Insurance	52	—	52	16	(5)	(6)	—	57
Tax related interest and penalties	14	—	14	—	—	(1)	1	14
Employer liability claims	47	—	47	—	—	—	—	47
Other	124	—	124	22	(3)	(4)	3	142
	1,582	723	2,305	316	(250)	(143)	20	2,248
Current liabilities	475		513					567
Non-current liabilities	1,107		1,792					1,681

¹ The charge to the income statement includes £15m (30 June 2021: £16m) as a result of the unwinding of the discounting of provisions previously recognised.

15 Provisions for liabilities and charges continued

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 period, the Group has utilised £36m of the Trent 1000 wastage costs provision. This represents customer disruption costs settled in cash and credit notes, and remediation shop visit costs. During the period, additional Trent 1000 costs of £64m 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 2022 to 2024.

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 an increase of the total contract loss provision by £723m as at 1 January 2022 (see note 1 for details). During the period, additional contract losses for the Group of £181m have been recognised as a result of changes in future cost estimates, primarily in relation to LTSA shop visits. Contract losses of £229m previously recognised have been reversed following improvements to cost estimates across various large engine programmes as a result of commercial and 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 warranties 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.

Customer financing

Customer financing provisions have been made to cover guarantees provided for asset value and/or financing where it is probable that a payment will be made. In addition to the provisions recognised, the Group has contingent liabilities for customer financing arrangements where the payment is not probable as described below.

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 \$1.4bn (31 December 2021: \$1.7bn) (on a discounted basis) to provide facilities to enable customers to purchase aircraft (of which approximately \$360m could be called during 2022). 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.

Gross commitments of £33m (31 December 2021: £32m) are offset by £11m (31 December 2021: £10m) for the value of security and £1m (31 December 2021: £2m) of guarantees. 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. These amounts do not represent values that are expected to crystallise. The values of aircraft providing security are based on advice from a specialist aircraft appraiser.

Other

At 30 June 2022, other provisions includes £30m for costs related to the termination of a contract under which the Group now has an obligation to enter an onerous lease, 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.

16 Pensions and other post-retirement and long-term employee benefits

The net post-retirement scheme surplus as at 30 June 2022 is calculated on a year to date basis, using the latest valuation as at 31 December 2021, updated to 30 June 2022 for the principal schemes.

Movements in the net post-retirement position recognised in the balance sheet were as follows:

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	–	(59)	(59)
Current service cost and administrative expenses	(4)	(24)	(28)
Past service credit	6	–	6
Settlement cost ¹	–	(5)	(5)
Financing recognised in the income statement	11	(9)	2
Contributions by employer	–	29	29
Actuarial gains recognised in OCI ²	2,449	505	2,954
Returns on plan assets excluding financing recognised in OCI ²	(2,446)	(179)	(2,625)
Transfers	–	(1)	(1)
At 30 June 2022	1,134	(1,086)	48
Post-retirement scheme surpluses – included in non-current assets ³	1,134	23	1,157
Post-retirement scheme deficits – included in non-current liabilities	–	(1,109)	(1,109)
	1,134	(1,086)	48

¹ During the period, the Group undertook a lump sum exercise with participants of the Rolls-Royce North America salaried retirement plan as part of the anticipated termination in the second half of the year. This resulted in a settlement cost of £5m recognised in the period to 30 June 2022.

² A net gain of £329m has been recognised in OCI in the period to 30 June 2022 which has been driven by market conditions at 30 June 2022, in particular due to higher discount rates across the various schemes.

³ 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 UK defined benefit scheme

As at 30 June 2022, a constructive obligation has been recognised for the offering of the Bridging Pension Option (BPO) to other deferred members. As a result, a past service credit of £6m has been recognised within non-underlying.

Sensitivities

A reduction in the discount rate from 3.90% to 3.65% could lead to an increase in the defined benefit obligations of the RR UK Pension Fund of approximately £260m. 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 RR UK Pension Fund of approximately £90m.

A one-year increase in life expectancy from 21.8 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 £215m.

Where applicable, it is assumed that 50% (31 December 2021: 50%) of members of the RR UK Pension Fund will transfer out of the fund on retirement with a share of funds transfer. An increase of 5% in this assumption would increase the defined benefit obligation by £20m.

17 Contingent liabilities

Contingent liabilities in respect of customer financing commitments are described in note 15.

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 DPA with the DoJ was dismissed by the US District Court on 19 May 2020 and the SFO filed notice of discontinuance of proceedings with the UK Court on 18 January 2022. 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 customers and customers' financiers. 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.

Since the invasion of Ukraine by Russia on 24 February 2022, the Group has responded appropriately to comply with a fast-moving 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.

18 Related party transactions

	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
Sale of goods and services to related parties ¹	1,312	1,434
Purchases of goods and services from related parties ¹	(2,340)	(1,772)

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 £nil (30 June 2021: £6m). Profit recognised in the period on such sales amounted to £19m (30 June 2021: £13m), including profit on current period sales and recognition of profit deferred on similar sales in previous years.

19 Disposals, businesses 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 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 in the period to 30 June 2022.

	Airtanker £m
Proceeds	
Cash consideration	189
Net cash consideration	189
Investments	34
Trade receivables and other assets	14
Less: Net assets disposed	48
Profit on disposal before disposal costs and continuing obligations	141
Cash flow hedge reserve loss	(62)
Disposal costs	(3)
Non-underlying profit before tax	76

Disposal completed in prior periods

On 1 June 2018, the Group sold its L'Orange business, part of Rolls-Royce Power Systems, to Woodward Inc. for €673m. Under the sale agreement, the cash consideration may be adjusted by up to +/- €44m, based on L'Orange aftermarket sales over the five-year period to 31 May 2023. A liability of €18m is recognised for amounts that are expected to be payable for years through to 2023 (31 December 2021: €28m). Cash of €10m has been paid during the period. The maximum adjustment to sales proceeds has now been provided for in all future years to 2023.

Reconciliation of profit to the income statement:	Total £m
Profit on disposal (see above)	76
Adjustment to consideration on disposals completed in prior periods	1
Profit on disposal of businesses per income statement	77

Reconciliation of cash flow on disposal of businesses to the cash flow statement:	Total £m
Proceeds on disposal of businesses (see above)	189
Disposal costs paid	(3)
Cash outflow on disposals completed in prior periods	(7)
Cash flow on disposal of businesses per cash flow statement	179

19 Disposals, businesses held for sale and discontinued operations continued

Businesses held for sale

On 27 August 2020, the Group announced its intention to sell ITP Aero. During the period to 30 June 2021, the Hucknall site with associated fabrications activities, that were previously reported as part of the Civil Aerospace segment, were transferred to ITP Aero and other preparatory work had been performed such that as at 30 June 2021 the business was classified as a disposal group held for sale. On 27 September 2021, the Group signed an agreement for the sale of ITP Aero to Bain Capital for £1.3bn and consequently, in accordance with IFRS 5, the business continues to be classified as a disposal group held for sale at 30 June 2022. The disposal process has received regulatory clearance and is progressing towards completion. The assets of ITP Aero have been assessed for impairment in line with the requirements of IFRS 5 and no impairment is required at 30 June 2022. ITP Aero had an additional £94m of cash which was held by another Group company and net intercompany trading creditor of £290m at 30 June 2022 which are not included in the disposal group as the resulting intra-group balances are eliminated on consolidation.

The table below summarises the categories of assets and liabilities classified as held for sale at 30 June 2022 and 31 December 2021.

	30 June 2022		31 December 2021	
	ITP Aero		ITP Aero	Other ¹
	£m	£m	£m	£m
Intangible assets	897	872	–	872
Property, plant and equipment	328	313	26	339
Right-of-use assets	13	12	–	12
Investment in associates and joint ventures	1	1	34	35
Deferred tax assets	172	167	–	167
Inventory	269	222	–	222
Trade receivables and other assets	384	342	14	356
Cash and cash equivalents	37	25	–	25
Assets held for sale	2,101	1,954	74	2,028
Trade payables and other liabilities	(623)	(540)	(7)	(547)
Provisions for liabilities and charges	(22)	(22)	–	(22)
Borrowings and lease liabilities	(53)	(72)	–	(72)
Deferred tax liabilities	(83)	(82)	–	(82)
Liabilities associated with assets held for sale	(781)	(716)	(7)	(723)
Net assets held for sale	1,320	1,238	67	1,305

¹ Other assets and liabilities held for sale at 31 December 2021 comprised: investment in joint venture and accrued interest with Airtanker Holdings Limited; and assets and associated government grant related to the Group's site rationalisation activities.

19 Disposals, businesses held for sale and discontinued operations continued

Discontinued operations

ITP Aero represents a separate major line of business and is 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 period that have been classified as discontinued operations.

	Half-year to 30 June 2022 £m	Half-year to 30 June 2021 £m
Revenue	207	146
Operating profit/(loss)¹	72	(76)
Profit/(loss) before taxation¹	67	(75)
Income tax (charge)/credit ¹	(7)	91
Profit for the period from discontinued operations on ordinary activities	60	16
Costs on disposal of discontinued operations	(4)	(17)
Profit/(loss) for the period from discontinued operations	56	(1)
Net cash inflow from operating activities ²	56	4
Net cash outflow from investing activities	(14)	(12)
Net cash outflow from financing activities	(32)	(1)
Exchange gains	1	3
Net change in cash and cash equivalents	11	(6)

¹ Profit/(loss) from discontinued operations on ordinary activities is presented net of intercompany trading eliminations, related consolidation adjustments and amortisation of intangible assets arising on previous acquisition (prior to classification to held for sale). Operating profit of £72m (30 June 2021: loss of £76m) has improved as a result of increased volume and performance in addition to the cessation of depreciation and amortisation charges following classification to held for sale.

² Cash flows from operating activities include £1m (30 June 2021: £17m) costs of disposal paid during the period to 30 June 2022 that are not a movement in the cash balance of the disposal group as they were borne centrally.

20 Derivation of summary funds flow statement from statutory cash flow statement

	Half-year ended 30 June 2022		Half-year ended 30 June 2021		Source
	£m	£m	£m	£m	
Underlying operating profit from continuing operations	125		307		Note 2
Operating profit/(loss) from discontinued operations	68		(93)		Note 19
Amortisation and impairment of intangible assets	138		159		Cash flow statement (CFS)
Depreciation and impairment of PPE	203		243		CFS
Depreciation and impairment of right-of-use assets	127		128		CFS
Adjustment to residual value guarantees in lease liabilities	(1)		(3)		CFS
Impairment of joint ventures, associates and other investments	–		2		
Reversal of non-underlying impairments of non-current assets	11		1		Reversal of underlying adjustment (note 2)
Acquisition accounting	(23)		(26)		Reversal of underlying adjustment (note 2)
Depreciation, amortisation and impairment	455		504		
Additions of intangible assets	(82)		(71)		CFS less exceptional restructuring
Purchases of PPE	(115)		(124)		CFS less exceptional restructuring
Lease payments (capital plus interest)	(114)		(171)		CFS (capital and interest payments adjusted for foreign exchange (FX))
Movement in inventories	(692)		(219)		CFS
Movement in receivables/payables	320		(203)		CFS adjusted for the impact of exceptional programme charges and exceptional restructuring shown on the basis of the FX rate achieved on settled derivative contracts
Movement in contract balances (excluding Civil LTSA)	287		(88)		CFS adjusted for the impact of exceptional programme charges and FX and excluding Civil LTSA (shown separately below)
Underlying movement in Civil Aerospace LTSA contract balances	433		(108)		Movement in Civil LTSA balances within movement of contract balances in CFS less impact of FX
Revaluation of trading assets (excluding exceptional items)	(386)		(154)		Adjustment to reflect the impact of the FX contracts held on receivables/payables
Realised derivatives in financing	202		45		Realised cash flows on FX contracts not included in underlying operating profit less cash flows on settlement of excess derivative contracts
Movement on receivables/payables/contract balances	856		(508)		CFS adjusted for the impact of exceptional programme charges and anticipated recoveries, exceptional restructuring and FX contracts held
Movement on provisions	(116)		(136)		
Net interest received and paid	(114)		(81)		CFS
Fees paid on undrawn facilities	(23)		(35)		CFS
Cash flows on settlement of excess derivative contracts	(265)		(303)		CFS
Cash flows on financial instruments net of realised losses included in operating profit	35		(52)		Cash flows on other financial instruments (CFS) not allocated to lease payments or exceptional programme expenditure adjusted for the impact of FX not held for trading
Other	(6)		27		Principally disposals of non-current assets, joint venture trading and the effect of share-based payments
Trading cash flow	12		(955)		
<i>Trading cash flow from continuing operations</i>	<i>21</i>		<i>(979)</i>		
Contributions to defined benefit schemes in excess of underlying operating profit charge	(1)		(94)		CFS
Tax	(88)		(102)		CFS
Free cash flow	(77)		(1,151)		
<i>Free cash flow from continuing operations</i>	<i>(68)</i>		<i>(1,174)</i>		

The comparative information for the period ended 30 June 2021 has been re-presented to be on a comparable basis with the definition of underlying results. There is no change to trading or group free cash flow.

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, 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 53.

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 period, including the impact of the Group's foreign exchange activities. In addition, a number of other APMs are utilised to measure and monitor the Group's performance.

Definitions and reconciliations to the relevant statutory measure are included below. All comparative periods relate to 30 June 2021.

Underlying results from continuing operations

Underlying results include underlying revenue, underlying operating profit and underlying EPS. Underlying results are presented by recording all relevant revenue and cost of sales transactions at the average exchange rate achieved on effective settled derivative contracts in the period that the cash flow occurs. Underlying results also exclude: the effect of acquisition accounting and business disposals, impairment of goodwill and other non-current assets where the reasons for the impairment are outside of normal operating activities, exceptional items and certain other items which are market driven and outside of management's 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 and note 19.

	Notes	2022 £m	2021 £m
Revenue from continuing operations			
Statutory revenue		5,600	5,159
Derivative & FX adjustments	2	(292)	68
Underlying revenue		5,308	5,227

Operating profit/(loss) from continuing operations

	Notes	2022	2021
Operating profit/(loss) from continuing operations			
Statutory operating profit		223	38
Derivative & FX adjustments	2	(119)	297
Programme exceptional charges	2	(22)	–
Restructuring exceptional charges	2	32	11
Acquisition accounting & M&A	2	23	26
Impairment reversals	2	(11)	(1)
Pension past service credit	2	(1)	(11)
Other underlying adjustments	2	–	(53)
Underlying operating profit		125	307

	Notes	2022 pence	2021 pence
Basic EPS from continuing operations			
Statutory basic EPS	6	(19.29)	4.73
Effect of underlying adjustments to (loss)/profit before tax	6	19.69	0.23
Related tax effects	6	(2.64)	(3.71)
Basic underlying EPS		(2.24)	1.25

Underlying results from discontinued operations

	Notes	2022 £m	2021 £m
Results from discontinued operations			
Profit for the period from discontinued operations on ordinary activities	19	60	16
Costs of disposal on discontinued operations	19	(4)	(17)
Statutory loss from discontinued operations		56	(1)
Acquisition accounting & M&A		1	41
Derivative & FX adjustments		2	4
Restructuring exceptional charges		–	(1)
Other		–	32
Related tax effects		–	(91)
Underlying profit from discontinued operations		59	(16)

Trading cash flow

Trading cash flow is defined as free cash flow (as defined on page 51) 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, see note 20.

	2022 £m	2021 £m
Civil Aerospace	63	(1,064)
Defence	89	89
Power Systems	(76)	71
New Markets	(30)	(31)
Total reportable segments trading cash flow	46	(935)
Other businesses	(1)	(22)
Central and Inter-segment	(24)	(22)
Trading cash flow from continuing operations	21	(979)
Discontinued operations	(9)	24
Trading cash flow	12	(955)
Underlying operating profit charge exceeded by contributions to defined benefit schemes	(1)	(94)
Tax ¹	(88)	(102)
Free cash flow	(77)	(1,151)

¹ See page 17 for tax paid in the statutory cash flow statement.

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

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 19. For further detail, see note 20.

Free cash flow from cash flows from operating activities

	2022 £m	2021 £m
Statutory cash flows from operating activities	597	(679)
Capital expenditure (including investment from NCI and movement in joint ventures, associates and other investments)	(213)	(223)
Capital element of lease payments	(95)	(147)
Interest paid	(172)	(150)
Settlement of excess derivatives	(265)	(303)
Exceptional restructuring costs	48	134
M&A costs	18	22
Financial penalties paid	—	156
Other	5	39
Free cash flow	(77)	(1,151)
Discontinued operations free cash flow ¹	9	(23)
Free cash flow from continuing operations	(68)	(1,174)

¹ Discontinued operations free cash excludes: transactions with parent company of £(34)m (2021: £(16)m), movements in borrowings of £25m (2021: nil), exceptional restructuring costs of nil (2021: £7m), M&A costs of £(2)m (2021: £19m) and other of £(8)m (2021: £(27)m).

Group R&D expenditure

R&D expenditure during the period excluding the impact of contributions and fees, including government funding, amortisation and impairment of capitalised costs and amounts capitalised during the period.

Notes	2022 £m	2021 £m
Statutory research and development costs	(373)	(390)
Amortisation and impairment of capitalised cost	3 40	35
Capitalised as intangible assets	(48)	(41)
Contributions and fees	(218)	(153)
Gross R&D expenditure	(599)	(549)

Principal risks and uncertainties

Our risk management system is described on page 52 of our 2021 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.

We continue to review our principal risks and how we manage them to reflect their evolving nature. We have reviewed our risks in light of changes to the internal and external environment, in particular external uncertainties including challenges around the pace of market recovery, the current political situation including the war in Ukraine, global supply chain disruption and rising inflation. Despite the rigorous supply chain management, leaner manufacturing, strategic partnerships, application of contractual pricing protection, utilisation of our hedge book and continued focus on pricing, productivity and costs we believe the risk levels for Financial shock, Market shock, Business Continuity and Political risk have increased over the last six months. The principal risks facing the Group for the remaining six months of the financial year are reported on pages 54 to 57 of our Annual Report 2021 and are summarised below:

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.

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; 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, oil price, interest rates) 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 by pioneering the power that matters. Our strategy is to focus on delivering our plans for existing and nascent businesses 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.

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.

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); 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. 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

As previously reported, some of our loan facilities place restrictions and conditions on payments to shareholders. In 2021, as a result of these restrictions, the Board was not able to recommend shareholder payments. However, the Board may recommend shareholder payments from 2023, subject to satisfaction of the conditions and our consideration of progress made to strengthen the balance sheet. We aim to be able to recommend shareholder payments in the medium-term. The restrictions on distributions do not prevent shareholders from redeeming C Shares issued in January 2020 or prior to that.

Shareholders wishing to redeem their existing C Shares must lodge instructions with the Registrar to arrive no later than 5.00pm on 01 December 2022 (CREST holders must submit their election in CREST by 2.55pm). The payment of C Share redemption monies will be made on 05 January 2023 and the CRIP purchase will begin as soon as practicable after 06 January 2023.

Statement of Directors' responsibilities

The Directors confirm that, to the best of their knowledge:

- the condensed consolidated interim financial statements have been prepared in accordance with IAS 34 *Interim Financial Reporting* as adopted by the UK;
- the interim management report includes a fair review of the information required by:

(a) DTR 4.2.7R of the Disclosure and Transparency Rules, being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed consolidated interim financial statements; and a description of the principal risks and uncertainties for the remaining six months of the year; and

(b) DTR 4.2.8R of the Disclosure and Transparency Rules, being related party transactions that have taken place in the first six months of the current financial year and that have materially affected the financial position or performance of the entity during that period; and any changes in the related party transactions described in the last Annual Report that could do so.

By order of the Board

Warren East
Chief Executive

4 August 2022

Panos Kakoullis
Chief Financial Officer

4 August 2022

Independent review report to Rolls-Royce Holdings plc

Report on the condensed consolidated interim financial statements

Our conclusion

We have reviewed Rolls-Royce Holdings plc's condensed consolidated interim financial statements (the "interim financial statements") in the 2022 Half Year Results of Rolls-Royce Holdings plc for the 6 month period ended 30 June 2022 (the "period").

Based on our review, nothing has come to our attention that causes us to believe that the interim financial statements are not prepared, in all material respects, in accordance with UK adopted International Accounting Standard 34, 'Interim Financial Reporting' and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

The interim financial statements comprise:

- the Condensed consolidated balance sheet as at 30 June 2022;
- the Condensed consolidated income statement and Condensed consolidated statement of comprehensive income for the period then ended;
- the Condensed consolidated cash flow statement for the period then ended;
- the Condensed consolidated statement of changes in equity for the period then ended; and
- the explanatory notes to the interim financial statements.

The interim financial statements included in the 2022 Half Year Results of Rolls-Royce Holdings plc have been prepared in accordance with UK adopted International Accounting Standard 34, 'Interim Financial Reporting' and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

Basis for conclusion

We conducted our review in accordance with International Standard on Review Engagements (UK) 2410, 'Review of Interim Financial Information Performed by the Independent Auditor of the Entity' issued by the Financial Reporting Council for use in the United Kingdom. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures.

A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) and, consequently, does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

We have read the other information contained in the 2022 Half Year Results and considered whether it contains any apparent misstatements or material inconsistencies with the information in the interim financial statements.

Conclusions relating to going concern

Based on our review procedures, which are less extensive than those performed in an audit as described in the Basis for conclusion section of this report, nothing has come to our attention to suggest that the directors have inappropriately adopted the going concern basis of accounting or that the directors have identified material uncertainties relating to going concern that are not appropriately disclosed. This conclusion is based on the review procedures performed in accordance with this ISRE. However, future events or conditions may cause the group to cease to continue as a going concern.

Responsibilities for the interim financial statements and the review

Our responsibilities and those of the directors

The 2022 Half Year Results, including the interim financial statements, is the responsibility of, and has been approved by the directors. The directors are responsible for preparing the 2022 Half Year Results in accordance with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority. In preparing the 2022 Half Year Results, including the interim financial statements, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

Our responsibility is to express a conclusion on the interim financial statements in the 2022 Half Year Results based on our review. Our conclusion, including our Conclusions relating to going concern, is based on procedures that are less extensive than audit procedures, as described in the Basis for conclusion paragraph of this report. This report, including the conclusion, has been prepared for and only for the company for the purpose of complying with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and for no other purpose. We do not, in giving this conclusion, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

PricewaterhouseCoopers LLP

Chartered Accountants

London

4 August 2022