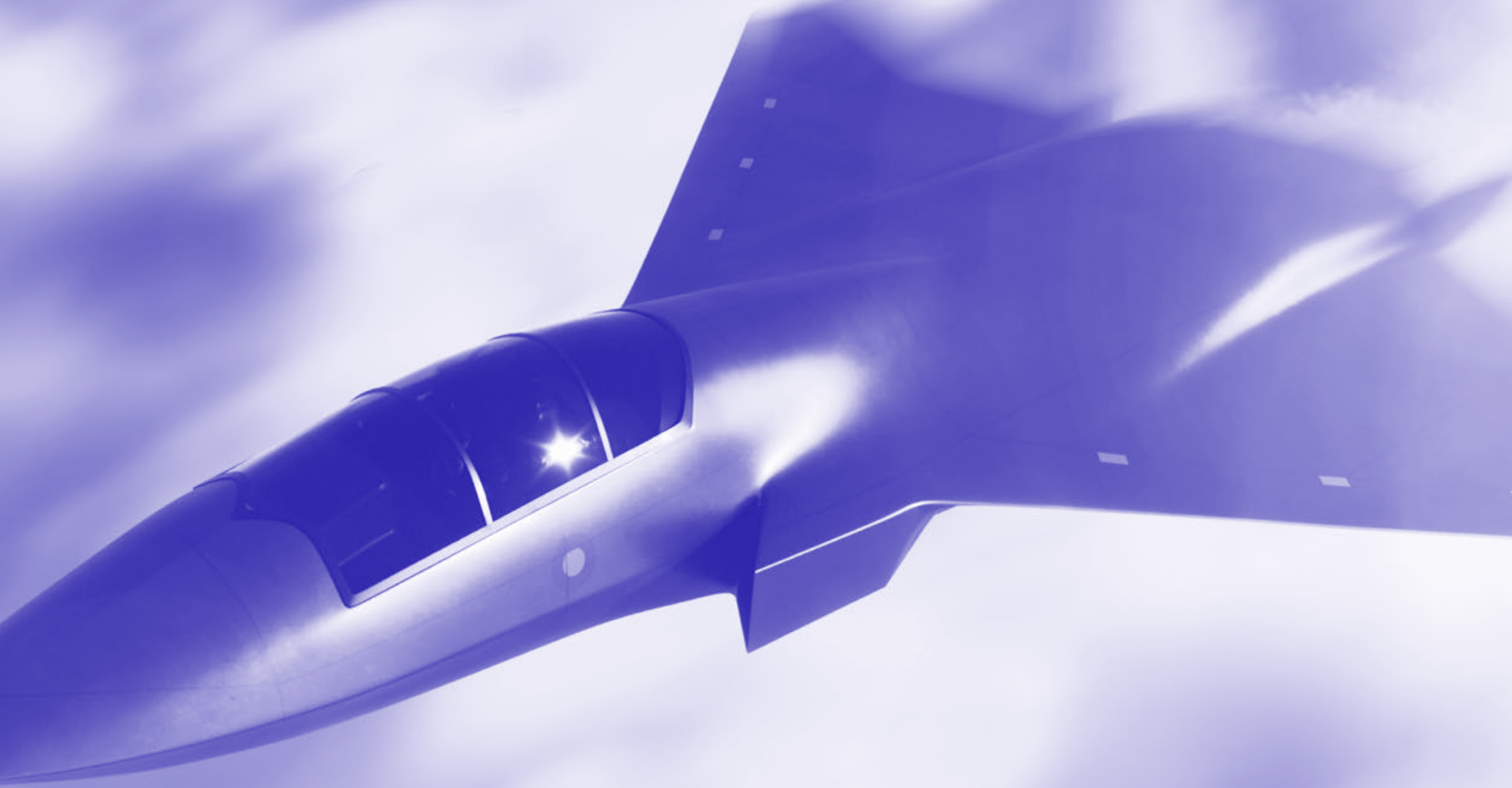
FINANCIAL STATEMENTS



Consolidated Financial Statements

Company Financial Statements

CONSOLIDATED INCOME STATEMENT

Year ended 31 December 2021

	Notes	2021 £m	Restated [1] 2020 £m
Continuing operations			
Revenue	2	11,218	11,491
Cost of sales [2]		(9,082)	(11,678)
Gross profit/(loss)	2	2,136	(187)
Commercial and administrative costs	2	(890)	(771)
Research and development costs	2, 3	(778)	(1,204)
Share of results of joint ventures and associates	12	45	190
Operating profit/(loss)		513	(1,972)
Gain/(loss) arising on acquisition and disposal of businesses	27	56	(14)
Profit/(loss) before financing and taxation		569	(1,986)
Financing income	4	229	61
Financing costs [3]	4	(1,092)	(874)
Net financing costs		(863)	(813)
Loss before taxation		(294)	(2,799)
Taxation	5	418	(302)
Profit/(loss) for the year from continuing operations		124	(3,101)
Discontinued operations			
Profit/(loss) for the year from ordinary activities	27	36	(68)
Costs of disposal of discontinued operations	27	(39)	–
Loss for the year from discontinued operations		(3)	(68)
Profit/(loss) for the year		121	(3,169)
Attributable to:			
Ordinary shareholders		120	(3,170)
Non-controlling interests (NCI)		1	1
Profit/(loss) for the year		121	(3,169)
Other comprehensive income/(expense)		41	(265)
Total comprehensive income/(expense) for the year		162	(3,434)
Earnings/(loss) per ordinary share attributable to ordinary shareholders:	6		
From continuing operations			
Basic		1.48p	(51.81)p
Diluted		1.47p	(51.81)p
From continuing and discontinued operations			
Basic		1.44p	(52.95)p
Diluted		1.43p	(52.95)p

[1] The comparative figures have been restated to reflect ITP Aero being classified as a discontinued operation. The respective notes to the financial statements have also been restated on this basis. Further detail can be found in note 27.
[2] Cost of sales includes a charge for expected credit losses of £124m (2020: £119m). Further detail can be found in note 14.
[3] Included within financing costs are fair value changes on derivative contracts. Further details can be found in notes 2, 4 and 20.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 December 2021

	Notes	2021 £m	2020 £m
Profit/(loss) for the year		121	(3,169)
Other comprehensive income/(expense) (OCI)			
Actuarial movements on post-retirement schemes	22	254	(590)
Revaluation to fair value of other investments	12	(2)	–
Share of OCI of joint ventures and associates	12	1	(1)
Related tax movements	5	(79)	195
Items that will not be reclassified to profit or loss		174	(396)
Foreign exchange translation differences on foreign operations		(178)	121
Foreign exchange translation differences reclassified to income statement on disposal of businesses	27	(1)	6
Movement on fair values debited to cash flow hedge reserve		(32)	(16)
Reclassified to income statement from cash flow hedge reserve		39	26
Share of OCI of joint ventures and associates	12	44	(4)
Related tax movements	5	(5)	(2)
Items that will be reclassified to profit or loss		(133)	131
Total other comprehensive income/(expense)		41	(265)
Total comprehensive income/(expense) for the year		162	(3,434)
Attributable to:			
Ordinary shareholders		161	(3,435)
Non-controlling interests (NCI)		1	1
Total comprehensive income/(expense) for the year		162	(3,434)
Total comprehensive income/(expense) for the year attributable to ordinary shareholders arises from:			
Continuing operations		278	(3,457)
Discontinued operations		(117)	22
Total comprehensive income/(expense) for the year		161	(3,435)

CONSOLIDATED BALANCE SHEET

At 31 December 2021

	Notes	2021 £m	2020 £m
ASSETS			
Intangible assets	9	4,041	5,145
Property, plant and equipment	10	3,917	4,515
Right-of-use assets	11	1,203	1,405
Investments – joint ventures and associates	12	404	394
Investments – other	12	36	19
Other financial assets	20	361	687
Deferred tax assets	5	2,249	1,826
Post-retirement scheme surpluses	22	1,148	907
Non-current assets		13,359	14,898
Inventories	13	3,666	3,690
Trade receivables and other assets	14	5,383	5,455
Contract assets	15	1,473	1,510
Taxation recoverable		90	117
Other financial assets	20	46	107
Short-term investments	20	8	–
Cash and cash equivalents	16	2,621	3,452
Current assets		13,287	14,331
Assets held for sale	27	2,028	288
TOTAL ASSETS		28,674	29,517
LIABILITIES			
Borrowings and lease liabilities	17	(279)	(1,272)
Other financial liabilities	20	(689)	(608)
Trade payables and other liabilities	19	(6,016)	(6,653)
Contract liabilities	15	(3,599)	(4,187)
Current tax liabilities		(101)	(154)
Provisions for liabilities and charges	21	(475)	(826)
Current liabilities		(11,159)	(13,700)
Borrowings and lease liabilities	17	(7,497)	(6,058)
Other financial liabilities	20	(2,715)	(3,046)
Trade payables and other liabilities	19	(1,575)	(1,922)
Contract liabilities	15	(6,710)	(6,245)
Deferred tax liabilities	5	(451)	(494)
Provisions for liabilities and charges	21	(1,107)	(1,119)
Post-retirement scheme deficits	22	(1,373)	(1,580)
Non-current liabilities		(21,428)	(20,464)
Liabilities associated with assets held for sale	27	(723)	(228)
TOTAL LIABILITIES		(33,310)	(34,392)
NET LIABILITIES		(4,636)	(4,875)
EQUITY			
Called-up share capital	23	1,674	1,674
Share premium		1,012	1,012
Capital redemption reserve		165	162
Cash flow hedging reserve		(45)	(94)
Merger reserve		650	650
Translation reserve		342	524
Accumulated losses		(8,460)	(8,825)
Equity attributable to ordinary shareholders		(4,662)	(4,897)
Non-controlling interests (NCI)		26	22
TOTAL EQUITY		(4,636)	(4,875)

The Financial Statements on pages 109 to 183 were approved by the Board on 24 February 2022 and signed on its behalf by:

Warren East
Chief Executive

Panos Kakoullis
Chief Financial Officer

CONSOLIDATED CASH FLOW STATEMENT

Year ended 31 December 2021

	Notes	2021 £m	2020 £m
Operating profit/(loss) from continuing operations		513	(1,972)
Operating loss from discontinued operations	27	(43)	(109)
Operating profit/(loss) [1]		470	(2,081)
Loss on disposal of property, plant and equipment		9	37
Share of results of joint ventures and associates	12	(45)	(191)
Dividends received from joint ventures and associates	12	27	60
Amortisation and impairment of intangible assets	9	290	902
Depreciation and impairment of property, plant and equipment		462	821
Depreciation and impairment of right-of-use assets	11	257	732
Adjustment of amounts payable under residual value guarantees within lease liabilities [2]		(4)	(102)
Impairment of and other movements on investments	12	7	24
Decrease in provisions		(394)	(801)
(Increase)/decrease in inventories		(169)	588
Movement in trade receivables/payables and other assets/liabilities		(507)	(2,655)
Movement in contract assets/liabilities		(134)	259
Financial penalties paid [3]		(156)	(135)
Cash flows on other financial assets and liabilities held for operating purposes		(85)	(126)
Interest received		9	13
Net defined benefit post-retirement cost/(credit) recognised in profit/(loss) before financing	22	23	(68)
Cash funding of defined benefit post-retirement schemes	22	(162)	(80)
Share-based payments	24	28	25
Net cash outflow from operating activities before taxation		(74)	(2,778)
Taxation paid		(185)	(231)
Net cash outflow from operating activities		(259)	(3,009)
Cash flows from investing activities			
Movement in other investments	12	(26)	(5)
Additions of intangible assets		(231)	(365)
Disposals of intangible assets	9	5	18
Purchases of property, plant and equipment		(328)	(585)
Disposals of property, plant and equipment		61	23
Acquisition of businesses		–	(106)
Disposal of businesses	27	99	23
Movement in investments in joint ventures and associates and other movements on investments	12	–	(19)
Movement in short-term investments		(8)	6
Net cash outflow from investing activities		(428)	(1,010)
Cash flows from financing activities			
Repayment of loans [4]		(965)	(2,884)
Proceeds from increase in loans [4]		2,005	4,774
Capital element of lease payments		(374)	(284)
Net cash flow from increase in borrowings and leases		666	1,606
Interest paid		(206)	(88)
Interest element of lease payments		(63)	(74)
Fees paid on undrawn facilities		(62)	(97)
Cash flows on settlement of excess derivative contracts [5]	4	(452)	(202)
Issue of ordinary shares – rights issue (net of expenses and rights taken by share trust)		–	1,972
Purchase of ordinary shares		–	(1)
Transactions with non-controlling interests (NCI) [6]		30	–
NCI on formation of subsidiary		3	–
Dividends to NCI		(1)	(1)
Redemption of C Shares		(3)	(91)
Net cash (outflow)/inflow from financing activities		(88)	3,024
Change in cash and cash equivalents		(775)	(995)
Cash and cash equivalents at 1 January		3,496	4,435
Exchange (losses)/gains on cash and cash equivalents		(82)	56
Cash and cash equivalents at 31 December [7]		2,639	3,496

CONSOLIDATED CASH FLOW STATEMENT – CONTINUED

Year ended 31 December 2021

1 During the year, the Group has received £11m (2020: £47m) from the British Government as part of the UK furlough scheme. This has been recognised within operating profit/loss.
2 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.
3 Relates to penalties paid on agreements with investigating bodies.
4 Repayment of loans includes repayment of £300m commercial paper under the Covid Corporate Financing Facility (CCFF) and €750m (£639m) loan notes in line with repayment terms. Proceeds from increase in loans includes the drawdown of a £2,000m loan (supported by an 80% guarantee from UK Export Finance). Further details are provided in note 17.
5 During the year, the Group incurred a cash outflow of £452m as a result of settling foreign exchange contracts that were originally in place to sell $3,184m receipts. Further detail is provided in note 4.
6 Relates to NCI investment received in the year, in respect of Rolls-Royce SMR Limited. Following the formation of Rolls-Royce SMR Limited during the year, and in line with the shareholder agreements, £30m investment was received by Rolls-Royce SMR Limited.
7 The Group considers overdrafts (repayable on demand) and cash held for sale to be an integral part of its cash management activities and these are included in cash and cash equivalents for the purposes of the cash flow statement.

In deriving the consolidated cash flow statement, movement in balance sheet items have been adjusted for non-cash items. The cash flow in the year includes the sale of goods and services to joint ventures and associates – see note 26.

	2021 £m	2020 £m
Reconciliation of movements in cash and cash equivalents to movements in net debt		
Change in cash and cash equivalents	(775)	(995)
Cash flows from increase in borrowings and leases	(666)	(1,606)
Less: settlement of related derivatives included in fair value of swaps below	6	50
Cash flows from increase/(decrease) in short-term investments	8	(6)
Change in net debt resulting from cash flows	(1,427)	(2,557)
New leases and other non-cash adjustments on lease liabilities and borrowings	(86)	(38)
Exchange (losses)/gains on net debt	(51)	143
Fair value adjustments	170	(126)
Debt disposed of on disposal of business/(assumed on acquisition of business)	8	(24)
Reclassifications	19	11
Movement in net debt excluding the fair value of swaps	(1,367)	(2,591)
Net debt at 1 January excluding the fair value of swaps	(3,827)	(1,236)
Net debt at 31 December excluding the fair value of swaps	(5,194)	(3,827)
Fair value of swaps hedging fixed rate borrowings	37	251
Net debt at 31 December	(5,157)	(3,576)

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

	At 1 January £m	Funds flow £m	Net funds on acquisition/ disposal £m	Exchange differences £m	Fair value adjustments £m	Reclassi-fications [1] £m	Other movements £m	At 31 December £m
2021								
Cash at bank and in hand	940	(87)	–	(20)	–	(38)	–	795
Money market funds	669	(620)	–	–	–	–	–	49
Short-term deposits	1,843	–	–	(66)	–	–	–	1,777
Cash and cash equivalents (per balance sheet)	3,452	(707)	–	(86)	–	(38)	–	2,621
Cash and cash equivalents included within assets held for sale	51	(68)		4	–	38	–	25
Overdrafts	(7)	–	–	–	–	–	–	(7)
Cash and cash equivalents (per cash flow statement)	3,496	(775)	–	(82)	–	–	–	2,639
Short-term investments	–	8	–	–	–	–	–	8
Other current borrowings	(1,006)	950	–	1	35	18	–	(2)
Non-current borrowings	(4,274)	(2,002)	–	38	136	88	(9)	(6,023)
Borrowings included within liabilities held for sale	–	18	–	1	(1)	(77)	–	(59)
Lease liabilities	(2,043)	370	–	(9)	–	15	(77)	(1,744)
Lease liabilities included within liabilities held for sale	–	4	8	–	–	(25)	–	(13)
Financial liabilities	(7,323)	(660)	8	31	170	19	(86)	(7,841)
Net debt excluding the fair value of swaps	(3,827)	(1,427)	8	(51)	170	19	(86)	(5,194)
Fair value of swaps hedging fixed rate borrowings [2]	251	(6)	–	(35)	(173)	–	–	37
Net debt [3]	(3,576)	(1,433)	8	(86)	(3)	19	(86)	(5,157)

CONSOLIDATED CASH FLOW STATEMENT – CONTINUED

Year ended 31 December 2021

	At 1 January £m	Funds flow £m	Net funds on acquisition/ disposal £m	Exchange differences £m	Fair value adjustments £m	Reclassi-fications [1] £m	Other movements £m	At 31 December £m
2020								
Cash at bank and in hand	825	163	–	3	–	(51)	–	940
Money market funds	1,095	(426)	–	–	–	–	–	669
Short-term deposits	2,523	(733)	–	53	–	–	–	1,843
Cash and cash equivalents (per balance sheet)	4,443	(996)	–	56	–	(51)	–	3,452
Cash and cash equivalents included within assets held for sale	–	–	–	–	–	51	–	51
Overdrafts	(8)	1	–	–	–	–	–	(7)
Cash and cash equivalents (per cash flow statement)	4,435	(995)	–	56	–	–	–	3,496
Short-term investments	6	(6)	–	–	–	–	–	–
Other current borrowings	(427)	134	(24)	(1)	–	(686)	(2)	(1,006)
Non-current borrowings	(2,896)	(1,974)	–	38	(126)	686	(2)	(4,274)
Lease liabilities	(2,354)	284	–	50	–	11	(34)	(2,043)
Financial liabilities	(5,677)	(1,556)	(24)	87	(126)	11	(38)	(7,323)
Net debt excluding fair value swaps	(1,236)	(2,557)	(24)	143	(126)	11	(38)	(3,827)
Fair value of swaps hedging fixed rate borrowings [2]	243	(50)	–	(42)	114	(14)	–	251
Net debt [3]	(993)	(2,607)	(24)	101	(12)	(3)	(38)	(3,576)

[1] Reclassifications include 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 current 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 (2021: £114m, 2020: £293m) and the element of fair value relating to exchange differences on the underlying principal of derivatives in cash flow hedges (2021: £(77)m, 2020: £(42)m).

[3] As at 31 December 2021, net debt excluding lease liabilities was £(3,400)m (2020: £(1,533)m).

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year ended 31 December 2021

The following describes the nature and purpose of each reserve within equity:

Share capital – The nominal value of ordinary shares of 20p each in issue.
Share premium – Proceeds received in excess of the nominal value of ordinary shares issued, less the costs of issue.
Capital redemption reserve – Amounts transferred from accumulated losses on the repurchase of ordinary shares or the redemption of C Shares. In Rolls-Royce Holdings plc's own Financial Statements, C Shares are issued from the merger reserve. This reserve was created by a scheme of arrangement in 2011. As this reserve is eliminated on consolidation in the Consolidated Financial Statements, the C Shares are shown as being issued from the capital redemption reserve.
Cash flow hedging reserve – Cumulative gains and losses on hedging instruments deemed effective in cash flow hedges.
Merger reserve – The premium on issuing shares to acquire a business where merger relief in accordance with the Companies Act 2006 applies.
Translation reserve – Gains and losses arising on retranslating the net assets of overseas operations into sterling.
Accumulated losses – All other net gains and losses and transactions with owners not recognised elsewhere and ordinary shares held for the purpose of share-based payment plans.
Non-controlling interests – The share of net assets or liabilities of subsidiaries held by third parties.

		Attributable to ordinary shareholders									
	Notes	Share capital £m	Share premium £m	Capital redemption reserve £m	Cash flow hedging reserve £m	Merger reserve £m	Translation reserve £m	Accumulated losses [1] £m	Total £m	Non-controlling interests (NCI) £m	Total equity £m
At 1 January 2021		1,674	1,012	162	(94)	650	524	(8,825)	(4,897)	22	(4,875)
Profit for the year		–	–	–	–	–	–	120	120	1	121
Foreign exchange translation differences on foreign operations		–	–	–	–	–	(178)	–	(178)	–	(178)
Reclassified to income statement on disposal of businesses	27	–	–	–	–	–	(1)	–	(1)	–	(1)
Movement on post-retirement schemes	22	–	–	–	–	–	–	254	254	–	254
Movement on fair values debited to cash flow hedge reserve		–	–	–	(32)	–	–	–	(32)	–	(32)
Reclassified to income statement from cash flow hedge reserve		–	–	–	39	–	–	–	39	–	39
Revaluation to fair value of other investments	12	–	–	–	–	–	–	(2)	(2)	–	(2)
OCI of joint ventures and associates	12	–	–	–	44	–	–	1	45	–	45
Related tax movements	5	–	–	–	(2)	–	(3)	(79)	(84)	–	(84)
Total comprehensive income/ (expense) for the year		–	–	–	49	–	(182)	294	161	1	162
Redemption of C Shares	20	–	–	3	–	–	–	(3)	–	–	–
Share-based payments – direct to equity [2]		–	–	–	–	–	–	28	28	–	28
Transactions with NCI [3]		–	–	–	–	–	–	29	29	1	30
Dividends to NCI		–	–	–	–	–	–	–	–	(1)	(1)
NCI on formation of subsidiary		–	–	–	–	–	–	–	–	3	3
Related tax movements		–	–	–	–	–	–	17	17	–	17
Other changes in equity in the year		–	–	3	–	–	–	71	74	3	77
At 31 December 2021		1,674	1,012	165	(45)	650	342	(8,460)	(4,662)	26	(4,636)

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY – CONTINUED

Year ended 31 December 2021

	Notes	Share capital £m	Share premium £m	Capital redemption reserve £m	Cash flow hedging reserve £m	Merger reserve £m	Translation reserve £m	Accumulated losses [1] £m	Total £m	Non-controlling interests (NCI) £m	Total equity £m
		Attributable to ordinary shareholders									
At 1 January 2020		386	319	159	(96)	650	397	(5,191)	(3,376)	22	(3,354)
Loss for the year		–	–	–	–	–	–	(3,170)	(3,170)	1	(3,169)
Foreign exchange translation differences on foreign operations		–	–	–	–	–	121	–	121	–	121
Reclassified to income statement on disposal of businesses		–	–	–	–	–	6	–	6	–	6
Movement on post-retirement schemes	22	–	–	–	–	–	–	(590)	(590)	–	(590)
Movement on fair values debited to cash flow hedge reserve		–	–	–	(16)	–	–	–	(16)	–	(16)
Reclassified to income statement from cash flow hedge reserve		–	–	–	26	–	–	–	26	–	26
OCI of joint ventures and associates	12	–	–	–	(4)	–	–	(1)	(5)	–	(5)
Related tax movements	5	–	–	–	(4)	–	–	197	193	–	193
Total comprehensive expense for the year		–	–	–	2	–	127	(3,564)	(3,435)	1	(3,434)
Issues of ordinary shares											
– Rights issue [4]		1,288	693	–	–	–	–	(10)	1,971	–	1,971
Issue of C Shares	20	–	–	(89)	–	–	–	1	(88)	–	(88)
Redemption of C Shares	20	–	–	92	–	–	–	(92)	–	–	–
Ordinary shares purchased		–	–	–	–	–	–	(1)	(1)	–	(1)
Share-based payments – direct to equity [2]		–	–	–	–	–	–	27	27	–	27
Transactions with NCI		–	–	–	–	–	–	–	–	(1)	(1)
Related tax movements		–	–	–	–	–	–	5	5	–	5
Other changes in equity in the year		1,288	693	3	–	–	–	(70)	1,914	(1)	1,913
At 31 December 2020		1,674	1,012	162	(94)	650	524	(8,825)	(4,897)	22	(4,875)

[1] At 31 December 2021, 29,405,191 ordinary shares with a net book value of £65m (2020: 39,866,717 ordinary shares with a net book value of £89m) were held for the purpose of share-based payment plans and included in accumulated losses. During the year:
- 10,667,095 ordinary shares with a net book value of £24m (2020: 3,458,865 ordinary shares with a net book value of £29m) vested in share-based payment plans; and
- the Company acquired none (2020: 85,724) of its ordinary shares via reinvestment of dividends received on its own shares and purchased none (2020: 30,763,282) of its ordinary shares through purchases on the London Stock Exchange.

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

[3] Relates to NCI investment received in the year in respect of Rolls-Royce SMR Limited. Further detail can be found on page 113.

[4] In 2020, the Company issued 6,436,601,676 new ordinary shares with a net book value of £1,288m and the Employee Share Trust subscribed for new shares at a value of £10m relating to the November 2020 rights issue. The amount credited to share premium is net of £79m in relation to transaction costs associated with the rights issue.

1 ACCOUNTING POLICIES

The Company and the Group

Rolls-Royce Holdings plc (the 'Company') is a public company limited by shares incorporated under the Companies Act 2006 and domiciled in England in the United Kingdom. The Consolidated Financial Statements of the Company for the year ended 31 December 2021 consist of the audited consolidation of the Financial Statements of the Company and its subsidiaries (together referred to as the Group) together with the Group's interest in jointly controlled and associated entities.

Basis of preparation and statement of compliance

The Company has elected to prepare its individual Company Financial Statements under FRS 101 *Reduced Disclosure Framework*. They are set out on pages 184 to 189 with the associated accounting policies from page 186.

The Consolidated Financial Statements have been prepared in accordance with UK adopted International Accounting Standards (IAS) and interpretations issued by the IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under UK adopted IFRS.

The Consolidated Financial Statements have been prepared on a going concern basis as described on page 58. The historical cost basis has been used except where IFRS require the revaluation of financial instruments to fair value and certain other assets and liabilities on an alternative basis, most significantly post-retirement scheme obligations are valued on the basis required by IAS 19 *Employee Benefits*.

The Consolidated Financial Statements are presented in sterling which is the Company's functional currency.

The preparation of Consolidated Financial Statements requires management to make judgements and estimates that affect the reported amounts of assets and liabilities at the date of the Consolidated Financial Statements and the reported amounts of revenue and expenses during the reporting period. Actual future outcomes could differ from those estimates.

Going concern

The Directors have undertaken a comprehensive going concern review over an 18-month period to August 2023, considering the forecast cash flows of the Group and the liquidity headroom available over the corresponding period, taking into account the Group's principal risks and uncertainties. The Directors have considered the impact that the COVID-19 pandemic continues to have on the Group and the uncertainty that remains in the short term over the timing of recovery of demand, in particular in relation to the civil aviation industry. The Group has modelled two forecasts in its assessment of going concern which have been considered by the Directors, along with a likelihood assessment of these forecasts, being:

- base case, which reflects the Directors' current expectations of future trading; and
- severe but plausible downside forecast, which envisages a 'stress' or 'downside' situation.

In addition, the Directors believe there are significant business growth opportunities to come from the Group playing a leading role in the transition to net zero, whilst at the same time climate change poses potentially significant risks to the Group. Although it is unlikely that physical and transition risks will arise during the 18-month period being assessed for going concern, both physical and transition risks have been considered as part of the Group's risk assessment.

Further details are given in the Going Concern Statement on pages 58 to 59. After due consideration, the Directors consider that the Group has sufficient liquidity to continue in operational existence for a period of at least 18 months from the date of this report and are therefore satisfied that it is appropriate to adopt the going concern basis of accounting in preparing the Financial Statements.

Climate change

In preparing the Consolidated Financial Statements the Directors have considered the potential impact of climate change, particularly in the context of the disclosures included in the Strategic Report this year and the stated decarbonisation commitments. Based on the Taskforce for Climate-related Financial Disclosures (TCFD) recommendations, the Group assesses the potential impact of climate-related risks which cover both transition risks and physical risks. The transition risks may include extensive policy, legal, technological, and market changes and physical risks could include direct damage to assets and supply chain disruption.

The Group has set decarbonisation commitments and identified longer-term considerations in response to the climate challenge and is engaging proactively with external stakeholders to advocate for the conditions that society needs to achieve its net zero target. The Group's main short- and longer-term priorities include the following:

- achieving net zero greenhouse gas (GHG) emissions by 2030 from all energy purchased and consumed in the operation of the buildings, facilities and manufacturing processes (with the exception of product testing and development). This will be met through continued investment in onsite renewable energy installations; the procurement of renewable energy; and continued investment in energy efficiency improvements to reduce the Group's overall energy demands and operating costs. The investment required to meet these scope 1 and 2 emission improvements is included in the forecasts that support these Financial Statements. The Group expects the Bristol, UK, manufacturing site to be its first site to achieve net zero carbon operations during 2022.
- pioneering breakthrough new technologies, including investment in hybrid-electric solutions in Power Systems, continued development of the more efficient UltraFan aero engine, testing of sustainable aviation fuels, small modular reactors (SMRs) and hybrid and fully electric propulsion. New products will be compatible with net zero operation by 2030 and all products will be compatible with net zero operation by 2050. In the year, R&D costs of £(68)m within New Markets included design development to ready the SMRs to enter the UK GDA process and investment in electrical propulsion technology. Future investment required to deliver these technologies is included in the forecasts that support the Financial Statements.

Climate change (continued)

Climate change scenarios have been prepared to assess the viability of our business strategy, decarbonisation plans and approach to managing climate-related risk. There is inherent uncertainty over the assumptions used within these and how they will impact the Group's business operations, cash flows and profit projections. The Directors assess the assumptions on a regular basis to ensure that they are consistent with the risk management activities and the commitments made to investors and other stakeholders.

Assumptions used within the Financial Statements in relation to areas such as revenue recognition for long-term contracts, impairment reviews of non-current assets and the carrying amount of deferred tax assets consider the findings from the climate scenarios prepared. Key variables include carbon prices based on the IEA Net Zero scenario, which assumes an increase from $47 per tonne of carbon in 2022 to $250 per tonne in 2050, commodity price trends derived from the climate scenarios set out by the Intergovernmental Panel on Climate Change (IPCC RCP1.9), temperature rises from the (IPCC SSP1-19) scenario, and GDP information from the Oxford Economics Net Zero model.

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. To ensure revenue recognition or the carrying value of assets is not overstated it has cautiously been assumed that the impact of carbon pricing predominantly falls on the cost base of the domestic facilities and external supply chain, rather than directly on customers or consumers. The Group will be able to mitigate an element of the financial impact as it reduces the scope 1 and 2 emissions from its buildings, facilities and manufacturing processes and this is expected to decline. However, no account has been made of expected mitigations from decarbonisation in the external supply chain (who the Group is working with, whilst acknowledging in its financial modelling that this is complex and will therefore take some time). The financial modelling performed recognises the extent to which the Group's current supplier contracts offer protection from cost increases in the short to medium term where pricing is fixed or subject to capped escalation clauses. The Group has made a cautious assessment of whether higher costs would be passed on to customers in the short and medium term that considers the markets operated in and the pricing mechanisms in place. For example, in Civil Aerospace it is recognised that escalation caps within a number of its LTSA contracts would be triggered, meaning additional costs could remain within the business under current commercial arrangements until the end of existing contract periods.

When determining the amount of cumulative revenue recognised on long-term contracts, and the obligation in relation to onerous contracts, the assumptions above have been used to reflect the climate uncertainties. This has resulted in a revenue catch-up of £(17)m and an increase in contract loss provisions of £(20)m in the year from increased costs over the term of the current contracts of around 1%. A sensitivity is presented within the key sources of estimation uncertainty (page 129) to disclose the impact of a further 1% cost increase that might arise from further unmitigated increases in carbon and/or commodity pricing.

Impairment testing of non-current assets including goodwill, programme assets and deferred tax assets has considered the above risks as well as assessing how the Group's 1.5ºC scenario may change the demand for products over the medium and longer term. To assess the carrying value of assets where there is more potential for impairment, the Directors have modelled downside risks specific to those products. This included consideration of lower OE volumes or a shorter in-service life that generates lower aftermarket volumes, together with higher costs in Civil Aerospace. Power Systems is a shorter-cycle business with scope to re-assess contractual terms to reflect the cost of carbon. Whilst the Defence programmes cover a longer period, the nature of the largest customers and the typical contractual arrangements mean that the Group expects future contracts to reflect the cost of carbon. Further information is provided in notes 5 and 9.

Deferred tax assets are recognised to the extent it is probable that future taxable profits will be available, against which the unused tax losses and deductible temporary difference can be utilised. In addition to the weighted downside forecast (see note 5), the climate-related estimates and assumptions above have also been considered when assessing the recoverability of the deferred tax assets. Recognising the longer term over which these assets will be recovered, the Group has also considered the impact on OE and aftermarket sales if new, more efficient, civil aircraft or new engine options enter the market earlier than assumed in its most likely estimates. Under this scenario some older products would see a reduction in profits but additional opportunities exist for newer products such as the Trent XWB. Whilst carbon pricing illustrates pressure on costs, decarbonisation and new supplier and customer contracts offer the opportunity to receive value for more efficient and sustainable products. Further details are included in note 5 together with sensitivity analysis in the key sources of estimation uncertainty section below.

The climate-related estimates and assumptions that have been considered to be key areas of judgement or sources of estimation uncertainty for the year ended 31 December 2021 are those relating to the recoverable amount of non-current assets including goodwill, capitalised development costs, recovery of deferred tax assets, recognition and measurement of provisions and recognition of revenue on long-term contracts. These items are included within the key areas of judgement and key sources of estimation uncertainty summarised on page 119 and 120 and explained in detail throughout the significant accounting policies.

Items that may be impacted by climate-related risks, but which are not considered to be key areas of judgements or sources of estimation uncertainty in the current financial year are outlined below:

Useful lives of assets - The useful lives of assets could be reduced by climate-related matters, for example as a result of physical risks, obsolescence or legal restrictions. The change in useful lives would have a direct impact on the amount of depreciation or amortisation recognised each year from the date of reassessment. The Directors' review of useful lives has taken into consideration the impacts of the Group's decarbonisation commitments and has not had a material impact on the results for the year.

Inventory valuation - Climate-related matters may affect the value of inventories as they could become obsolete as a result of a decline in selling prices or a reduction in demand. After consideration of the typical stock-turns of the inventory in relation to the rate of change in the market the Directors consider that inventory is appropriately valued.

1 ACCOUNTING POLICIES – CONTINUED

Recoverability of trade receivables and contract assets - The impact of climate-related matters could have an impact on the Group's customers in the future, especially those customers in the Civil Aerospace business. No material climate-related issues have arisen during the year that have impacted our assessment of the recoverability of receivables. The Group's ECL provision uses credit ratings which inherently will include the market's assessment of the climate change impact on credit risk of the counter parties. Given the maturity time of trade receivables and the majority of contract assets, climate change is unlikely to have a material increase on counter party credit risk in that time.

Share-based payments - Executive leadership remuneration packages will be impacted and measured against a new sustainability metric from the 2023 financial year. This could impact the future amount and timing of the recognition of the share-based payment expense in the income statement once these metrics are included within the performance condition criteria of the share-based payment plans. This change has had no impact on the 2021 financial statements.

Defined benefit pension plans - Climate-related risks could affect the financial position of defined benefit pension plans. As a result, this could have implications on the expected return on plan assets and measurement of defined benefit liabilities in future years.

Presentation of underlying results

The Group measures financial performance on an underlying basis and discloses this information as an alternative performance measure. This is consistent with the way that financial performance is measured by management and reported to the Board in accordance with IFRS 8 *Operating Segments*. The Group believes this is the most appropriate basis to measure the in-year performance as underlying results reflect the substance of trading activity, including the impact of the Group's foreign exchange forward contracts, which economically hedge net foreign currency cash flows at predetermined exchange rates. In addition, underlying results exclude the accounting impact of business acquisitions and disposals, impairment charges where the reasons are outside of normal operating activities, exceptional items, and certain other items which are market driven and outside of the control of management. Further details are given in note 2. A reconciliation of alternative performance measures to the statutory equivalent is provided on page 215 and 216.

Revisions to IFRS applicable in 2021

In April 2021, the IFRS IC published its final agenda decision on Configuration and Customisation costs in a Cloud Computing Arrangement. The agenda decision considers how a customer accounts for configuration or customisation costs where an intangible asset is not recognised in a cloud computing arrangement. The agenda decision does not have a material impact on the Group in respect of the current period or prior periods.

There are no other new standards or interpretations issued by the IASB that had a significant impact on the Consolidated Financial Statements.

Key areas of judgement and sources of estimation uncertainty

The determination of the Group's accounting policies requires judgement. The subsequent application of these policies requires estimates and the actual outcome may differ from that calculated. The key judgements and key sources of estimation uncertainty at the balance sheet date, that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial year, are summarised below. Further details, together with sensitivities for key sources of estimation uncertainty where appropriate and practicable, are included within the significant accounting policies section of this note.

Area	Key judgements	Key sources of estimation uncertainty	Page ref
Revenue recognition and contract assets and liabilities	– Whether Civil Aerospace OE and aftermarket contracts should be combined. – How performance on long-term aftermarket contracts should be measured. – Whether any costs should be treated as wastage. – Whether sales of spare engines to joint ventures are at fair value. – When revenue should be recognised in relation to spare engine sales to related entities.	– Estimates of future revenue and costs of long-term contractual arrangements including the impact of climate change.	121
Risk and revenue sharing arrangements	– Determination of the nature of entry fees received.		123
Taxation		– Estimates necessary to assess whether it is probable that sufficient suitable taxable profits will arise in the UK to utilise the deferred tax assets.	124

1 ACCOUNTING POLICIES – CONTINUED

Area	Key judgements	Key sources of estimation uncertainty	Page ref
Discontinued operations and assets held for sale	– Whether the ITP Aero business and associated consolidation adjustments meet the criteria to be classified as held for sale and a discontinued operation.		124
Research and development	– Determination of the point in time where costs incurred on an internal programme development meet the criteria for capitalisation or ceasing capitalisation. – Determination of the basis for amortising capitalised development costs.		126
Leases	– Determination of the lease term.	– Estimates of the payments required to meet residual value guarantees at the end of engine leases.	127
Impairment of non-current assets	– Determination of cash-generating units for assessing impairment of goodwill.	– Estimates of cash flow forecasts to support the carrying value of intangible assets (including programme-related assets).	128
Provisions	– Whether any costs should be treated as wastage.	– Estimates of the time to resolve the technical issues on the Trent 1000, including the development of the modified high pressure turbine (HPT) blade and estimates of the expenditure required to settle the obligation relating to Trent 1000 claims and to settle Trent 1000 long-term contracts assessed as onerous. – Estimates of the future revenues and costs to fulfil onerous contracts.	129
Post-retirement benefits		– Estimates of the assumptions for valuing the defined benefit obligation.	130

Significant accounting policies
The Group's significant accounting policies are set out below. These accounting policies have been applied consistently to all periods presented in these Consolidated Financial Statements.

Basis of consolidation
The Consolidated Financial Statements include the Company Financial Statements and its subsidiary undertakings together with the Group's share of the results in joint arrangements and associates made up to 31 December.

A subsidiary is an entity controlled by the Company. Control exists when the Company has power over an entity, exposure to variable returns from its involvement with an entity and the ability to use its power over an entity so as to affect the Company's returns. Subsidiaries are consolidated in accordance with IFRS 10 *Consolidated Financial Statements*.

A joint arrangement is an entity in which the Group holds a long-term interest and which is jointly controlled by the Group and one or more other investors under a contractual arrangement. Joint arrangements may be either joint ventures or joint operations. Joint ventures are accounted for using the equity method of accounting and joint operations are accounted for using proportionate accounting.

An associate is an entity that is neither a subsidiary nor a joint arrangement, in which the Group holds a long-term interest and where the Group has a significant influence. The results of associates are accounted for using the equity method of accounting.

All intra-group transactions, balances, income and expenses are eliminated on consolidation. Adjustments are made to eliminate the profit or loss arising on transactions with joint arrangements and associates to the extent of the Group's interest in the entity. Transactions with non-controlling interests are recorded directly in equity.

Any subsidiary undertaking, joint arrangement or associate sold or acquired during the year are included up to, or from, the date of change of control. Details of transactions in the year are set out in note 27.

1 ACCOUNTING POLICIES – CONTINUED

Revenue recognition and contract assets and liabilities

Revenue recognised comprises sales to the Group's customers after discounts and amounts payable to customers. Revenue excludes value added taxes. The transaction price of a contract is typically clearly stated within the contract, although the absolute amount may be dependent on escalation indices and long-term contracts require the key estimates highlighted below. Refund liabilities where sales are made with a right of return are not typical in the Group's contracts. Where they do exist, and consideration has been received, a portion based on an assessment of the expected refund liability is recognised within other payables. The Group has elected to use the practical expedient not to adjust revenue for the effect of financing components where the expectation is that the period between the transfer of goods and services to customers and the receipt of payment is less than a year.

Sales of standard OE, spare parts and time and material overhaul services are generally recognised on transfer of control to the customer. This is generally on delivery to the customer, unless the specific contractual terms indicate a different point. The Directors consider whether there is a need to constrain the amount of revenue to be recognised on delivery based on the contractual position and any relevant facts, however, this is not typically required.

Sales of OE and services that are specifically designed for the contract (most significantly in the Defence business) are recognised by reference to the progress towards completion of the performance obligation, using the cost method described in the key judgements, provided the outcome of contracts can be assessed with reasonable certainty.

The Group generates a significant portion of its revenue on aftermarket arrangements arising from the installed OE fleet. As a consequence, in particular in the Civil Aerospace large engine business, the Group will often agree contractual prices for OE deliveries that take into account the anticipated aftermarket arrangements. Sometimes this may result in losses being incurred on OE. As described in the key judgements, these contracts are not combined. The consideration in the OE contract is therefore allocated to OE performance obligations and the consideration in the aftermarket contract to aftermarket performance obligations.

Key areas of the accounting policy are:

- Future variable revenue from long-term contracts is constrained to take account of the risk of non-recovery of resulting contract balances from reduced utilisation e.g. engine flying hours, based on historical forecasting experience and the risk of aircraft being parked by the customer.
- A significant amount of revenue and cost related to long-term contract accounting is denominated in currencies other than that of the relevant Group undertaking, most significantly US dollar transactions in sterling and euro denominated undertakings. These are translated at estimated long-term exchange rates.
- The assessment of stage of completion is generally measured for each contract. However, in certain cases, such as for CorporateCare agreements where there are many contracts covering aftermarket services each for a small number of engines, the Group accounts for a portfolio of contracts together as the effect on the Consolidated Financial Statements would not differ materially from applying the standard to the individual contracts in the portfolio. When accounting for a portfolio of long-term service arrangements the Group uses estimates and assumptions that reflect the size and composition of the portfolio.
- A contract asset/liability is recognised where payment is received in arrears/advance of the revenue recognised in meeting performance obligations.
- Where material, wastage costs (see key judgements below) are recorded as an exceptional non-underlying expense.

If the expected costs to fulfil a contract exceed the expected revenue, a contract loss provision is recognised for the excess costs.

The Group pays participation fees to airframe manufacturers, its customers for OE, on certain programmes. Amounts paid are initially treated as contract assets and subsequently charged as a reduction to the OE revenue when the engines are transferred to the customer.

The Group has elected to use the practical expedient to expense as incurred any incremental costs of obtaining or fulfilling a contract if the amortisation period of an asset created would have been one year or less. Where costs to obtain a contract are recognised in the balance sheet, they are amortised over the performance of the related contract (two to ten years).

Key judgement – Whether Civil Aerospace OE and aftermarket contracts should be combined
In the Civil Aerospace business, OE contracts for the sale of engines to be installed on new aircraft are with the airframers, while the contracts to provide spare engines and aftermarket goods and services are with the aircraft operators, although there may be interdependencies between them. IFRS 15 *Revenue from Contracts with Customers* includes guidance on the combination of contracts, in particular that contracts with unrelated parties should not be combined. Notwithstanding the interdependencies, the Directors consider that the engine contract should be considered separately from the aftermarket contract. In making this judgement, they also took account of industry practice.

Key judgement – How performance on long-term aftermarket contracts should be measured
The Group generates a significant proportion of its revenue from aftermarket arrangements. These aftermarket contracts, such as TotalCare and CorporateCare agreements in the Civil Aerospace business, cover a range of services and generally have contractual terms covering more than one year. Under these contracts, the Group's primary obligation is to maintain customers' engines in an operational condition and this is achieved by undertaking various activities, such as maintenance, repair and overhaul, and engine monitoring over the period of the contract. Revenue on these contracts is recognised over the period of the contract and the basis for measuring progress is a matter of judgement. The Directors consider that the stage of completion of the contract is best measured by using the actual costs incurred to date compared to the estimated costs to complete the performance obligations, as this reflects the extent of completion of the activities to be performed.

1 ACCOUNTING POLICIES – CONTINUED

Key judgement – Whether any costs should be treated as wastage
In rare circumstances, the Group may incur costs of wasted material, labour or other resources to fulfil a contract where the level of cost was not reflected in the contract price. The identification of such costs is a matter of judgement and would only be expected to arise where there has been a series of abnormal events which give rise to a significant level of cost of a nature that the Group would not expect to incur and hence is not reflected in the contract price. Examples include technical issues that: require resolution to meet regulatory requirements; have a wide-ranging impact across a product type; and cause significant operational disruption to customers. Similarly, in these rare circumstances, significant disruption costs to support customers resulting from the actual performance of a delivered good or service may be treated as a wastage cost. Provision is made for any costs identified as wastage when the obligation to incur them arises – see note 21.

Key judgement – Whether sales of spare engines to joint ventures are at fair value
The Civil Aerospace business maintains a pool of spare engines to support its customers. Some of these engines are sold to, and held by, joint venture companies. The assessment of whether the sales price reflects fair value is a key judgement. The Group considers that based upon the terms and conditions of the sales, and by comparison to the sales price of spare engines to other third parties, the sales made to joint ventures reflect the fair value of the goods sold. See note 26 for value of sales to joint ventures during the year.

Key judgement - When revenue should be recognised in relation to spare engine sales to related entities
The Group recognises revenue when a performance obligation is settled. A judgement has been made on whether the Group relinquishes control of these spare engines at the point of legal sale, as the customer, in some instances, is contracted to provide some future spare engine capacity to the Group to support its installed fleet. The customer in the engine sale has responsibility for generating revenue from the engines and exposure to periods of non-utilisation; exposure to risk of damage or loss, risk from residual value movements, and will determine if and when profits will be made from disposal. The spare engines that will be made available to the Group in the future do not consist of identified assets and the provider retains a substantive right to substitute the asset through the Group's period of use. It is therefore appropriate to recognise revenue from the sale of the spare engines at the point that title transfers.

Key estimate – Estimates of future revenue and costs on long-term contractual arrangements
The Group has long-term contracts that fall into different accounting periods and which can extend over significant periods (generally up to 25 years) the most significant of these are long-term service arrangements (LTSAs) in the Civil Aerospace business with an average remaining term of around ten years. The estimated revenue and costs are inherently imprecise and significant estimates are required to assess: engine flying hours (EFHs), time-on-wing and other operating parameters; the pattern of future maintenance activity and the costs to be incurred; lifecycle cost improvements over the term of the contracts; and escalation of revenue and costs. The impact of climate change on EFH and costs is also considered when making these estimates. Industry and customer data on expected levels of utilisation is included in the forecasts used. Across the length of the current Civil LTSA contracts, allowance has been made for around a 1% projected cost increase resulting from carbon pricing and commodity price changes.

The sensitivities below demonstrate how changes in assumptions (including as a result of climate change) could impact the level of revenue recognised were assumptions to change. The Directors believe that the estimates used to prepare the financial statements take account of the inherent uncertainties, constraining the expected level of revenue as appropriate.

The ongoing COVID-19 pandemic continues to result in uncertainty over the recovery of demand across the civil aviation industry. Further details have been included in the going concern disclosure on page 58. Estimates of future LTSA revenue within Civil Aerospace are based upon future EFH forecasts, influenced by assumptions over the recovery of the civil aviation industry. Finally, many of the revenues and costs are denominated in currencies other than that of the relevant Group undertaking. These are translated at an estimated long-term exchange rate, based on historical trends and economic forecasts.

During the year, changes to the estimate in relation to the Civil LTSA contracts resulted in favourable catch-up adjustments to revenue of £214m.

Based upon the stage of completion of all widebody LTSA contracts within Civil Aerospace as at 31 December 2021, the following reasonably possible changes in estimates would result in catch-up adjustments being recognised in the period in which the estimates change (at underlying rates):

- A change in forecast EFHs of 1% over the remaining term of the contracts would impact LTSA income and to a lesser extent costs, resulting in an in-year impact of around £6m to £9m. 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 lead to a revenue catch-up adjustment in the next 12 months of around £25m.

1 ACCOUNTING POLICIES – CONTINUED

Risk and revenue sharing arrangements (RRSAs)

Cash entry fees received are initially deferred on the balance sheet within trade payables and other liabilities. They are then recognised as a reduction in cost of sales incurred. Individual programme amounts are allocated pro rata to the estimated number of units to be produced. Amortisation commences as each unit is delivered and then charged on a 15-year straight-line basis.

The payments to suppliers of their shares of the programme cash flows for their production components are charged to cost of sales when OE sales are recognised or as LTSA costs are incurred.

The Group also has arrangements with third parties who invest in a programme and receive a return based on its performance, but do not undertake development work or supply parts. Such arrangements (financial RRSAs) are financial instruments as defined by IAS 32 *Financial Instruments: Presentation* and are accounted for using the amortised cost method.

Key judgement – Determination of the nature of entry fees received

RRSAs with key suppliers (workshare partners) are a feature of the civil aviation industry business. Under these contractual arrangements, the key commercial objectives are that: (i) during the development phase the workshare partner shares in the risks of developing an engine by performing its own development work, providing development parts and paying a non-refundable cash entry fee; and (ii) during the production phase it supplies components in return for a share of the programme cash flows as a 'life of type' supplier (i.e. as long as the engine remains in service).

The non-refundable cash entry fee is judged by the Group to be a contribution towards the development expenditure incurred. These receipts are deferred on the balance sheet and recognised against the cost of sales over the estimated number of units to be delivered on a similar basis to the amortisation of development costs – see 126.

Royalty payments

Where a government or similar body has previously acquired an interest in the intellectual property of a programme, royalty payments are matched to the related sales.

Government grants

Government grants received are varied in nature and are recognised in the income statement so as to match them with the related expenses that they are intended to compensate. Where grants are received in advance of the related expenses, they are initially recognised as liabilities within trade payables and other liabilities and released to match the related expenditure. Non-monetary grants are recognised at fair value.

Interest

Interest receivable/payable is credited/charged to the income statement using the effective interest method. Where borrowing costs are attributable to the acquisition, construction or production of a qualifying asset, such costs are capitalised as part of the specific asset.

Taxation

The tax charge/credit on the profit or loss for the year comprises current and deferred tax:

- Current tax is the expected tax payable for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.
- Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of the assets and liabilities for financial reporting purposes and the amounts used for tax purposes and is calculated using the enacted or substantively enacted rates that are expected to apply when the asset or liability is settled. In the UK, the deferred tax liability on the pension scheme surplus is recognised consistently with the basis for recognising the surplus i.e. at the rate applicable to refunds from a trust.

Tax is charged or credited to the income statement or OCI as appropriate, except when it relates to items credited or charged directly to equity in which case the tax is also dealt with in equity.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries and joint arrangements, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax is not recognised on taxable temporary differences arising on the initial recognition of goodwill or for temporary differences arising from the initial recognition of assets and liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profits, which include the reversal of taxable temporary differences, will be available against which the assets can be utilised. Further details on the Group's tax position can be found on page 213.

1 ACCOUNTING POLICIES – CONTINUED

Key estimate – Estimates necessary to assess whether it is probable that sufficient suitable taxable profits will arise in the UK to utilise the deferred tax assets
Deferred tax assets are recognised to the extent it is probable that future taxable profits will be available, against which the deductible temporary difference can be utilised. Further details are included in note 5.

In addition to taking into account a severe but plausible downside forecast (see below), the climate-related estimates and assumptions (set out on pages 117 to 119) have also been considered when assessing the recoverability of the deferred tax assets. Recognising the longer term over which these assets will be recovered, the Group has also considered the impact on OE and aftermarket sales if new more efficient civil aircraft or new engine options enter the market earlier than assumed in our most likely estimates. Under this scenario some older products would see a reduction in profits, but additional opportunities exist for our newer products such as the Trent XWB.

While carbon and commodity pricing may put pressure on costs, decarbonisation and new supplier and customer contracts offer the opportunity to receive value for more efficient and sustainable products.

The ongoing COVID-19 pandemic continues to result in uncertainty over the recovery of demand across the civil aviation industry. As explained in note 5, a 25% probability of there being a severe but plausible downside forecast in relation to the civil aviation industry has been taken into account in the assessment of the recovery of the UK deferred tax assets.

The estimates take account of the inherent uncertainties constraining the expected level of profit as appropriate. Changes in these estimates will affect future profits and therefore the recoverability of the deferred tax assets. The following sensitivities have been modelled to demonstrate the impact of changes in assumptions on the recoverability of deferred tax assets.

- A 5% change in margin in the main Civil Aerospace widebody programmes.
- A 5% change in the number of shop visits driven by EFHs.
- Assumed future cost increases from climate change expected to flow through to customers at 100% are restricted to 90% pass through.

All of these could be driven by a number of factors including the impact of climate change as explained on pages 117 to 119.

A 5% change in margin or shop visits would result in an increase/decrease in the deferred tax asset of around £150m.

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 carbon prices were to double, this would be £110m.

Foreign currency translation

Transactions denominated in currencies other than the functional currency of the transacting Group undertaking are translated into the functional currency at the average monthly exchange rate when the transaction occurs. Monetary assets and liabilities denominated in foreign currencies are translated into the relevant functional currency at the rate prevailing at the year end. Exchange differences arising on foreign exchange transactions and the retranslation of monetary assets and liabilities into functional currencies at the rate prevailing at the year end are included in profit/(loss) before taxation.

The trading results of Group undertakings are translated into sterling at the average exchange rates for the year. The assets and liabilities of overseas undertakings, including goodwill and fair value adjustments arising on acquisition, are translated at the exchange rates prevailing at the year end. Exchange adjustments arising from the retranslation of the opening net assets, and from the translation of the profits or losses at average rates, are recognised in OCI.

Discontinued operations

A discontinued operation is defined in IFRS 5 *Non-current assets held for sale and discontinued operations* as a component of an entity that has been disposed of or is classified as held for sale, represents a separate major line of business or geographical area of operations, is part of a single co-ordinated plan to dispose of such a line of business or is a subsidiary acquired exclusively with a view to resale. The results of discontinued operations are required to be presented separately in the income statement with the comparative period restated to show results attributable to continuing operations.

Assets and businesses are classified as held for sale when their carrying amounts will be recovered through sale rather than through continuing use.

Key judgement – Whether the ITP Aero business and associated consolidation adjustments meet the criteria to be classified as held for sale and a discontinued operation
In identifying the assets and liabilities that form part of the disposal group held for sale in relation to the ITP Aero business, the Group has considered whether the associated consolidation adjustments meet the criteria to be classified within the disposal group. The consolidation adjustments allocated to the disposal group are those that relate to the carrying value of the disposal group's assets and liabilities. Further detail can be found in note 27.

1 ACCOUNTING POLICIES – CONTINUED

Financial instruments – Classification and measurement

Financial assets primarily include trade receivables, cash and cash equivalents, short-term investments, derivatives (foreign exchange, commodity and interest rate contracts), and unlisted investments.

- Trade receivables are classified either as held to collect and measured at amortised cost, or as held to collect and sell and measured at fair value, with movements in fair value recognised through other comprehensive income (FVOCI). The Group may sell trade receivables due from certain customers before the due date. Any trade receivables from such customers that are not sold at the reporting date are classified as 'held to collect and sell'.
- Cash and cash equivalents (consisting of balances with banks and other financial institutions, money-market funds, short-term deposits) and short-term investments are subject to low market risk. Cash balances, short-term deposits and short-term investments are measured at amortised cost. Money market funds are measured at fair value, with movements in fair value recognised in the income statement as a profit or loss (FVPL).
- Derivatives and unlisted investments are measured at FVPL. During the year, the Company elected to measure its listed investment at FVOCI.
- Financial liabilities primarily consist of trade payables, borrowings, derivatives, financial RRSAs and C Shares.
- Derivatives are classified and measured at FVPL.
- All other financial liabilities are classified and measured at amortised cost.

Financial instruments – Impairment of financial assets and contract assets

IFRS 9 *Financial Instruments* sets out the basis for the accounting of expected credit losses (ECLs) on financial assets and contract assets resulting from transactions within the scope of IFRS 15 *Revenue from Contracts with Customers*. The Group has adopted the simplified approach to provide for ECLs, measuring the loss allowance at a probability weighted amount that considers reasonable and supportable information about past events, current conditions and forecasts of future economic conditions of customers. These are incorporated in the simplified model adopted by using credit ratings which are publicly available, or through internal risk assessments derived using the customer's latest available financial information. The ECLs are updated at each reporting date to reflect changes in credit risk since initial recognition. ECLs are calculated for all financial assets in scope, regardless of whether or not they are overdue.

Financial instruments – Hedge accounting

Forward foreign exchange contracts and commodity swaps (derivative financial instruments) are held to manage the cash flow exposures of forecast transactions denominated in foreign currencies or in commodities respectively. Derivative financial instruments qualify for hedge accounting when: (i) there is a formal designation and documentation of the hedging relationship and the Group's risk management objective and strategy for undertaking the hedge at the inception of the hedge; and (ii) the hedge is expected to be effective.

In general, the Group has chosen to not apply hedge accounting in respect of these exposures. Prior to its acquisition in 2017, ITP Aero adopted hedge accounting for its equivalent exposures. It has continued to do so, although the value of the derivatives is not significant relative to those held by the rest of the Group and are now classified as held for sale.

The Group economically hedges the fair value and cash flow exposures of its borrowings. Cross-currency interest rate swaps are held to manage the fair value or cash flow exposures of borrowings denominated in foreign currencies and are designated as fair value hedges or cash flow hedges as appropriate. Interest rate swaps are held to manage the interest rate exposures of fixed and floating rate borrowings and may be designated as fair value hedges or cash flow hedges as appropriate. If the swaps are not designated as fair value or cash flow hedges, the economic effect is included in the underlying results – see note 2.

Changes in the fair values of derivatives that are designated as fair value hedges are recognised directly in the income statement. The fair value changes of effective cash flow hedge derivatives are recognised in OCI and subsequently recycled in the income statement in the same period or periods during which the hedged cash flows affect profit or loss. Any ineffectiveness in the hedging relationship is included in the income statement.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, exercised, or no longer qualifies for hedge accounting. At that time, for cash flow hedges and, if the forecast transaction remains probable, any cumulative gain or loss on the hedging instrument recognised in SOCIE is retained until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss is recycled to the income statement.

Financial instruments – Replacement of benchmark interest rates

In August 2020, Phase 2 of IBOR reform was published, effective from 1 January 2021. The amendments address issues that arise from the implementation of the reforms including the replacement of one benchmark with an alternative one. The Phase 2 amendments provide additional temporary reliefs from applying specific IAS 39 *Financial Instruments: Recognition and Measurement* and IFRS 9: *Financial Instruments* hedge accounting requirements to hedging relationships directly affected by IBOR reform.

During 2021, the Group carried out an IBOR reform transition project to assess and implement changes to systems, processes, risk and valuation models, as well as managing related tax and accounting implications. The Group's risk exposure that is directly affected by the interest rate benchmark reform is its portfolio of long-term borrowings of £6.1bn and a number of its foreign exchange contracts. The borrowings are hedged, using interest rate swaps and cross-currency interest rate swaps, for changes in fair value and cash flows attributable to the relevant benchmark interest rate. The Group has made amendments to the contractual terms of IBOR-referenced floating-rate debt, swaps and foreign exchange contracts, and updated the relevant hedge designations.

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 2021 financial statements. These contracts will be amended in due course.

1 ACCOUNTING POLICIES – CONTINUED

Business combinations and goodwill

Goodwill recognised represents the excess of the fair value of the purchase consideration over the fair value to the Group of the net of the identifiable assets acquired and the liabilities assumed. On transition to IFRS on 1 January 2004, business combinations were not retrospectively adjusted to comply with UK-adopted International Accounting Standards and goodwill was recognised based on the carrying value under the previous accounting policies. Goodwill in respect of the acquisition of a subsidiary is recognised as an intangible asset. Goodwill arising on the acquisition of joint arrangements and associates is included in the carrying value of the investment.

Customer relationships

The fair value of customer relationships recognised as a result of a business combination relate to the acquired company's established relationships with its existing customers that result in repeat purchases and customer loyalty. Amortisation is charged on a straight-line basis over its useful economic life, up to a maximum of 15 years.

Certification costs

Costs incurred in respect of meeting regulatory certification requirements for new Civil Aerospace aero-engine/aircraft combinations, including payments made to airframe manufacturers for this, are recognised as intangible assets to the extent that they can be recovered out of future sales. They are charged to the income statement over the programme life. Individual programme assets are allocated pro rata to the estimated number of units to be produced. Amortisation commences as each unit is delivered and then charged on a 15-year straight-line basis.

Research and development

Expenditure incurred on research and development is distinguished as relating either to a research phase or to a development phase. All research phase expenditure is charged to the income statement. Development expenditure is recognised as an internally generated intangible asset (programme asset) only if it meets strict criteria, relating in particular to technical feasibility and generation of future economic benefits. More specifically, development costs are capitalised from the point at which the following conditions have been met:

- the technical feasibility of completing the programme and the intention and ability (availability of technical, financial and other resources) to complete the programme asset and use or sell it;
- the probability that future economic benefits will flow from the programme asset; and
- the ability to measure reliably the expenditure attributable to the programme asset during its development.

Capitalisation continues until the point at which the programme asset meets its originally contracted technical specification (defined internally as the point at which the asset is capable of operating in the manner intended by management).

Subsequent expenditure is capitalised where it enhances the functionality of the programme asset and demonstrably generates an enhanced economic benefit to the Group. All other subsequent expenditure on programme assets is expensed as incurred.

Individual programme assets are allocated pro rata to the estimated number of units to be produced. Amortisation commences as each unit is delivered and then charged on a 15-year straight-line basis. In accordance with IAS 38 *Intangible Assets*, the basis on which programme assets are amortised is assessed annually.

Key judgement – Determination of the point in time when costs incurred on an internal programme development meet the criteria for capitalisation

The Group incurs significant research and development expenditure in respect of various development programmes. Determining when capitalisation should commence and cease is a critical judgement, as is the determination of when subsequent expenditure on the programme assets should be capitalised. During the year, £104m of development expenditure was capitalised.

Within the Group, there is an established Product Introduction and Lifecycle Management process (PILM) in place. Within this process, the technical feasibility, the commercial viability and financial assessment of the programme is assessed at certain milestones. When these are met, development expenditure is capitalised. Prior to this, expenditure is expensed as incurred.

The Group continues to invest in new technologies as a result of its decarbonisation commitments. As these are new technologies, there is a higher level of uncertainty over potential outcomes and therefore, this could impact the level of expenditure that is capitalised or recognised in the income statement in future years.

Subsequent expenditure after entry into service which enhances the performance of the engine and the economic benefits to the Group is capitalised. This expenditure is referred to as enhanced performance and is governed by the PILM process referred to above. All other development costs are expensed as incurred.

Key judgement – Determination of the basis for amortising capitalised development costs

The economic benefits of the development costs are primarily those cash inflows arising from long-term service agreements, which are expected to be relatively consistent for each engine within a programme. Amortisation of development costs is recognised on a straight-line basis over the estimated period of operation of the engine by its initial operator.

Software

Software that is not specific to an item of property, plant and equipment is classified as an intangible asset, recognised at its acquisition cost and amortised on a straight-line basis over its useful economic life, up to a maximum of five years. The cost of internally developed software includes direct labour and an appropriate proportion of overheads.

1 ACCOUNTING POLICIES – CONTINUED

Other intangible assets
These principally include intangible assets arising on acquisition of businesses, such as technology, patents and licences which are amortised on a straight-line basis over a maximum of 15 years and trademarks which are not amortised.

Property, plant and equipment
Property, plant and equipment are stated at acquisition cost less accumulated depreciation and any provision for impairment in value. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate proportion of overheads and, where appropriate, interest.

Depreciation is provided on a straight-line basis to write off the cost, less the estimated residual value, of property, plant and equipment over their estimated useful lives. No depreciation is recorded on assets in the course of construction. Estimated useful lives are reassessed annually and are as follows:

- Land and buildings, as advised by the Group's professional advisers:
  - freehold buildings – five to 50 years (average 25 years); and
  - no depreciation is provided on freehold land.
- Plant and equipment – two to 25 years (average 11 years).
- Aircraft and engines – five to 20 years (average 16 years).

Leases
Assets and liabilities arising from a lease are initially measured on a present value basis.

Lease liabilities include the net present value of the following lease payments:

- fixed payments less any lease incentive receivable;
- variable lease payments that are based on an index or a rate;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option; and
- payments of penalties for termination of the lease, if the lease term reflects the Group exercising that option.

Where leases commenced after the initial IFRS 16 *Leases* transition date, the lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the Group's incremental borrowing rate is used, being the rate that the Group would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions. Where appropriate, lease liabilities are revalued at each reporting date using the spot exchange rate.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability or a revaluation of the liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs; and
- restoration costs.

Each right-of-use asset is depreciated over the shorter of its useful economic life and the lease term on a straight-line basis unless the lease is expected to transfer ownership of the underlying asset to the Group, in which case the asset is depreciated to the end of the useful life of the asset.

Short-term leases are leases with a lease term of 12 months or less. Payments associated with short-term leases and low-value leases are recognised on a straight-line basis as an expense in the income statement.

Key judgement – Determination of lease term
In determining the lease term, the Group considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated). Certain land and building leases have renewal options with renewal dates for the most significant property leases evenly spread between 2022–2028 and in 2041. The Group reviews its judgements on lease terms annually, including the operational significance of the site, especially where utilised for manufacturing activities.

Key estimates – Estimates of the payments required to meet residual value guarantees at the end of engine leases
Engine leases in the Civil Aerospace segment often include clauses that require the engines to be returned to the lessor with specific levels of usable life remaining or cash payments to the lessor. The costs of meeting these requirements are included in the lease payments. The amounts payable are calculated based upon an estimate of the utilisation of the engines over the lease term, whether the engine is restored to the required condition by performing an overhaul at our own cost or through the payments of amounts specified in the contract and any new contractual arrangements arising when the current lease contracts end. Amounts due can vary depending on the level of utilisation of the engines, overhaul activity prior to the end of the contract, and decisions taken on whether ongoing access to the assets is required at the end of the lease term. During the year, adjustments to return conditions at the end of leases resulted in a credit of £4m to the income statement. The lease liability at 31 December 2021 included £412m relating to the cost of meeting these residual value guarantees in the Civil Aerospace business. Up to £76m is payable in the next 12 months, £75m is due over the following four years and the remaining balance after five years.

1 ACCOUNTING POLICIES – CONTINUED

Impairment of non-current assets

Impairment of non-current assets is considered in accordance with IAS 36 *Impairment of Assets*. Where the asset does not generate cash flows that are independent of other assets, impairment is considered for the cash-generating unit (CGU) to which the asset belongs. Goodwill, indefinite life intangible assets and intangible assets not yet available for use are tested for impairment annually. Other intangible assets (including programme-related intangible assets), property, plant and equipment and investments are assessed for any indications of impairment annually. If any indication of impairment is identified, an impairment test is performed to estimate the recoverable amount.

If the recoverable amount of an asset (or CGU) is estimated to be below the carrying value, the carrying value is reduced to the recoverable amount and the impairment loss is recognised as an expense. The recoverable amount is the higher of value in use or fair value less costs of disposal, if this is readily available. The value in use is the present value of future cash flows using a pre-tax discount rate that reflects the time value of money and the risk specific to the asset (or CGU). The relevant local statutory tax rates have been applied in calculating post-tax to pre-tax discount rates.

Key judgement – Determination of CGUs for assessing impairment of goodwill
The Group conducts impairment reviews at the CGU level. As permitted by IAS 36, impairment reviews for goodwill are performed at the groups of CGUs level, representing the lowest level at which the Group monitors goodwill for internal management purposes and no higher than the Group's operating segments. The main CGUs for which goodwill impairment reviews have been performed are Rolls-Royce Deutschland Ltd & Co KG and at an aggregated Rolls-Royce Power Systems AG level.

Key estimate – Estimates of cash flow forecasts to support the carrying value of intangible assets (including programme-related intangible assets)
The assessment of the recoverable value of development expenditure, certification costs, and customer relationships recognised as intangible assets (31 December 2021: £2,274m, 2020: £3,220m) is dependent on estimates of cash flows generated by the relevant programme, the discount rate used to calculate a present value and assumptions on foreign exchange rates. The estimates of cash flows generated by a programme comprise: future market share; product performance related estimates (including EFHs and time-on-wing); pricing and cost for uncontracted business; assumptions over the recovery from COVID-19 of the industries in which we operate; and climate-related matters including assessment of future contractual terms with suppliers and customers in relation to the cost of carbon (with details set out in notes 1 and 9).

A weaker than expected recovery from the impacts of COVID-19 or a reduction in OE volumes, for example due to reduced customer demand and an increase in costs as a result of climate change, could result in a deterioration in future cash flow forecasts.

- The Group has considered whether a 10% reduction in OE quantities or a 5% deterioration in EFHs (and hence future cash flows) on the business aviation programme assets that have previously been subject to impairment would lead to an additional impairment and concluded that it would not.
- For programmes that have not previously been impaired, but where there is existing headroom that could be significantly reduced over the next 12 months, the Group has considered whether an increase in costs of up to 10% would lead to an additional impairment and concluded that it would not.

Inventories

Inventories are valued on a first-in, first-out basis, at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those direct and indirect overheads, including depreciation of property, plant and equipment, that have been incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling prices less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. All inventories are classified as current as it is expected that they will be used in the Group's operating cycle, regardless of whether this is expected to be within 12 months of the balance sheet date.

Cash and cash equivalents

Cash and cash equivalents include cash at bank and in hand, investments in money-market funds and short-term deposits with a maturity of three months or less on inception. The Group considers overdrafts (repayable on demand) to be an integral part of its cash management activities and these are included in cash and cash equivalents for the purposes of the cash flow statement. Where the Group operates pooled banking arrangements across multiple accounts, these are presented on a net basis when it has both a legal right and intention to settle the balances on a net basis.

The Group offers a supply chain financing (SCF) programme in partnership with banks to enable suppliers, including joint ventures, who are on our standard 75 day or more payment terms to receive their payment sooner. The election to utilise the programme is the sole decision of the supplier. As the Group continues to have a contractual obligation to pay its suppliers under commercial terms which are unaffected by any utilisation of the programme, and it does not retain any ongoing involvement in the SCF, the related payables are retained on the Group's balance sheet and classified as trade payables. Further details are disclosed in note 19.

1 ACCOUNTING POLICIES – CONTINUED

Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, and it is probable that the Group will be required to settle that obligation. Provisions are discounted to present value where the effect is material.

The principal provisions are recognised as follows:

- Trent 1000 in-service issues when wastage costs are identified as described on page 122;
- contract losses based on an assessment of whether the direct costs to fulfil a contract are greater than the expected revenue;
- warranties and guarantees based on an assessment of future claims with reference to past experience and recognised at the earlier of when the underlying products and services are sold and when the likelihood of a future cost is identified; and
- restructuring when the Group has approved a detailed and formal restructuring plan, and the restructuring has either commenced or has created a valid expectation to those affected.

Key judgement – Whether any costs should be treated as wastage
As described further on page 122, in rare circumstances, the Group may incur costs of wasted material, labour or other resources to fulfil a contract where the level of cost was not reflected in the contract price. The identification of such costs is a matter of judgement and would only be expected to arise where there has been a series of abnormal events which give rise to a significant level of cost of a nature that the Group would not expect to incur and hence is not reflected in the contract price. Provision is made for any costs identified as wastage when the obligation to incur them arises.

Specifically for the Trent 1000 wastage costs, provision has been made as the Group is an owner of an engine Type Certificate under which it has a present obligation to develop appropriate design changes to address certain engine conditions that have been noted in issued Airworthiness Directives. The Group is also required to ensure engine operators can continue to safely operate engines within the terms of their LTSAs, and this requires the engines to be compliant with the requirements of those issued Airworthiness Directives. These requirements cannot be met without the Group incurring significant costs in the form of replacement parts and customer claims. Given the significant activities of the Group in designing and overhauling aero engines it is very experienced in making the required estimates in relation to the number and timing of shop visits, parts costs, overhaul labour costs and customer claims.

Key estimates – Estimates of the time to resolve the technical issues on the Trent 1000, including the development of the modified HPT blade and estimates of the expenditure required to settle the obligation relating to Trent 1000 claims and to settle Trent 1000 long-term contracts assessed as onerous
The Group has provisions for Trent 1000 exceptional costs at 31 December 2021 of £157m (2020: £321m). These represent the Directors' best estimate of the expenditure required to settle the obligations at the balance sheet date. These estimates take account of information available and different possible outcomes.

The Group considers that at 31 December 2021 the Trent 1000 contract loss provisions and the Trent 1000 exceptional cost provision are most sensitive to changes in estimates. A 12-month delay in the availability of the modified HPT blade could lead to around a £60–100m increase in the Trent 1000 exceptional costs provision.

Key estimates – Estimates of the future revenues and costs to fulfil onerous contracts
The Group has provisions for onerous contracts at 31 December 2021 of £845m (2020: £808m).

An increase in Civil Aerospace widebody estimates of LTSA costs of 1% over the remaining term of the contracts could lead to around a £100–120m increase in the provision for contract losses across all programmes.

Post-retirement benefits

Pensions and similar benefits (principally healthcare) are accounted for under IAS 19 *Employee Benefits*.

For defined benefit plans, obligations are measured at discounted present value, using a discount rate derived from high-quality corporate bonds denominated in the currency of the plan, whilst plan assets are recorded at fair value. Surpluses in schemes are recognised as assets only if they represent economic benefits available to the Group in the future. Actuarial gains and losses are recognised immediately in OCI. The service and financing costs of such plans are recognised separately in the income statement:

- current service costs are spread systematically over the lives of employees;
- past-service costs and settlements are recognised immediately; and
- financing costs are recognised in the periods in which they arise.

UK pension obligations include the estimated impact of the obligation to equalise defined benefit pensions and transfer values for men and women – see note 22.

Payments to defined contribution schemes are charged as an expense as they fall due.

1 ACCOUNTING POLICIES – CONTINUED

Key estimate – Estimates of the assumptions for valuing the defined benefit obligation
The Group's defined benefit pension schemes and similar arrangements are assessed annually in accordance with IAS 19. The valuations, which are based on assumptions determined with independent actuarial advice, resulted in a net deficit of £225m before deferred taxation being recognised on the balance sheet at 31 December 2021 (2020: deficit of £686m). The size of the net surplus/deficit is sensitive to the actuarial assumptions, which include the discount rate, price inflation, pension and salary increases, longevity and, in the UK, the number of plan members who take the option to transfer their pension to a lump sum on retirement or who choose to take the Bridging Pension Option. Following consultation, the UK scheme closed to future accrual on 31 December 2020 and following conclusion on the final protections agreed in the year to 31 December 2021, the Group has trued up the estimate recognised at 31 December 2020.

A reduction in the discount rate of 0.25% from 1.90% could lead to an increase in the defined benefit obligations of the RR UK Pension Fund of approximately £460m. 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.

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 £365m.

It is assumed that 50% of employed deferred and 40% of deferred (2020: 40%) of members of the RR UK Pension Fund will transfer out of the fund on retirement. The change in this assumption is a result of actual experience. An increase of 5% in this assumption would increase the defined benefit obligation by £30m.

Further details and sensitivities are included in note 22.

Share-based payments
The Group provides share-based payment arrangements to certain employees. These are principally equity-settled arrangements and are measured at fair value (excluding the effect of non-market based vesting conditions) at the date of grant. The fair value is expensed on a straight-line basis over the vesting period. The amount recognised as an expense is adjusted to reflect the actual number of shares or options that will vest, except where additional shares vest as a result of the total shareholder return (TSR) performance condition in the long-term incentive plan (LTIP), where no adjustment is required as allowance for this is included in the initial fair value.

Cash-settled share options (grants in the International ShareSave plan) are measured at fair value at the balance sheet date. The Group recognises a liability at the balance sheet date based on these fair values, taking into account the estimated number of options that will actually vest and the relative completion of the vesting period. Changes in the value of this liability are recognised in the income statement for the year.

The cost of shares of Rolls-Royce Holdings plc held by the Group for the purpose of fulfilling obligations in respect of employee share plans is deducted from equity in the consolidated balance sheet. See note 24 for a further description of the share-based payment plans.

Customer financing support
In connection with the sale of its products the Group will, on occasion, provide financing support for its customers. These arrangements fall into two categories: credit-based guarantees and asset-value guarantees. Credit-based guarantees are disclosed as commitments or contingent liabilities dependent on whether aircraft have been delivered or not. The Group considers asset-value guarantees to be non-financial liabilities and provides for amounts required. As described on page 171, the Directors consider the likelihood of crystallisation in assessing whether provision is required for any contingent liabilities.

The Group's contingent liabilities relating to financing arrangements are spread over many years and relate to a number of customers and a broad product portfolio and are reported on a discounted basis.

Costs of share issues
The costs of issuing ordinary shares are charged to the share premium account.

1 ACCOUNTING POLICIES – CONTINUED

Revisions to IFRS not applicable in 2021

Standards and interpretations issued by the IASB are only applicable if endorsed by the UK. Other than IFRS 17 *Insurance Contracts* and Amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* – Onerous Contracts described below, the Group does not consider that any standards, amendments or interpretations issued by the IASB, but not yet applicable will have a significant impact on the Consolidated Financial Statements.

The Group is not expecting to adopt the amendment to IFRS 16 *Leases*, effective in 2022, which provides a practical expedient to not treat COVID-19 rent concessions as lease modifications. The Group did not adopt the equivalent practical expedient during 2021.

IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*

Amendments to IAS 37 for Onerous Contracts – Cost of Fulfilling a Contract is effective from 1 January 2022. It 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 an allocation of other costs that relate directly to fulfilling contracts (for example, an allocation of the depreciation charge for an item of PP&E used to fulfil the contract). The Group has assessed the impact of this amendment on its contracts (of which the most significant onerous contracts are in Civil Aerospace) and the inclusion of additional allocated costs is expected to increase the total contract loss provision by £0.7bn to £0.8bn. As required by the transition arrangements in relation to the amendment, there will be a corresponding impact to 2022 opening retained earnings.

IFRS 17 *Insurance Contracts*

IFRS 17 is effective from 1 January 2023. The new Standard establishes 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 Consolidated Financial Statements will continue during 2022.

Post balance sheet events

The Group has taken the latest legal position in relation to any ongoing legal proceedings and reflected these in the 2021 results as appropriate. In addition, the Group completed the sale of its 23.1% shareholding in AirTanker Holdings Limited to Equitix Investment Management Limited on 9 February 2022. Further details are included in note 27.

2 SEGMENTAL ANALYSIS

The analysis by business segment is presented in accordance with IFRS 8 *Operating Segments*, on the basis of those segments whose operating results are regularly reviewed by the Board (who acts as the Chief Operating Decision Maker as defined by IFRS 8). The Group's four 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

For the year ended 31 December 2020, Civil Aerospace, Power Systems, Defence and ITP Aero were identified as core businesses, with other smaller businesses identified as non-core businesses. From 1 January 2021, the identification of core and non-core businesses has ceased with non-core businesses now included within the category of 'Other businesses'. The figures in the segmental analysis are shown in total to include the Group's four divisions and Other businesses.

Other businesses include the trading results of the Bergen Engines AS business until the date of disposal on 31 December 2021, the results of the Civil Nuclear Instrumentation & Control business until the date of disposal on 5 November 2021, the results of the North America Civil Nuclear business until the date of disposal on 31 January 2020 and the results of the Knowledge Management System business until the date of disposal on 3 February 2020. The trading results of the UK Civil Nuclear business have also been included in Other businesses. The segmental analysis for 2020 has been restated to reflect the 2021 definition of Other businesses.

During the year to 31 December 2021, activity previously managed as part of the Civil Aerospace segment has been transferred to ITP Aero. The activity transferred from Civil Aerospace to ITP Aero relates to the change in ownership of the Hucknall site with associated fabrications activities. This transfers the production of fabrications, combustors and fan outlet guide vanes manufactured in Hucknall from Civil Aerospace to ITP Aero. To ensure comparability, the segmental analysis for 2020 has been restated to reflect this transfer. ITP has been classified as a disposal group held for sale and discontinued operations 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 2020 has been restated to reflect the 2021 assessment of operating segments.

2 SEGMENTAL ANALYSIS – CONTINUED

During 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 Civil Aerospace, Defence, Power Systems and Corporate and Inter-segment. The segmental analysis for 2020 has been restated to reflect the 2021 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 first half of the year, the Group was a net purchaser of USD, with the consequence that the achieved exchange rate GBP:USD of 1.39 on settled contracts was similar to the average spot rate in the period. In the second half of 2021, the Group was a net seller of USD, at an achieved exchange rate GBP:USD of 1.59 based on the USD hedge book.

Estimates of future USD cash flows have been determined using the Group's base-case forecast. These USD cash flows have been used to establish the extent of future USD hedge requirements. In 2020, the Group took action to reduce the size of the USD hedge book by $11.8bn across 2020-2026, resulting in an underlying charge of £1.7bn being recognised within underlying finance costs and the associated cash settlement costs occurring over the period 2020-2026. In the year to 31 December 2021, the Group took the opportunity to further reduce the size of the USD hedge book by an additional $2bn by settling the mark-to-market at £1m cost. 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 year to 31 December 2021, cash settlement costs of £452m were incurred (2020: £202m).

Underlying performance excludes the following:

- the effect of acquisition accounting and business disposals;
- impairment of goodwill, other non-current and current assets where the reasons for the impairment are outside of normal operating activities;
- exceptional items; and
- certain other items which are market driven and outside of the control of management.

Acquisition accounting, business disposals and impairment

We exclude these from underlying results so that the current year and comparative results are directly comparable.

Exceptional items

Items are classified as exceptional where the Directors believe that presentation of the results in this way is useful in providing an understanding of the Group's financial performance. Exceptional items are identified by virtue of their size, nature or incidence.

In determining whether an event or transaction is exceptional, the Directors considers 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.

2 SEGMENTAL ANALYSIS – CONTINUED

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.

Penalties paid on agreements with investigating bodies are considered to be one-off in nature and are therefore excluded from underlying 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 137 for the reconciliation between underlying performance and reported performance.

The following analysis sets out the results of the Group's businesses on the basis described above and also includes a reconciliation of the underlying results to those reported in the consolidated income statement.

	Civil Aerospace [1,2] £m	Defence [2] £m	Power Systems [2] £m	New Markets [2] £m	Other businesses £m	Corporate and Inter-segment [2] £m	Total Underlying £m
Year ended 31 December 2021							
Underlying revenue from sale of original equipment	1,612	1,411	1,744	–	155	(11)	4,911
Underlying revenue from aftermarket services	2,924	1,957	1,005	2	148	–	6,036
Total underlying revenue	4,536	3,368	2,749	2	303	(11)	10,947
Gross profit/(loss)	474	721	778	1	32	(10)	1,996
Commercial and administrative costs	(297)	(161)	(383)	(3)	(20)	(35)	(899)
Research and development costs	(434)	(105)	(157)	(68)	(10)	–	(774)
Share of results of joint ventures and associates	85	2	4	–	–	–	91
Underlying operating (loss)/profit	(172)	457	242	(70)	2	(45)	414
Year ended 31 December 2020							
Underlying revenue from sale of original equipment	2,278	1,428	1,787	3	136	(6)	5,626
Underlying revenue from aftermarket services	2,790	1,927	948	2	137	–	5,804
Total underlying revenue	5,068	3,355	2,735	5	273	(6)	11,430
Gross (loss)/profit	(1,987)	684	678	2	15	(5)	(613)
Commercial and administrative costs	(310)	(146)	(331)	(1)	(26)	(52)	(866)
Research and development costs	(407)	(86)	(160)	(46)	(9)	–	(708)
Share of results of joint ventures and associates	169	9	1	–	–	–	179
Underlying operating (loss)/profit	(2,535)	461	188	(45)	(20)	(57)	(2,008)

1 The underlying results for Civil Aerospace for 31 December 2020 have been restated to reflect the changes to activity during 2021 due to the transfer of the Hucknall site and associated fabrications activities to ITP Aero.

2 The underlying results of Civil Aerospace, Defence, Power Systems and Corporate and Inter-segment activities for 31 December 2020 have been restated to reclassify the results of the Group's SMR and electrical activities as New Markets.

2 SEGMENTAL ANALYSIS – CONTINUED

Reconciliation to statutory results

	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group statutory results £m
Year ended 31 December 2021			
Continuing operations			
Revenue from sale of original equipment	4,911	152	5,063
Revenue from aftermarket services	6,036	119	6,155
Total revenue	10,947	271	11,218
Gross profit	1,996	140	2,136
Commercial and administrative costs	(899)	9	(890)
Research and development costs	(774)	(4)	(778)
Share of results of joint ventures and associates	91	(46)	45
Operating profit	414	99	513
Gain arising on the acquisition and disposal of businesses	–	56	56
Profit before financing and taxation	414	155	569
Net financing	(378)	(485)	(863)
Profit/(loss) before taxation	36	(330)	(294)
Taxation	(26)	444	418
Profit for the year from continuing operations	10	114	124
Discontinued operations [1]	51	(54)	(3)
Profit for the year	61	60	121
Attributable to:			
Ordinary shareholders	60	60	120
Non-controlling interests	1	–	1
Year ended 31 December 2020			
Continuing operations			
Revenue from sale of original equipment	5,626	(68)	5,558
Revenue from aftermarket services	5,804	129	5,933
Total revenue	11,430	61	11,491
Gross (loss)/profit	(613)	426	(187)
Commercial and administrative costs	(866)	95	(771)
Research and development costs	(708)	(496)	(1,204)
Share of results of joint ventures and associates	179	11	190
Operating (loss)/profit	(2,008)	36	(1,972)
Loss arising on the disposal of businesses	–	(14)	(14)
(Loss)/profit before financing and taxation	(2,008)	22	(1,986)
Net financing	(1,985)	1,172	(813)
(Loss)/profit before taxation	(3,993)	1,194	(2,799)
Taxation	(46)	(256)	(302)
(Loss)/profit for the year from continuing operations	(4,039)	938	(3,101)
Discontinued operations [1]	42	(110)	(68)
(Loss)/profit for the year	(3,997)	828	(3,169)
Attributable to:			
Ordinary shareholders	(3,998)	828	(3,170)
Non-controlling interests	1	–	1

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

2 SEGMENTAL ANALYSIS – CONTINUED

Disaggregation of revenue from contracts with customers
Analysis by type and basis of recognition

	Civil Aerospace [1,2] £m	Defence [2] £m	Power Systems [2] £m	New Markets [2] £m	Other businesses £m	Corporate and Inter-segment [2] £m	Total Underlying £m
Year ended 31 December 2021							
Original equipment recognised at a point in time	1,612	604	1,720	–	142	(11)	4,067
Original equipment recognised over time	–	807	24	–	13	–	844
Aftermarket services recognised at a point in time	629	825	871	2	148	–	2,475
Aftermarket services recognised over time	2,223	1,132	134	–	–	–	3,489
Total underlying customer contract revenue [3]	4,464	3,368	2,749	2	303	(11)	10,875
Other underlying revenue	72	–	–	–	–	–	72
Total underlying revenue	4,536	3,368	2,749	2	303	(11)	10,947
Year ended 31 December 2020							
Original equipment recognised at a point in time	2,278	522	1,769	3	120	(6)	4,686
Original equipment recognised over time	–	905	17	–	16	–	938
Aftermarket services recognised at a point in time	1,168	794	824	2	136	–	2,924
Aftermarket services recognised over time	1,398	1,132	124	–	1	–	2,655
Total underlying customer contract revenue [3]	4,844	3,353	2,734	5	273	(6)	11,203
Other underlying revenue	224	2	1	–	–	–	227
Total underlying revenue	5,068	3,355	2,735	5	273	(6)	11,430

1 The underlying results for Civil Aerospace for 31 December 2020 have been restated to reflect the changes to activity during 2021 due to the transfer of the Hucknall site and associated fabrications activities to ITP Aero.
2 The underlying results of Civil Aerospace, Defence, Power Systems and Corporate and Inter-segment activities for 31 December 2020 have been restated to reclassify the results of the Group's SMR and electrical activities as New Markets.
3 Includes £159m, of which £214m relates to Civil LTSA contracts, (2020: £(1,048)m, of which £(1,061)m relates to Civil LTSA contracts) of revenue recognised in the year relating to performance obligations satisfied in previous years.

	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group statutory results £m
Year ended 31 December 2021			
Original equipment recognised at a point in time	4,067	152	4,219
Original equipment recognised over time	844	–	844
Aftermarket services recognised at a point in time	2,475	38	2,513
Aftermarket services recognised over time	3,489	75	3,564
Total customer contract revenue	10,875	265	11,140
Other revenue	72	6	78
Total revenue [1]	10,947	271	11,218
Year ended 31 December 2020			
Original equipment recognised at a point in time	4,686	(63)	4,623
Original equipment recognised over time	938	(6)	932
Aftermarket services recognised at a point in time	2,924	53	2,977
Aftermarket services recognised over time	2,655	110	2,765
Total customer contract revenue	11,203	94	11,297
Other revenue	227	(33)	194
Total revenue [1]	11,430	61	11,491

1 During the year to 31 December 2021, revenue recognised within Civil Aerospace, Defence and Power Systems of £1,634m (2020: 1,701m) was received from a single customer.

2 SEGMENTAL ANALYSIS – CONTINUED

Analysis by geographical destination

The Group's revenue by destination of the ultimate operator is as follows:

	2021 £m	Restated 2020 £m
United Kingdom	1,497	1,132
Germany	737	807
Switzerland	164	258
Spain	106	281
France	332	224
Italy	187	185
Russia	170	102
Norway	146	110
Rest of Europe	610	730
Europe	3,949	3,829
United States	3,525	3,647
Canada	235	292
North America	3,760	3,939
South America	170	128
Central America	76	64
Saudi Arabia	271	353
Rest of Middle East	364	546
Middle East	635	899
China	1,245	1,058
Singapore	105	366
Japan	233	350
South Korea	137	130
India	140	77
Rest of Asia	359	101
Asia	2,219	2,082
Africa	213	257
Australasia	196	291
Other	–	2
	11,218	11,491

Order backlog

Contracted consideration, translated at the estimated long term exchange rates, that is expected to be recognised as revenue when performance obligations are satisfied in the future (referred to as order backlog) is as follows:

	2021			Restated 2020		
	Within five years £bn	After five years £bn	Total [1] £bn	Within five years £bn	After five years £bn	Total [1] £bn
Civil Aerospace	20.3	20.8	41.1	17.6	24.8	42.4
Defence	6.2	0.3	6.5	7.1	0.4	7.5
Power Systems	2.6	0.2	2.8	2.2	0.2	2.4
Other businesses	0.2	–	0.2	0.6	–	0.6
	29.3	21.3	50.6	27.5	25.4	52.9

[1] There is no order backlog attributable to New Markets.

The parties to these contracts have approved the contract and our customers do not have a unilateral enforceable right to terminate the contract without compensation. The Group excludes Civil Aerospace OE orders (for deliveries beyond the next 7-12 months) that our customers have placed where they retain a right to cancel. Our expectation based on historical experience is that these orders will be fulfilled. Within the 0-5 years category, contracted revenue in: Defence will largely be recognised in the next three years and Power Systems will be recognised over the next two years as it is a short cycle business.

2 SEGMENTAL ANALYSIS – CONTINUED

Underlying adjustments

		2021				Restated 2020			
		Revenue £m	Profit before financing £m	Net financing £m	Taxation[11] £m	Revenue £m	Loss before financing £m	Net financing £m	Taxation[11] £m
Underlying performance		10,947	414	(378)	(26)	11,430	(2,008)	(1,985)	(46)
Impact of settled derivative contracts on trading transactions [1]	A	271	(34)	62	33	61	995	(324)	(39)
Unrealised fair value changes on derivative contracts held for trading [2]	A	–	(6)	(618)	110	–	8	(85)	(182)
Unrealised net (gain)/losses on closing future over-hedged position [3]	A	–	–	(8)	–	–	–	1,503	(106)
Realised net (gain)/losses on closing over-hedged position [3]	A	–	–	(6)	–	–	–	202	(38)
Unrealised fair value change to derivative contracts held for financing [4]	A	–	–	79	(20)	–	–	(86)	–
Exceptional programme credits/(charges) [5]	B	–	105	–	(1)	–	620	(36)	–
Exceptional restructuring credit/(charge) [6]	B	–	45	–	1	–	(470)	–	32
Impairments [7]	C	–	9	–	–	–	(1,244)	–	258
Other write-offs	C	–	–	–	–	–	(92)	–	25
Effect of acquisition accounting [8]	C	–	(50)	–	12	–	(85)	–	23
Pension past-service credit [9]	B	–	47	–	(13)	–	308	–	(108)
Other	D	–	(17)	6	(37)	–	(4)	(2)	(7)
Included in operating profit/(loss)		271	99	(485)	85	61	36	1,172	(142)
Gains/(loss) arising on the acquisitions and disposals of businesses [10]	C	–	56	–	2	–	(14)	–	3
Impact of tax rate change		–	–	–	327	–	–	–	159
Re-recognition/(de-recognition) of deferred tax assets		–	–	–	30	–	–	–	(276)
Total underlying adjustments		271	155	(485)	444	61	22	1,172	(256)
Statutory performance per consolidated income statement		11,218	569	(863)	418	11,491	(1,986)	(813)	(302)

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 £271m (2020: increased by £61m) and reduced profit before financing and taxation by £34m (2020 restated: reduced loss by £995m). 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 year to 31 December 2021. In the year to 31 December 2021, the Group took the opportunity to further reduce the size of the USD hedge book by an additional $2bn resulting in a £1m charge to underlying finance costs. Further detail is provided in note 4.

4 Includes the losses on hedge ineffectiveness in the year of £1m (2020: losses of £11m) and net fair value gains of £80m (2020: losses of £75m) on any interest rate swaps not designated into hedging relationships for accounting purposes.

5 During the year to 31 December 2021, the estimated Trent 1000 abnormal wastage costs reduced by £105m following a reassessment of the number of engines impacted by these issues, with an associated reduction in expected contract losses. See note 21 for further details.

6 During the year to 31 December 2021, the Group recorded an exceptional restructuring credit of £45m (2020 restated: charge of £470m) which included a £138m provision release offset by £93m (2020: £116m) associated with initiatives to enable the restructuring which have been charged directly to the income statement. Further details are provided in note 21.

7 The Group has assessed the carrying value of its assets. Further details are provided in notes 9, 10 and 11.

8 The effect of acquisition accounting includes the amortisation of intangible assets arising on previous acquisitions.

9 The past service credit £47m comprises of; £7m has been recorded following the final details on the additional transitional protections agreed during the period; £4m as a result of transferring employment of 236 employees in anticipation of a business disposal; £4m from the updated scope of the fundamental restructuring programmes following a higher than expected rate of natural attrition; and £32m from remeasurement of the US defined benefit liability to remove spousal benefits not included in the plan benefits.

10 Gains/(losses) arising on the acquisitions and disposals of businesses are set out in note 27.

11 Appropriate rates of tax have been applied to adjustments made to profit/(loss) before tax in the table above. Adjustments which impact the UK tax loss have an effective tax rate of zero. See note 5 for more details. The total underlying adjustments in 2021 are a credit of £444m (2020: tax charge of £256m). The overall tax credit in 2021 includes £327m which arises on the re-measurement of UK deferred tax balances following the change in the UK tax rate from 19% to 25% and £30m re-recognition of deferred tax assets previously not recognised. The £159m tax credit in 2020 relates to the re-measurement of the UK deferred tax balances from 17% to 19%. In 2020 there is a tax charge of £276m relating to the derecognition of some of the deferred tax asset on UK losses previously recognised.

2 SEGMENTAL ANALYSIS – CONTINUED

Balance sheet analysis

Year ended 31 December 2021	Civil Aerospace [1,2] £m	Defence [2] £m	Power Systems [2] £m	New Markets [2] £m	Total reportable segments £m
Segment assets	15,846	2,766	3,531	90	22,233
Interests in joint ventures and associates	378	9	16	–	403
Segment liabilities	(20,745)	(2,635)	(1,503)	(33)	(24,916)
Net (liabilities)/assets	(4,521)	140	2,044	57	(2,280)
Investment in intangible assets, property, plant and equipment, right-of-use assets and joint ventures and associates	323	97	187	15	622
Depreciation, amortisation and impairment	660	117	177	4	958
Year ended 31 December 2020					
Segment assets	16,622	3,083	3,471	65	23,241
Interests in joint ventures and associates	363	19	11	–	393
Segment liabilities	(22,331)	(3,079)	(1,352)	(17)	(26,779)
Net (liabilities)/assets	(5,346)	23	2,130	48	(3,145)
Investment in intangible assets, property, plant and equipment, right-of-use assets and joint ventures and associates	774	121	179	3	1,077
Depreciation, amortisation and impairment	1,914	125	266	5	2,310

1 The financial position for Civil Aerospace for 31 December 2020 has been restated to reflect the transfer of activity during 2021 as described on page 131.
2 The financial positions of Civil Aerospace, Defence, Power Systems and Corporate and Inter-segment activities at 31 December 2020 have been restated to reclassify the results of the Group's SMR and electrical activities as New Markets.

Reconciliation to the balance sheet

	2021 £m	2020 £m
Total reportable segment assets excluding held for sale	22,233	23,241
Other businesses	14	21
Corporate and inter-segment	(2,255)	(3,112)
Interests in joint ventures and associates	403	393
ITP Aero prior to classification as held for sale	–	2,091
Assets held for sale [1]	2,028	288
Cash and cash equivalents and short-term investments	2,629	3,452
Fair value of swaps hedging fixed rate borrowings	135	293
Deferred and income tax assets	2,339	1,943
Post-retirement scheme surpluses	1,148	907
Total assets	28,674	29,517
Total reportable segment liabilities excluding held for sale	(24,916)	(26,779)
Other businesses	(11)	(10)
Corporate and inter-segment	2,139	3,261
ITP Aero prior to classification as held for sale	–	(1,036)
Liabilities associated with assets held for sale [1]	(723)	(228)
Borrowings and lease liabilities	(7,776)	(7,330)
Fair value of swaps hedging fixed rate borrowings	(98)	(42)
Deferred and income tax liabilities	(552)	(648)
Post-retirement scheme deficits	(1,373)	(1,580)
Total liabilities	(33,310)	(34,392)
Net liabilities	(4,636)	(4,875)

1 As 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 have been classified as held for sale. At 31 December 2020, Bergen Engines AS and Civil Nuclear Instrumentation and Control were classified as held for sale. For further details see note 27.

2 SEGMENTAL ANALYSIS – CONTINUED

The carrying amounts of the Group's non-current assets including investments but excluding financial instruments, deferred tax assets and post-employment benefit surpluses, by the geographical area in which the assets are located, are as follows:

	2021 £m	2020 £m
United Kingdom	5,489	5,823
Germany	2,086	2,269
Spain	38	1,267
United States	1,282	1,380
Other	706	739
	9,601	11,478

3 RESEARCH AND DEVELOPMENT

	2021 £m	Restated 2020 £m
Gross research and development costs	(1,179)	(1,225)
Contributions and fees [1]	366	353
Expenditure in the year	(813)	(872)
Capitalised as intangible assets	105	228
Amortisation and impairment of capitalised costs [2]	(70)	(560)
Net cost recognised in the income statement	(778)	(1,204)
Underlying adjustments relating to effects of acquisition accounting, impairment and foreign exchange [3]	4	496
Net underlying cost recognised in the income statement	(774)	(708)

[1] Includes government funding.
[2] See note 9 for analysis of amortisation and impairment. During the year, amortisation of £5m has been incurred within the disposal group recognised as a discontinued operation.
[3] During the year, no impairment of research and development was recorded. In the comparative period to 31 December 2020 (restated), impairment charges of £464m were recorded, relating to the financial and operational impact of COVID-19.

4 NET FINANCING

	2021 Per consolidated income statement £m	2021 Underlying financing [1] £m	Restated 2020 Per consolidated income statement £m	Restated 2020 Underlying financing [1] £m
Interest receivable	7	7	21	21
Net fair value gains on non-hedge accounted interest rate swaps [2]	80	–	–	–
Financial RRSAs – foreign exchange differences and changes in forecast payments	–	–	12	–
Net fair value gains on commodity contracts	63	–	–	–
Financing on post-retirement scheme surpluses	17	–	28	–
Net foreign exchange gains	62	–	–	–
Realised net gains on closing over-hedged position [3]	–	6	–	–
Unrealised net gains on closing over-hedged position [3]	–	8	–	–
Financing income	229	21	61	21
Interest payable	(252)	(262)	(178)	(175)
Net fair value losses on foreign currency contracts	(681)	–	(23)	–
Net fair value losses on non-hedge accounted interest rate swaps [2]	–	–	(75)	–
Unrealised net losses on closing future over-hedged position	–	–	–	(1,503)
Realised net losses on closing over-hedged position	–	–	–	(202)
Financial RRSAs – foreign exchange differences and changes in forecast payments	(7)	–	(20)	–
Financial charge relating to financial RRSAs	–	–	(3)	(8)
Net fair value losses on commodity contracts	–	–	(62)	–
Financing on post-retirement scheme deficits	(20)	–	(29)	–
Net foreign exchange losses	–	–	(324)	–
Fees paid on undrawn facilities	(62)	(62)	(97)	(97)
Other financing charges	(70)	(75)	(63)	(21)
Financing costs	(1,092)	(399)	(874)	(2,006)
Net financing costs	(863)	(378)	(813)	(1,985)
Analysed as:				
Net interest payable	(245)	(255)	(157)	(154)
Net fair value (losses)/gains on derivative contracts	(538)	14	(160)	(1,705)
Net post-retirement scheme financing	(3)	–	(1)	–
Net foreign exchange gains/(losses)	62	–	(324)	–
Net other financing	(139)	(137)	(171)	(126)
Net financing costs	(863)	(378)	(813)	(1,985)

1 See note 2 for definition of underlying results.

2 The consolidated income statement shows the net fair value gain/(loss) on any interest rate swaps not designated into hedging relationships for accounting purposes. Underlying financing reclassifies the fair value movements on these interest rates 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. In the year to 31 December 2021, the Group took the opportunity to further reduce the size of the USD hedge book by an additional $2bn resulting in a £1m charge to underlying finance costs. The cash settlement costs of £1,674m covers the period 2020 to 2026, £186m was incurred in 2020 and £452m was incurred in the year to 31 December 2021. The Group estimates that future cash outflows of £326m will be incurred in 2022 and £710m spread over 2023 to 2026.

5 TAXATION

(Credited)/charged in the income statement

	UK		Overseas		Total	
	2021 £m	Restated 2020 £m	2021 £m	Restated 2020 £m	2021 £m	Restated 2020 £m
Current tax charge for the year	17	12	151	162	168	174
Adjustments in respect of prior years	2	–	12	(27)	14	(27)
Current tax	19	12	163	135	182	147
Deferred tax (credit)/charge for the year	(173)	178	(59)	(327)	(232)	(149)
Adjustments in respect of prior years	(15)	(12)	(26)	42	(41)	30
Derecognition of deferred tax	–	433	–	–	–	433
Deferred tax credit resulting from increase in UK tax rates	(327)	(159)	–	–	(327)	(159)
Deferred tax	(515)	440	(85)	(285)	(600)	155
(Credited)/charged in the income statement	(496)	452	78	(150)	(418)	302

Other tax (charges)/credits

	OCI				Equity	
	Items that will not be reclassified		Items that may be reclassified			
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Deferred tax:						
Movement in post-retirement schemes	(79)	195	–	–	–	–
Cash flow hedge	–	–	(2)	(4)	–	–
Net investment hedge	–	–	(3)	2	–	–
Share-based payments – direct to equity	–	–	–	–	17	5
Other tax (charges)/credits	(79)	195	(5)	(2)	17	5

Tax reconciliation on continuing operations

	2021 £m	Restated 2020 £m
Loss before taxation from continuing operations	(294)	(2,799)
Less: share of results of joint ventures and associates (note 12)	(22)	(132)
Loss before taxation from continuing operations excluding joint ventures and associates	(316)	(2,931)
Nominal tax credit at UK corporation tax rate 19% (2020: 19%)	(60)	(557)
UK tax rate differential [1]	(33)	33
Overseas rate differences [2]	26	(59)
Impairments	–	21
R&D credits	(10)	(10)
Exempt gain on disposal of businesses [3]	(15)	–
Other permanent differences	13	9
Benefit to deferred tax from previously unrecognised tax losses and temporary differences	(47)	–
Tax losses and other temporary differences not recognised in deferred tax [4]	62	588
Derecognition of deferred tax [5]	–	433
Adjustments in respect of prior years	(27)	3
Increase in deferred taxes resulting from a change in the UK tax rate [6]	(327)	(159)
	(418)	302
Underlying items (note 2)	26	46
Non-underlying items	(444)	256
	(418)	302

1 The UK tax rate differential arises on the difference between the deferred tax rate and the UK current corporation tax rate.
2 Overseas rate differences mainly relate to tax on profits or losses in countries such as the US and Germany which have higher tax rates than the UK. In 2020, the impact is negative because of the loss in Germany relating to the impairment of the business aviation programme intangible assets.
3 The exempt gain mainly relates to the disposal of the Civil Nuclear Instrumentation and Control business.
4 Tax losses and other temporary differences not recognised mainly relate to the UK.
5 Derecognition of deferred tax assets in 2020 relates to foreign exchange and commodity financial assets and liabilities and UK losses.
6 UK deferred tax was previously measured at 19%. The Spring Budget 2021 announced that the UK corporate tax rate will increase to 25% from 1 April 2023. The UK deferred tax balances have therefore been re-measured at 25%. The 2020 rate change relates to the Spring Budget 2020 announcement that the UK tax rate would remain at 19% rather than reducing to 17%.

5 TAXATION – CONTINUED

Tax on discontinued operations

	2021 £m	2020 £m
Tax credit on loss before taxation from discontinued operations	(34)	(43)

Deferred taxation assets and liabilities

	2021 £m	2020 £m
At 1 January	1,332	1,269
Amount credited/(charged) to income statement	636	(107)
Amount (charged)/credited to other comprehensive income	(82)	197
Amount charged to cash flow hedge reserve	(2)	(4)
Amount credited to equity	17	5
On disposal/acquisition of businesses [1]	(4)	(20)
Transferred to assets held for sale [2]	(85)	(4)
Exchange differences	(14)	(4)
At 31 December	1,798	1,332
Deferred tax assets	2,249	1,826
Deferred tax liabilities	(451)	(494)
	1,798	1,332

[1] The 2021 deferred tax relates to the disposal of Bergen Engines AS and the Civil Nuclear Instrumentation & Control business. The 2020 deferred tax relates to the acquisitions of Qinous GmBH and Kinolt Group S.A.

[2] The 2021 deferred tax transferred to assets held for sale relates to ITP Aero. The 2020 deferred tax transferred to assets held for sale relates to Bergen Engines AS and the Civil Nuclear Instrumentation and Control business.

5 TAXATION – CONTINUED

The analysis of the deferred tax position is as follows:

	At 1 January £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Disposals and acquisition related activity £m	Transferred to held for sale £m	Exchange differences £m	At 31 December £m
2021								
Intangible assets	**(567)**	**(102)**	**–**	**–**	**–**	**188**	**17**	**(464)**
Property, plant and equipment	**34**	**145**	**–**	**–**	**–**	**23**	**(9)**	**193**
Other temporary differences	**343**	**185**	**(12)**	**–**	**(4)**	**(49)**	**8**	**471**
Net contract liabilities	**56**	**17**	**–**	**–**	**–**	**–**	**–**	**73**
Pensions and other post-retirement scheme benefits	**(8)**	**(47)**	**(79)**	**–**	**–**	**–**	**(6)**	**(140)**
Foreign exchange and commodity financial assets and liabilities	**187**	**165**	**7**	**–**	**–**	**1**	**2**	**362**
Losses	**850**	**254**	**–**	**17**	**–**	**(33)**	**(3)**	**1,085**
R&D credit	**274**	**20**	**–**	**–**	**–**	**(215)**	**(23)**	**56**
Advance corporation tax	**163**	**(1)**	**–**	**–**	**–**	**–**	**–**	**162**
	1,332	**636**	**(84)**	**17**	**(4)**	**(85)**	**(14)**	**1,798**
Recognised in:								
Continuing operations		**600**						
Discontinued operations		**36**						
2020								
Intangible assets	(726)	160	–	–	(20)	–	19	(567)
Property, plant and equipment	(138)	153	–	–	(2)	–	21	34
Other temporary differences	374	48	5	(1)	6	(4)	(85)	343
Net contract liabilities	55	1	–	–	–	–	–	56
Pensions and other post-retirement scheme benefits	(154)	(48)	195	–	–	–	(1)	(8)
Foreign exchange and commodity financial assets and liabilities	425	(251)	(7)	–	(6)	–	26	187
Losses	1,017	(178)	–	6	2	–	3	850
R&D credit	253	8	–	–	–	–	13	274
Advance corporation tax	163	–	–	–	–	–	–	163
	1,269	(107)	193	5	(20)	(4)	(4)	1,332
Recognised in:								
Continuing operations		(155)						
Discontinued operations		48						

5 TAXATION – CONTINUED

Unrecognised deferred tax assets

	2021 £m	2020 £m
Advance corporation tax	19	19
UK losses	1,563	1,181
Foreign exchange and commodity financial assets and liabilities	392	369
Losses and other unrecognised deferred tax assets	73	68
Deferred tax not recognised on unused tax losses and other items on the basis that future economic benefit is uncertain	2,047	1,637

Gross amount and expiry of losses and other deductible temporary differences for which no deferred tax asset has been recognised

	2021					2020				
	Total gross losses and deductible temporary differences £m	UK losses £m	Foreign exchange and commodity financial assets and liabilities £m	Other losses £m	Other deductible temporary differences £m	Total gross losses and deductible temporary differences £m	UK losses £m	Foreign exchange and commodity financial assets and liabilities £m	Other losses £m	Other deductible temporary differences £m
Expiry within 5 years	4	–	–	4	–	26	–	–	26	–
Expiry within 6 to 30 years	282	–	–	282	–	281	–	–	281	–
No expiry	7,992	6,251	1,567	66	108	8,381	6,214	1,940	44	183
	8,278	6,251	1,567	352	108	8,688	6,214	1,940	351	183

In addition to the gross balances shown above, advance corporation tax of £19m (2020: £19m) has not been recognised. Advance corporation tax has no expiry.

Deferred tax assets of £2,249m include £1,054m (2020: £801m) relating to UK tax losses and £162m (2020: £163m) relating to advance corporation tax (ACT), both arising in Rolls-Royce plc. These assets have been recognised based on the expectation that the business will generate taxable profits and tax liabilities in the future against which the losses and ACT can be utilised.

Most of the tax losses relate to the Civil Aerospace widebody business which makes initial losses through the investment period of a programme and then makes a profit through its contracts for services. The programme lifecycles are typically in excess of 30 years. In the past few years there have been four new engines that have entered into service (Trent 1000–TEN, Trent 7000, Trent XWB-84 and Trent XWB-97).

Deferred tax assets are recognised only to the extent that it is probable that future taxable profits will be available against which the assets can be utilised. A recoverability assessment has been undertaken, taking account of deferred tax liabilities against which the reversal can be offset and using latest UK forecasts, which are mainly driven by the Civil Aerospace widebody business, to assess the level of future taxable profits.

The recoverability of deferred tax assets relating to tax losses and ACT has been assessed in 2021 on the following basis:

- using the most recent UK profit forecasts which are consistent with past experience and external sources on market conditions. These forecasts cover the next five years;
- the long-term forecast profit profile of certain of the major widebody engine programmes which is typically in excess of 30 years from initial investment to retirement of the fleet, including the aftermarket revenues earned from airline customers;
- taking into account forecast reductions in the usage of older aircraft, and including new business in certain areas;
- taking into account a 25% probability of the severe but plausible downside forecast materialising in relation to the civil aviation industry; and
- the long-term forecast profit and cost profile of the other parts of the business.

The assessment takes into account UK tax laws that, in broad terms, restrict the offset of the carried forward tax losses to 50% of current year profits. In addition, management's assumptions relating to the amounts and timing of future taxable profits take into account the impact of COVID-19 and climate change on existing widebody engine programmes. Based on this assessment, the Group has recognised a deferred tax asset of £1,054m relating to losses and £162m relating to ACT. This reflects the conclusions that:

- It is probable that the business will generate taxable income and tax liabilities in the future against which these losses and the ACT can be utilised.
- Based on current forecasts and using various scenarios these losses and the ACT will be used in full within the expected widebody engine programme lifecycles.
- The Group has not recognised any deferred tax assets in respect of 2021 UK tax losses.

5 TAXATION – CONTINUED

An explanation of the potential impact of climate change on forecast profits and sensitivity analysis can be found in note 1.

The Group has also reassessed the recovery of other deferred tax assets in Rolls-Royce plc, including those arising on unrealised losses on derivative contracts, resulting in a net increase of £154m of which £58m relates to the increase in the UK corporation tax rate (see below). Any future changes in tax law or the structure of the Group could have a significant effect on the use of losses, ACT and other deferred tax assets, including the period over which they can be used. In view of this and the significant judgement involved the Board continuously reassesses this area.

The other significant deferred tax assets in respect of tax losses and other deductible temporary differences continue to arise in Rolls-Royce Deutschland Ltd & Co KG, where the main business is business aviation. The total net deferred tax asset is £254m (2020: £252m), which has been recognised in full as it is considered probable that the business will generate taxable income in the future against which these assets can be utilised.

The Spring Budget 2021, announced that the UK corporation tax rate will increase from 19% to 25% from 1 April 2023. The new law was substantively enacted on 24 May 2021. The prior year UK deferred tax assets and liabilities were calculated at 19%, as this was the enacted rate at the 2020 balance sheet date. As the 25% rate has been substantively enacted before 31 December 2021, the UK deferred tax assets and liabilities have been re-measured at 25%.

The resulting credits and charges have been recognised in the income statement except to the extent that they relate to items previously credited or charged to equity. Accordingly, in 2021, £327m has been credited to the income statement and £17m has been credited directly to equity.

The temporary differences associated with investments in subsidiaries, joint ventures and associates, for which a deferred tax liability has not been recognised, aggregate to £957m (2020: £907m). No deferred tax liability has been recognised on the potential withholding tax due on the remittance of undistributed profits as the Group is able to control the timing of such remittances and it is probable that consent will not be given in the foreseeable future.

6 EARNINGS PER ORDINARY SHARE

Basic earnings per ordinary share (EPS) is calculated by dividing the profit/(loss) attributable to ordinary shareholders by the weighted average number of ordinary shares in issue during the year, excluding ordinary shares held under trust, which have been treated as if they had been cancelled.

In the current period, the potentially dilutive share options element has been assessed as 20 million shares. Where a loss for the year is recognised the effect of potentially dilutive ordinary shares is anti-dilutive.

	2021			Restated 2020		
	Basic	**Potentially dilutive share options**	**Diluted**	Basic	Potentially dilutive share options	Diluted
Profit/(loss) attributable to ordinary shareholders (£m)						
Continuing operations	123		123	(3,102)		(3,102)
Discontinued operations	(3)		(3)	(68)		(68)
	120		120	(3,170)		(3,170)
Weighted average number of ordinary shares (millions)	8,332	20	8,352	5,987	–	5,987
EPS (pence)						
Continuing operations	1.48p	(0.01p)	1.47p	(51.81p)	–	(51.81p)
Discontinued operations	(0.04p)	–	(0.04p)	(1.14p)	–	(1.14p)
	1.44p	(0.01p)	1.43p	(52.95p)	–	(52.95p)

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

	2021		Restated 2020	
	Pence	£m	Pence	£m
Underlying EPS/Underlying profit/(loss) from continuing operations attributable to ordinary shareholders	0.11	9	(67.48)	(4,040)
Total underlying adjustments to profit/(loss) before tax (note 2)	(3.96)	(330)	19.94	1,194
Related tax effects	5.33	444	(4.27)	(256)
EPS/Profit/(loss) from continuing operations attributable to ordinary shareholders	1.48	123	(51.81)	(3,102)
Diluted underlying EPS from continuing operations attributable to ordinary shareholders	0.11		(67.48)	

7 AUDITORS' REMUNERATION

	2021 £m	2020 £m
Fees payable to the Company's auditor for the audit of the Company's annual Financial Statements	3.3	2.7
Fees payable to the Company's auditor and its associates for the audit of the Company's subsidiaries pursuant to legislation	8.3	7.6
Total fees payable for audit services	11.6	10.3
Fees payable to the Company's auditor and its associates for other services:		
Audit related assurance services [1]	1.7	1.6
Taxation compliance services [2]	–	0.1
Other assurance services [3]	0.2	1.0
Total fees payable to the Company's auditor and its associates [4]	13.5	13.0
Fees payable in respect of the Group's pension schemes:		
Audit	0.1	0.1

[1] This includes £0.7m (2020: £1.0m) for the review of the half-year report, £0.8m (2020: £0.6m) in respect of the audit of grant claims and £0.2m (2020: nil) for a non-statutory audit of Bergen Engines.
[2] During the year to 31 December 2020, this included £0.1m for tax compliance services in respect of Kinolt Group S.A. where the auditor was engaged prior to the acquisition by the Group. These services ceased following the acquisition.
[3] This includes £0.1m in respect of levies payable to BEIS (Department of Business, Energy and Industrial Strategy) (2020: £0.5m in respect of Reporting Accountant services for the rights issue and £0.5m in respect of the bond issuance).
[4] Audit fees for overseas entities are reported at the average exchange rate for the year.

8 EMPLOYEE INFORMATION

	2021 Number	2020 Number
United Kingdom	19,700	22,000
Germany	9,500	9,800
United States	5,000	5,400
Spain	2,700	3,000
Italy	900	800
Singapore	900	1,100
Nordics	700	700
Canada	700	800
India	600	1,000
France	600	700
Rest of world	2,700	2,900
Monthly average number of employees	**44,000**	**48,200**
Civil Aerospace [1]	17,900	22,300
Defence [1]	11,100	10,500
Power Systems [1]	9,100	8,900
New Markets [1]	400	300
Other businesses [2]	1,400	1,600
Corporate [1, 3]	100	100
Monthly average number of employees excluding discontinued operations	**40,000**	**43,700**
ITP Aero (classified as discontinued operation) [1]	4,000	4,500
Monthly average number of employees	**44,000**	**48,200**

	2021			2020		
	Continuing operations £m	Discontinued operations £m	Total £m	Continuing operations £m	Discontinued operations £m	Total £m
Wages, salaries and benefits	2,392	154	2,546	2,404	164	2,568
Social security costs	343	36	379	392	41	433
Share-based payments (note 24)	28	–	28	25	–	25
Pensions and other post-retirement scheme benefits (note 22)	250	3	253	92	5	97
Group employment costs [4]	**3,013**	**193**	**3,206**	2,913	210	3,123

1 Comparative information has been restated to reflect changes in segmental analysis. See note 2 for more detail.
2 Other businesses are set out in note 2 on page 131.
3 Corporate consists of employees who do not provide a shared service to the segments. Where corporate functions provide such a service, employees have been allocated to the segments on an appropriate basis.
4 Remuneration of key management personnel is shown in note 26.

9 INTANGIBLE ASSETS

	Goodwill £m	Certification costs £m	Development expenditure £m	Customer relationships £m	Software [4] £m	Other £m	Total £m
Cost							
At 1 January 2020	1,024	962	3,294	1,303	967	803	8,353
Additions	–	3	232	–	89	40	364
Acquisition of businesses	57	–	3	41	–	36	137
Transferred to assets held for sale [1]	(3)	–	(33)	–	(12)	(4)	(52)
Disposals	–	(1)	–	–	(93)	(2)	(96)
Reclassifications [2]	4	(4)	(8)	–	15	(6)	1
Exchange differences	30	3	76	59	2	26	196
At 31 December 2020	1,112	963	3,564	1,403	968	893	8,903
Additions	–	1	104	–	83	35	223
Transferred to assets held for sale [1]	–	(6)	(179)	(868)	(15)	(59)	(1,127)
Disposals	(4)	(22)	–	–	(51)	(2)	(79)
Reclassifications [2]	–	–	–	–	(2)	8	6
Exchange differences	(48)	(3)	(96)	(60)	(5)	(42)	(254)
At 31 December 2021	**1,060**	**933**	**3,393**	**475**	**978**	**833**	**7,672**
Accumulated amortisation and impairment							
At 1 January 2020	30	392	1,201	354	605	329	2,911
Charge for the year [3]	–	21	106	82	81	33	323
Impairment	8	17	481	31	5	37	579
Transferred to assets held for sale [1]	–	–	(20)	–	(12)	(4)	(36)
Disposals	–	(1)	–	–	(75)	(2)	(78)
Reclassifications [2]	–	–	(2)	–	2	–	–
Exchange differences	–	–	37	11	1	10	59
At 31 December 2020	38	429	1,803	478	607	403	3,758
Charge for the year [3]	–	21	75	59	97	29	281
Impairment	–	–	–	–	1	8	9
Transferred to assets held for sale [1]	–	(4)	(51)	(176)	(10)	–	(241)
Disposals	(4)	(21)	–	–	(48)	(1)	(74)
Reclassifications [2]	–	–	(1)	–	6	1	6
Exchange differences	–	–	(66)	(19)	(3)	(20)	(108)
At 31 December 2021	**34**	**425**	**1,760**	**342**	**650**	**420**	**3,631**
Net book value							
At 31 December 2021	**1,026**	**508**	**1,633**	**133**	**328**	**413**	**4,041**
At 31 December 2020	1,074	534	1,761	925	361	490	5,145

1 ITP Aero has been classified as a disposal group held for sale since 30 June 2021. Bergen Engines AS and the Civil Nuclear Instrumentation & Control business were classified as held for sale at 31 December 2020 – see note 27.
2 Includes reclassifications within intangible assets or from property, plant and equipment when available for use.
3 Charged to cost of sales and commercial and administrative costs except development costs, which are charged to research and development costs.
4 Includes £115m (2020: £110m) of software under course of construction which is not amortised.

At 31 December 2021, the Group had expenditure commitments for software of £49m (2020: £34m).

9 INTANGIBLE ASSETS – CONTINUED

Goodwill

In accordance with the requirements of IAS 36 *Impairment of Assets*, goodwill is allocated to the Group's cash-generating units, or groups of cash-generating units, that are expected to benefit from the synergies of the business combination that gave rise to the goodwill as follows:

Cash-generating unit (CGU) or group of CGUs

	Primary reporting segment	2021 £m	2020 £m
Rolls-Royce Power Systems AG	Power Systems	760	792
Rolls-Royce Deutschland Ltd & Co KG	Civil Aerospace	229	245
Other	Various	37	37
		1,026	1,074

Goodwill has been tested for impairment during 2021 on the following basis:

- The carrying values of goodwill 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. These forecasts generally cover the next five years. Growth rates for the period not covered by the forecasts are based on growth rates of 2% which reflect the products, industries and countries in which the relevant CGU or group of CGUs operate.
- The key forecast assumptions for the impairment tests are the discount rate and the cash flow projections, in particular the programme assumptions (such as sales volumes and product costs), the impact of foreign exchange rates on the relationship between selling prices and costs, and growth rates. Impairment tests are performed using prevailing exchange rates.
- The Group 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 in-service 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 GHG emissions is reflected in the forecasts used.

A 1.5ºC Paris-aligned sensitivity, based on IEA and Oxford Economics forecasts, has been considered which assumes that Governments adopt strict product and behavioural standards, high carbon pricing and strategic investments in low carbon alternatives, with markets willing to pay for low carbon solutions. The sensitivity has considered the likelihood of demand changes for our products based on their relative fuel efficiency in the marketplace and the probability of alternatives being introduced earlier than currently expected. The sensitivity also reflects a broad range of potential costs imposed by policy or regulatory interventions (through carbon pricing). This sensitivity does not indicate the need for an impairment charge. Further detail can be found in note 1.

The principal value in use assumptions for goodwill balances considered to be individually significant are:

Rolls-Royce Power Systems AG

- Trading assumptions (e.g. volume of equipment deliveries, pricing achieved and cost escalation) that are based on current and known future programmes, estimates of market share and long-term economic forecasts;
- Plausible downside scenario in relation to COVID-19 recovery included with a 20% weighting;
- Cash flows beyond the five-year forecasts are assumed to grow at 2.0% (2020: 2.0%); and
- Pre-tax discount rate 10.7% (2020: 11.7%).

The Directors do not consider that any reasonably possible changes in the key assumptions (including taking consideration of the climate risks detailed above) would cause the value in use of the goodwill to fall below its carrying value.

Rolls-Royce Deutschland Ltd & Co KG

- Trading assumptions (e.g. volume of engine deliveries, flying hours of installed fleet, including assumptions on the recovery of the civil aviation industry, and cost escalation) that are based on current and known future programmes, estimates of market share and long-term economic forecasts;
- Plausible downside scenario in relation to COVID-19 recovery included with a 25% weighting;
- Cash flows beyond the five-year forecasts are assumed to grow at 2.0% (2020: 2.0%).
- Pre-tax discount rate 11.9% (2020: 11.9%).

The Directors do not consider that any reasonably possible changes in the key assumptions (including taking consideration of the climate risks detailed above) would cause the value in use of the goodwill to fall below its carrying value.

9 INTANGIBLE ASSETS – CONTINUED

Other cash generating units

Goodwill balances across the Group that are not considered to be individually significant were also tested for impairment, resulting in no impairment charge (2020: £8m) being recognised in 2021.

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

	Residual life	Net book value 2021 £m	2020 £m
Trent programme intangible assets [1]	7-15 years	1,787	1,770
Business aviation programme intangible assets [2]	15 years	237	256
Customer relationship assets on acquisition of ITP Aero [3]	typically 13–35 years	–	651
Intangible assets from acquisition of Power Systems [4]		491	531
		2,515	3,208

[1] Included within the Trent programmes are the Trent 1000, Trent 7000 and Trent XWB.
[2] Included within business aviation are the Pearl 700 and Pearl 15.
[3] ITP Aero has been classified as a disposal group held for sale since 30 June 2021.
[4] Includes £108m (2020: £115m) in respect of a brand intangible asset which is not amortised. Remaining assets are amortised over a range of 2 to 10 years.

The carrying amount of goodwill or intangible assets allocated across multiple CGUs is not significant in comparison with the Group's total carrying amount of goodwill or intangible assets with indefinite useful lives.

Other intangible assets (including programme intangible assets) have been reviewed for impairment in accordance with IAS 36 *Impairment of Assets*. Assessments have considered potential triggers of impairment such as external factors, including climate change (as set out in the goodwill section above), significant changes with an adverse effect on a programme and by analysing latest management forecasts against those prepared in 2020 to identify any deterioration in performance. Where a trigger event has been identified, an impairment test has been carried out. Where an impairment was required, the test was performed on the following basis:

- The carrying values have been assessed by reference to value in use. These have been estimated using cash flows from the most recent forecasts prepared by the Directors, which are consistent with past experience and external sources of information on market conditions over the lives of the respective programmes.
- The key assumptions underlying 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 in the year.

10 PROPERTY, PLANT AND EQUIPMENT

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	In course of construction £m	Total £m
Cost					
At 1 January 2020	2,020	5,497	876	401	8,794
Additions	14	145	162	232	553
Acquisition of businesses	9	7	–	1	17
Transferred to assets held for sale [1]	(32)	(77)	–	(9)	(118)
Disposal of businesses	–	(19)	–	–	(19)
Disposals/write-offs	(52)	(264)	(19)	(24)	(359)
Reclassifications [2]	25	117	3	(150)	(5)
Exchange differences	10	36	3	–	49
At 31 December 2020	1,994	5,442	1,025	451	8,912
Additions	19	120	6	154	299
Transferred to assets held for sale [1]	(200)	(305)	(22)	(8)	(535)
Disposals/write-offs	(59)	(264)	(11)	(23)	(357)
Reclassifications [2]	144	75	53	(271)	1
Exchange differences	(33)	(82)	(5)	(3)	(123)
At 31 December 2021	**1,865**	**4,986**	**1,046**	**300**	**8,197**
Accumulated depreciation					
At 1 January 2020	590	3,167	223	11	3,991
Charge for the year [3]	71	362	56	–	489
Impairment	71	137	97	27	332
Transferred to assets held for sale [1]	(29)	(74)	–	(8)	(111)
Disposal of businesses	–	(19)	–	–	(19)
Disposals/write-offs	(33)	(248)	(2)	(13)	(296)
Reclassifications [2]	10	(1)	–	(9)	–
Exchange differences	(1)	12	–	–	11
At 31 December 2020	679	3,336	374	8	4,397
Charge for the year [3]	70	312	57	–	439
Impairment [4]	1	18	–	–	19
Transferred to assets held for sale [1]	(74)	(127)	(5)	–	(206)
Disposals/write-offs	(48)	(254)	(1)	–	(303)
Reclassifications [2]	(7)	11	(10)	–	(6)
Exchange differences	(7)	(52)	(1)	–	(60)
At 31 December 2021	**614**	**3,244**	**414**	**8**	**4,280**
Net book value					
At 31 December 2021	**1,251**	**1,742**	**632**	**292**	**3,917**
At 31 December 2020	1,315	2,106	651	443	4,515

[1] ITP Aero has been classified as a disposal group held for sale since 30 June 2021. In addition, certain property, plant and equipment related to the Group's site rationalisation activities have been classified as held for sale at 31 December 2021. Bergen Engines AS and the Civil Nuclear Instrumentation & Control business were classified as held for sale at 31 December 2020 – see note 27.
[2] Includes reclassifications of assets under construction to the relevant classification in property, plant and equipment, right-of-use assets and intangible assets when available for use.
[3] Depreciation is charged to cost of sales and commercial and administrative costs or included in the cost of inventory as appropriate.
[4] The carrying values of property, plant and equipment have been assessed during the 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 9. Land and buildings are generally used across multiple programmes and are considered based on future expectations of the use of the site, which includes any implications from climate-related risks as explained in note 9. As a result of this assessment, there are no individually material impairment charges or reversals in the year.

Property, plant and equipment includes:

	2021 £m	2020 £m
Assets held for use in leases where the Group is the lessor:		
Cost	808	824
Depreciation	(311)	(277)
Net book value	497	547
Capital expenditure commitments	121	145
Cost of fully depreciated assets	2,001	1,853

The Group's share of equity accounted entities' capital commitments is £22m (2020: £8m).

11 RIGHT-OF-USE ASSETS

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	Total £m
Cost				
At 1 January 2020	504	128	1,767	2,399
Additions/modification of leases	(27)	33	129	135
Acquisition of businesses	–	1	–	1
Transferred to assets held for sale [1]	(13)	(3)	–	(16)
Disposals	(18)	(10)	(67)	(95)
Exchange differences	1	1	4	6
At 31 December 2020	447	150	1,833	2,430
Additions/modification of leases	37	15	30	82
Transferred to assets held for sale [1]	(16)	(2)	–	(18)
Disposals	(8)	(16)	(66)	(90)
Reclassifications to PPE	–	–	(8)	(8)
Exchange differences	(4)	(4)	(4)	(12)
At 31 December 2021	**456**	**143**	**1,785**	**2,384**
Accumulated depreciation and impairment				
At 1 January 2020	55	29	306	390
Charge for the year	56	35	255	346
Impairment [2]	66	9	311	386
Transferred to assets held for sale [1]	(5)	(2)	–	(7)
Disposals	(10)	(10)	(67)	(87)
Exchange differences	(3)	(1)	1	(3)
At 31 December 2020	159	60	806	1,025
Charge for the year	43	30	199	272
Impairment [2]	(2)	(6)	(7)	(15)
Transferred to assets held for sale [1]	(4)	(1)	–	(5)
Disposals	(8)	(16)	(66)	(90)
Reclassifications to PPE	–	–	(1)	(1)
Exchange differences	(2)	(1)	(2)	(5)
At 31 December 2021	**186**	**66**	**929**	**1,181**
Net book value				
At 31 December 2021	**270**	**77**	**856**	**1,203**
At 31 December 2020	288	90	1,027	1,405
Right-of-use assets held for use in operating leases where the Group is the lessor				
Cost	2	1	1,785	1,788
Depreciation	(1)	(1)	(929)	(931)
Net book value at 31 December 2021	**1**	**–**	**856**	**857**
Cost	2	1	1,833	1,836
Depreciation	(1)	(1)	(806)	(808)
Net book value at 31 December 2020	1	–	1,027	1,028

[1] ITP Aero has been classified as a disposal group held for sale since 30 June 2021. Bergen Engines AS and the Civil Nuclear Instrumentation & Control business were classified as held for sale at 31 December 2020 – see note 27.

[2] 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 9. Land and buildings are generally used across multiple programmes and are considered based on future expectations of the use of the site (which includes any implications from climate-related risks as explained in note 9). As a result of this assessment, an impairment reversal of £8m has been recognised through non-underlying profit. The reversal 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 that site.

12 INVESTMENTS

Composition of the Group

The entities contributing to the Group's financial results are listed on pages 190 to 196.

Where the Group does not own 100% of the shares of a Group undertaking, there are a number of arrangements with the other shareholder(s) that give the Group the option or potential obligation to acquire the third parties' shares. These arrangements have been assessed and are not considered to have a significant value, individually or in aggregate.

The Group does not have any material non-wholly owned subsidiaries.

Equity accounted and other investments

	Equity accounted			Other [1]
	Joint ventures £m	Associates £m	Total £m	Total £m
At 1 January 2020	402	–	402	14
Additions	19	–	19	5
Disposals [2]	(6)	–	(6)	–
Impairment [3]	(24)	–	(24)	–
Share of retained profit [4]	130	1	131	–
Reclassification of deferred profit to deferred income [5]	(96)	–	(96)	–
Transfer to subsidiary [2]	(4)	–	(4)	–
Exchange differences	(23)	–	(23)	–
Share of OCI	(5)	–	(5)	–
At 1 January 2021	393	1	394	19
Additions [6]	2	1	3	27
Disposals	–	–	–	(1)
Impairment [3]	(2)	–	(2)	(5)
Share of retained profit/(loss) [4]	19	(1)	18	–
Reclassification of deferred profit to deferred income [5]	(24)	–	(24)	–
Transferred to assets held for sale [7]	(35)	–	(35)	–
Repayment of loans	(3)	–	(3)	–
Revaluation of investments accounted for at FVOCI	–	–	–	(2)
Exchange differences	8	–	8	(2)
Share of OCI [8]	45	–	45	–
At 31 December 2021	403	1	404	36

1 Other investments includes unlisted investments of £29m and listed investments of £7m.
2 On 15 January 2020, the Group completed the acquisition of Qinous GmbH (increasing its shareholding from 24% to 100%). On the 6 July 2020, the Group completed the disposal of its 18% shareholding in Exostar LLC.
3 During the year, the Group recognised an impairment of £7m (2020: nil) through underlying and nil (2020: £24m) charged to the income statement through non-underlying.
4 See table below.
5 The Group's share of unrealised profit on sales to joint ventures is eliminated against the carrying value of the investment in the entity. Any excess amount, once the carrying value is reduced to nil, is recorded as deferred income.
6 During the year, additions to other investments of £27m include the following significant transactions. On 17 December 2021, the Group acquired a 1% investment in Vertical Aerospace for consideration of £9m. The Group has elected to value this investment at fair value through other comprehensive income. On 18 May 2020, the Group increased its shareholding in Reaction Engines Limited from 2% to 10.1% for £20m (£4m of which was paid during 2020) which was payable (and the associated shares acquired) in instalments. During the year, the Group paid the remaining instalments of £16m for the Reaction Engines acquisition.
7 The Group's investment in Airtanker Holdings Limited has been classified as a non-current asset held for sale since 13 September 2021. Further detail can be found in note 27.
8 Up to 13 September 2021, when Airtanker Holdings Limited was transferred to held for sale, the Group recognised its share of OCI relating to cash flow hedges of £43m.

Reconciliation of share of retained profit to the income statement and cash flow statement:

	2021 £m	Restated 2020 £m
Share of results of joint ventures and associates	22	132
Adjustments for intercompany trading [1]	23	58
Share of results of joint ventures and associates to the Group	45	190
Dividends paid by joint ventures and associates to the Group (cash flow statement)	(27)	(60)
Share of retained profit attributable to continuing operations	18	130
Share of retained profit attributable to discontinued operations	–	1
Share of retained profit above	18	131

1 During the year, the Group sold spare engines to Rolls-Royce & Partners Finance, a joint venture and subsidiary of Alpha Partners Leasing Limited. The Group's share of the profit on these sales is deferred and released to match the depreciation of the engines in the joint venture's financial statements. In 2021 and 2020, profit deferred on the sale of engines was lower than the release of that deferred in prior years.

12 INVESTMENTS – CONTINUED

The following joint ventures are considered to be individually material to the Group:

	Principal location	Activity	Ownership interest
Alpha Partners Leasing Limited (APL)	UK	Aero engine leasing	50.0%
Hong Kong Aero Engine Services Limited (HAESL)	Hong Kong	Aero engine repair and overhaul	50.0%
Singapore Aero Engine Services Pte Limited (SAESL)	Singapore	Aero engine repair and overhaul	50.0%

Summarised financial information of the Group's individually material joint ventures is as follows:

	APL		HAESL		SAESL	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Revenue	278	330	1,605	1,995	1,057	1,178
(Loss)/profit and total comprehensive (expense)/income for the year	(16)	44	51	71	20	32
Dividends paid during the year	–	–	(46)	(62)	–	(14)
(Loss)/profit for the year included the following:						
Depreciation and amortisation	(165)	(165)	(14)	(15)	(20)	(21)
Interest expense	(65)	(83)	(1)	(2)	(3)	(5)
Income tax expense	(77)	(35)	(10)	(13)	–	(4)
Current assets	314	172	533	461	676	256
Non-current assets	2,978	3,191	90	102	151	164
Current liabilities	(287)	(201)	(343)	(287)	(554)	(156)
Non-current liabilities	(2,401)	(2,551)	(73)	(78)	(65)	(74)
Net assets	604	611	207	198	208	190
Included in the above:						
Cash and cash equivalents	239	64	30	29	105	47
Current financial liabilities [1]	(217)	(143)	–	(22)	–	–
Non-current financial liabilities [1]	(2,048)	(2,245)	(67)	(66)	(65)	(73)
Reconciliation to the carrying amount recognised in the Consolidated Financial Statements						
Ownership interest	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Group share of net assets above	302	306	104	99	104	95
Goodwill	–	–	34	34	78	77
Adjustments for intercompany trading	(302)	(306)	(1)	(3)	–	–
Included in the balance sheet	–	–	137	130	182	172

[1] Excluding trade payables and other liabilities.

The summarised aggregated results of the Group's share of equity accounted investments is as follows:

	Individually material joint ventures (above)		Other joint ventures [2]		Associates		Total	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Assets:								
Non-current assets	1,610	1,729	205	734	–	–	1,815	2,463
Current assets	762	444	316	514	1	1	1,079	959
Liabilities: [1]								
Current liabilities	(592)	(322)	(232)	(303)	–	–	(824)	(625)
Non-current liabilities	(1,270)	(1,351)	(84)	(758)	–	–	(1,354)	(2,109)
Group adjustment for goodwill	112	111	–	17	–	–	112	128
Adjustment for intercompany trading	(303)	(309)	(121)	(113)	–	–	(424)	(422)
	319	302	84	91	1	1	404	394
[1] Liabilities include borrowings of:	(1,198)	(1,263)	(534)	(548)	–	–	(1,732)	(1,811)

[2] The aggregate value of the Group's share of profit/(loss) and total comprehensive income of individually immaterial joint ventures is £39m (2020: £58m).

13 INVENTORIES

	2021 £m	2020 £m
Raw materials	376	417
Work in progress	1,135	1,139
Finished goods	2,146	2,111
Payments on account	9	23
	3,666	3,690
Inventories stated at net realisable value	215	305
Amount of inventory write-down	92	95
Reversal of inventory write-down	26	16

14 TRADE RECEIVABLES AND OTHER ASSETS

	Current		Non-current		Total	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Trade receivables [1]	2,141	2,479	52	–	2,193	2,479
Receivables due on RRSAs	702	603	67	82	769	685
Amounts owed by joint ventures and associates	598	486	1	16	599	502
Costs to obtain contracts with customers [2]	13	12	41	50	54	62
Other taxation and social security receivable	197	225	8	6	205	231
Other receivables [3]	593	639	20	20	613	659
Prepayments	572	412	378	425	950	837
	4,816	4,856	567	599	5,383	5,455
Trade receivables and other assets are analysed as follows:						
Financial instruments (note 20):						
Trade receivables and similar items					3,466	3,584
Other non-derivative financial assets					705	740
Non-financial instruments					1,212	1,131
					5,383	5,455

1 Non-current trade receivables relate to amounts not expected to be received in the next 12 months from customers on payment plans.
2 These are amortised over the term of the related contract, resulting in amortisation of £9m (2020: £10m) in the year. There were no impairment losses.
3 Other receivables includes unbilled recoveries relating to overhaul activity.

During the year to 31 December 2021, the Group reassessed which trade receivables are held to collect or sell. The Group's intent is to no longer utilise invoice discounting and, consequently, balances are generally not classified as held to collect or sell. A small amount of invoice discounting has continued within Power Systems at the request and cost of the customers.

The expected credit losses for trade receivables and other assets have increased by £7m to £259m (2020: £252m). This movement is mainly driven by the Civil Aerospace business of £7m, of which £10m relates to specific customers and £(3)m relates to updates to the recoverability of other receivables.

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 assumptions and inputs used for the estimation of the expected credit losses are shown in the table below:

	2021			2020		
	Trade receivables and other financial assets £m	Loss allowance £m	Average expected credit loss rate %	Trade receivables and other financial assets £m	Loss allowance £m	Average expected credit loss rate %
Investment grade	1,092	(27)	2%	1,611	(33)	2%
Non-investment grade	147	(2)	1%	149	(7)	5%
Without credit rating	3,191	(230)	7%	2,816	(212)	8%
	4,430	(259)	6%	4,576	(252)	5%

14 TRADE RECEIVABLES AND OTHER ASSETS – CONTINUED

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

	2021 £m	2020 £m
At 1 January	(252)	(138)
Increases in loss allowance recognised in the income statement during the year	(124)	(119)
Loss allowance utilised	46	5
Releases of loss allowance previously provided	46	13
Transferred to assets held for sale	2	–
Exchange differences	23	(13)
At 31 December	(259)	(252)

15 CONTRACT ASSETS AND LIABILITIES

	Current		Non-current [1]		Total [2]	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Contract assets						
Contract assets with customers	586	416	641	660	1,227	1,076
Participation fee contract assets	27	48	219	386	246	434
	613	464	860	1,046	1,473	1,510

[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 £915m (2020: £726m) of Civil Aerospace LTSA assets, with most of the remaining balance relating to Defence. The main driver of the increase in the Group's balance is revenue recognised in Civil Aerospace in the year as performance obligations have been completed exceeding amounts received, partly reduced by £10m relating to performance obligations satisfied in previous years, together with foreign exchange movements. No impairment losses in relation to these contract assets (2020: none) have arisen during the year to 31 December 2021.

Participation fee contract assets have reduced by £188m (2020: reduced by £165m) due to ITP Aero being reclassified as a disposal group held for sale which had an impact of £147m, amortisation exceeding additions by £23m and foreign exchange on consolidation of overseas entities of £18m.

The absolute value of expected credit losses for contract assets has increased by £1m to £15m (2020: £14m).

	Current		Non-current		Total	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Contract liabilities	3,599	4,187	6,710	6,245	10,309	10,432

	2021 £m	2020 £m
Contract liabilities are analysed as follows:		
Financial instruments (note 20)	264	186
Non-financial instruments	10,045	10,246
	10,309	10,432

During the year £2,713m (31 December 2020: £2,792m) of the opening contract liability was recognised as revenue.

Contract liabilities have decreased by £123m. The main driver of the change in the Group balance is as a result of ITP Aero contract liabilities (2020: £173m) being reclassified as held for sale. The remaining movement includes an increase in Civil Aerospace of £165m offset by a £99m decrease in Defence.

The Civil Aerospace movement consists of an increase in relation to LTSA liabilities of £288m to £7,129m (2020: £6,841m). LTSA revenue billed has been ahead of revenue recognised in the year and, together with foreign exchange movements, resulted in an increase in the LTSA liabilities by £512m, offset by £224m 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. This is partially offset by the utilisation of deposits received in previous years as engines and aftermarket services were delivered in 2021.

The movement in Defence is from utilisation of prior year deposits and recognition of deferred income as revenue as performance obligations have been satisfied.

16 CASH AND CASH EQUIVALENTS

	2021 £m	2020 £m
Cash at bank and in hand	795	940
Money-market funds	49	669
Short-term deposits	1,777	1,843
Cash and cash equivalents per the balance sheet	2,621	3,452
Cash and cash equivalents included within assets held for sale (note 27)	25	51
Overdrafts (note 17)	(7)	(7)
Cash and cash equivalents per cash flow statement (page 112)	2,639	3,496

Cash and cash equivalents at 31 December 2021 includes £89m (2020: £143m) that is not available for general use by the Group. This balance includes £40m which is held in an account that is exclusively for the general use of Rolls-Royce Submarines Limited. This cash is not available for use by other entities within the Group. The remaining balance relates to cash held in non-wholly owned subsidiaries and joint arrangements.

Balances are presented on a net basis when the Group has both a legal right of offset and the intention to either settle on a net basis or realise the asset and settle the liability simultaneously.

17 BORROWINGS AND LEASE LIABILITIES

	Current		Non-current		Total	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Unsecured						
Overdrafts	7	7	–	–	7	7
Bank loans [1]	2	9	1,975	10	1,977	19
Commercial paper [2]	–	300	–	–	–	300
2.125% Notes 2021 €750m [3]	–	680	–	–	–	680
0.875% Notes 2024 €550m [4]	–	–	471	511	471	511
3.625% Notes 2025 $1,000m [4]	–	–	781	800	781	800
3.375% Notes 2026 £375m [5]	–	–	394	420	394	420
4.625% Notes 2026 €750m [6]	–	–	624	667	624	667
5.75% Notes 2027 $1,000m [6]	–	–	735	724	735	724
5.75% Notes 2027 £545m	–	–	540	539	540	539
1.625% Notes 2028 €550m [4]	–	–	493	545	493	545
Other loans [7]	–	17	10	58	10	75
Total unsecured	9	1,013	6,023	4,274	6,032	5,287
Lease liability – Land and buildings	46	44	365	392	411	436
Lease liability – Aircraft and engines	198	185	1,053	1,320	1,251	1,505
Lease liability – Plant and equipment	26	30	56	72	82	102
Total lease liabilities	270	259	1,474	1,784	1,744	2,043
Total borrowings and lease liabilities	279	1,272	7,497	6,058	7,776	7,330

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

[1] On 15 June 2021, the Group drew down the £2,000m loan maturing in 2025 (supported by an 80% guarantee from UK Export Finance).

[2] On 17 March 2021, the Group repaid commercial paper of £300m issued as part of the COVID Corporate Financing Facility (CCFF), a fund operated by the Bank of England on behalf of HM Treasury.

[3] These notes were the subject of cross-currency interest rate swap agreements under which the Group had undertaken to pay floating rates of GBP interest, which form a fair value hedge. On the 18 June 2021, the Group repaid €750m (£639m) loan notes in line with repayment terms.

[4] These notes are the subject of cross-currency interest rate swap agreements under which the Group has undertaken to pay floating rates of GBP interest, which form a fair value hedge. They are also subject to interest rate swap agreements under which the Group has undertaken to pay fixed rates of interest, which are classified as fair value through profit and loss.

[5] These notes are the subject of interest rate swap agreements under which the Group has undertaken to pay floating rates of interest, which form a fair value hedge. They are also subject to interest rate swap agreements under which the Group has undertaken to pay fixed rates of interest, which are classified as fair value through profit and loss.

[6] These notes are the subject of cross-currency interest rate swap agreements under which the Group has undertaken to pay fixed rates of GBP interest, which form a cash flow hedge.

[7] During the year, the Group reclassified borrowings and lease liabilities relating to ITP Aero as liabilities associated with assets held for sale.

17 BORROWINGS AND LEASE LIABILITIES – CONTINUED

During the year, the Group entered into a new £1,000m facility, maturing in 2026 (supported by an 80% guarantee from UK Export Finance and available to draw until March 2025). This facility was undrawn at 31 December 2021.

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.

18 LEASES

Leases as lessee

The net book value of right-of-use assets at 31 December 2021 was £1,203m (2020: £1,405m), with a lease liability of £1,744m (2020: £2,043m), per notes 11 and 17, respectively. Leases that have not yet commenced to which the Group is committed have a future liability of £55m and consist of mainly engines, plant and equipment, properties and cars. The consolidated income statement shows the following amounts relating to leases:

	2021 £m	2020 £m
Land and buildings depreciation and impairment [1]	(41)	(122)
Plant and equipment depreciation and impairment [2]	(24)	(44)
Aircraft and engines depreciation and impairment [3]	(192)	(566)
Total depreciation and impairment charge for right-of-use assets	(257)	(732)
Adjustment of amounts payable under residual value guarantees within lease liabilities [3, 4]	4	102
Expense relating to short-term leases of 12 months or less recognised as an expense on a straight-line basis [2]	(16)	(18)
Expense relating to variable lease payments not included in lease liabilities [3, 5]	(2)	(1)
Total operating costs	(271)	(649)
Interest expense [6]	(63)	(74)
Total lease expense	(334)	(723)
Income from sub-leasing right-of-use assets	35	97
Total amount recognised in the income statement	(299)	(626)

1 Included in cost of sales and commercial and administration costs depending on the nature and the use of the right-of-use asset.
2 Included in cost of sales, commercial and administration costs, or research and development depending on the nature and use of the right-of-use asset.
3 Included in cost of sales.
4 Where the cost of meeting residual value guarantees is less than that previously estimated, as costs have been mitigated or liabilities waived by the lessor, the lease liability has been remeasured. To the extent the value of this remeasurement exceeds the value of the right-of use asset, the reduction in the lease liability is credited to cost of sales.
5 Variable lease payments primarily arise on a small number of contracts where engine lease payments are dependent upon utilisation rather than a periodic charge.
6 Included in financing costs.

The total cash outflow for leases in 2021 was £448m (2020: £377m). Of this, £430m related to leases reflected in the lease liability, £16m to short-term leases where lease payments are expensed on a straight-line basis and £2m for variable lease payments where obligations are only due when the assets are used. The timing difference between income statement charge and cash flow relates to costs incurred at the end of leases for residual value guarantees and restoration costs that are recognised within depreciation over the term of the lease, the most significant amounts relate to engine leases.

Leases as lessor

The Group acts as lessor for engines to Civil Aerospace customers when they require engines to support their fleets. Lease agreements with the lessees provide protection over our assets. Usage in excess of specified limits and damage to the engine while on lease are covered by variable lease payment structures. Lessee bankruptcy risk is managed through the Cape Town Convention on International Interests in Mobile Equipment (including a specific protocol relating to aircraft equipment), an international treaty that creates common standards for the registration of lease contracts and establishes various legal remedies for default in financing agreements, including repossession and the effect of particular states' bankruptcy laws. Engines are only leased once we confirm that appropriate insurance documentation is established that covers the engine assets to pre-agreed amounts. All such contracts where we are lessor are operating leases. The Group also leases out a small number of properties, or parts of properties, where there is excess capacity under operating leases.

	2021 £m	2020 £m
Operating lease income – credited within revenue from aftermarket services [1, 2]	80	194

1 Includes variable lease payments received of £71m (2020: £179m) that do not depend on an index or a rate.
2 Items of property, plant and equipment subject to an operating lease are disclosed in note 10.

18 LEASES – CONTINUED

Non-cancellable future operating lease rentals (undiscounted) are receivable as follows:

	2021 £m	2020 £m
Within one year	9	13
Between one and two years	7	12
Between two and three years	7	10
Between three and four years	7	6
Between four and five years	7	6
After five years	21	21
	58	68

In a limited number of circumstances the Group sublets properties that are treated as a finance lease when the arrangement transfers substantially all the risks and rewards of ownership of the asset. At 31 December 2021, the total undiscounted lease payments receivable is £19m (2020: £22m) on annual lease income of £2m (2020: £3m). The discounted finance lease receivable at 31 December 2021 is £17m (2020: £19m). There was nil (2020: nil) finance income recognised during the year.

19 TRADE PAYABLES AND OTHER LIABILITIES

	Current		Non-current		Total	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
Trade payables	1,272	1,418	–	–	1,272	1,418
Payables due on RRSAs	739	697	–	–	739	697
Amounts owed to joint ventures and associates	486	583	–	–	486	583
Customer concession credits	1,106	1,536	399	514	1,505	2,050
Warranty credits	201	173	161	196	362	369
Accruals	1,361	1,322	192	117	1,553	1,439
Deferred receipts from RRSA workshare partners	23	17	484	507	507	524
Government grants [1]	28	16	39	66	67	82
Other taxation and social security	40	127	–	7	40	134
Other payables [2]	760	764	300	515	1,060	1,279
	6,016	6,653	1,575	1,922	7,591	8,575

Trade payables and other liabilities are analysed as follows:		
Financial instruments (note 20):		
Trade payables and similar items	4,045	4,128
Other non-derivative financial liabilities	2,403	3,021
Non-financial instruments	1,143	1,426
	7,591	8,575

[1] During the year, £13m, including £1m in discontinued operations, (2020: £10m) of government grants were released to the income statement.
[2] 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 to 120 days. The Group offers reduced payment terms for smaller suppliers, so that they are paid in 30 days. In line with civil aviation industry practice, the Group offers a supply chain financing (SCF) programme in partnership with banks to enable suppliers, including joint ventures, who are on standard 75-day payment terms to receive their payments sooner. The SCF programme is available to suppliers at their discretion and does not change rights and obligations with suppliers nor the timing of payment of suppliers. At 31 December 2021, suppliers had drawn £540m under the SCF scheme (2020: £582m).

Carrying values and fair values of financial instruments

	Notes	Basis for determining fair value	Assets: Fair value through profit or loss £m	Assets: Fair value through OCI £m	Assets: Amortised cost £m	Liabilities: Fair value through profit or loss £m	Liabilities: Other £m	Total £m
2021								
Other non-current asset investments	12	A	36	–	–	–	–	36
Trade receivables and similar items	14	B/C	–	17	3,449	–	–	3,466
Other non-derivative financial assets	14	B	–	–	705	–	–	705
Other assets		D	28	–	–	–	–	28
Derivative financial assets [1]		C	379	–	–	–	–	379
Short-term investments		B	–	–	8	–	–	8
Cash and cash equivalents	16	B	49	–	2,572	–	–	2,621
Borrowings	17	E/F	–	–	–	–	(6,032)	(6,032)
Lease liabilities	17	G	–	–	–	–	(1,744)	(1,744)
Derivative financial liabilities [1]		C	–	–	–	(3,292)	–	(3,292)
Financial RRSAs		H	–	–	–	–	(12)	(12)
Other liabilities		H	–	–	–	–	(75)	(75)
C Shares		B	–	–	–	–	(25)	(25)
Trade payables and similar items	19	B	–	–	–	–	(4,045)	(4,045)
Other non-derivative financial liabilities	19	B	–	–	–	–	(2,403)	(2,403)
Contract liabilities	15	B	–	–	–	–	(264)	(264)
			492	17	6,734	(3,292)	(14,600)	(10,649)
2020								
Other non-current asset investments	12	A	19	–	–	–	–	19
Trade receivables and similar items	14	B/C	–	938	2,646	–	–	3,584
Other non-derivative financial assets	14	B	–	–	740	–	–	740
Other assets		D	28	–	–	–	–	28
Derivative financial assets [1]		C	766	–	–	–	–	766
Cash and cash equivalents [2]	16	B	669	–	2,783	–	–	3,452
Borrowings	17	E/F	–	–	–	–	(5,287)	(5,287)
Lease liabilities	17	G	–	–	–	–	(2,043)	(2,043)
Derivative financial liabilities [1]		C	–	–	–	(3,472)	–	(3,472)
Financial RRSAs		H	–	–	–	–	(81)	(81)
Other		H	–	–	–	–	(73)	(73)
C Shares		B	–	–	–	–	(28)	(28)
Trade payables and similar items	19	B	–	–	–	–	(4,128)	(4,128)
Other non-derivative financial liabilities	19	B	–	–	–	–	(3,021)	(3,021)
Contract liabilities	15	B	–	–	–	–	(186)	(186)
			1,482	938	6,169	(3,472)	(14,847)	(9,730)

[1] In the event of counterparty default relating to derivative financial assets and liabilities, offsetting would apply and financial assets and liabilities held with the same counterparty would net off. If this occurred with every counterparty, total financial assets would be nil (2020: £43m) and liabilities £2,913m (2020: £2,749m).
[2] Cash and cash equivalents for 2020 have been re-presented to exclude cash held for sale.

20 FINANCIAL INSTRUMENTS – CONTINUED

Fair values equate to book values for both 2021 and 2020, with the following exceptions:

	Basis for determining fair value	2021 Book value £m	2021 Fair value £m	2020 Book value £m	2020 Fair value £m
Borrowings	E	(4,038)	(4,106)	(4,886)	(4,814)
Borrowings	F	(1,994)	(2,122)	(401)	(403)
Financial RRSAs	H	(12)	(13)	(81)	(89)

The fair value of a financial instrument is the price at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. Fair values have been determined with reference to available market information at the balance sheet date, using the methodologies described below. There have been no transfers during the year from or to level 3 valuation.

A These primarily comprise unconsolidated companies where fair value approximates to the book value.
B Fair values are assumed to approximate to cost either due to the short-term maturity of the instruments or because the interest rate of the investments is reset after periods not exceeding six months. Money market funds are valued using level 1 methodology.
C Fair values of derivative financial assets and liabilities and trade receivables held to collect or sell are estimated by discounting expected future contractual cash flows using prevailing interest rate curves. For commodity derivatives forward commodity prices are used to determine expected future cash flows. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. These financial instruments are included on the balance sheet at fair value, derived from observable market prices (Level 2 as defined by IFRS 13 *Fair Value Measurement*).
D Other assets are included on the balance sheet at fair value, derived from observable market prices or latest forecast (Level 2/Level 3 as defined by IFRS 13). At 31 December 2021, Level 3 assets totalled £15m (2020: £15m).
E Borrowings are carried at amortised cost. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. The fair value of borrowings is estimated using quoted prices (Level 1 as defined by IFRS 13).
F Borrowings are carried at amortised cost. Amounts denominated in foreign currencies are valued at the exchange rate prevailing at the balance sheet date. The fair value of borrowings is estimated by discounting contractual future cash flows (Level 2 as defined by IFRS 13).
G The fair value of lease liabilities are estimated by discounting future contractual cash flows using either the interest rate implicit in the lease or the Group's incremental cost of borrowing (Level 2 as defined by IFRS 13).
H The fair value of RRSAs and other liabilities are estimated by discounting expected future cash flows. The contractual cash flows are based on future trading activity, which is estimated based on latest forecasts (Level 3 as defined by IFRS 13).

IFRS 13 defines a three level valuation hierarchy:
Level 1 – quoted prices for similar instruments;
Level 2 – directly observable market inputs other than Level 1 inputs; and
Level 3 – inputs not based on observable market data.

Carrying values of other financial assets and liabilities

	Foreign exchange contracts £m	Commodity contracts £m	Interest rate contracts[1] £m	Total derivatives £m	Financial RRSAs £m	Other £m	C Shares £m	Total £m
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)
2020								
Non-current assets	396	18	258	672	–	15	–	687
Current assets	45	7	42	94	–	13	–	107
Assets	441	25	300	766	–	28	–	794
Current liabilities	(522)	(17)	(11)	(550)	(5)	(25)	(28)	(608)
Non-current liabilities	(2,790)	(19)	(113)	(2,922)	(76)	(48)	–	(3,046)
Liabilities	(3,312)	(36)	(124)	(3,472)	(81)	(73)	(28)	(3,654)
	(2,871)	(11)	176	(2,706)	(81)	(45)	(28)	(2,860)

[1] Includes the foreign exchange impact of cross-currency interest rate swaps.

20 FINANCIAL INSTRUMENTS – CONTINUED

Derivative financial instruments

The Group uses various financial instruments to manage its exposure to movements in foreign exchange rates. The Group uses commodity swaps to manage its exposure to movements in the price of commodities (jet fuel and base metals). To hedge the currency risk associated with a borrowing denominated in a foreign currency, the Group has currency derivatives designated as part of fair value or cash flow hedges. The Group uses interest rate swaps and forward rate agreements to manage its exposure to movements in interest rates.

Movements in the fair values of derivative financial assets and liabilities were as follows:

	Foreign exchange instruments		Commodity instruments		Interest rate instruments – hedge accounted [2]		Interest rate instruments – non-hedge accounted		Total	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
At 1 January	(2,871)	(3,104)	(11)	12	233	229	(57)	14	(2,706)	(2,849)
Movements in fair value hedges	–	–	–	–	(143)	139	–	–	(143)	139
Movements in cash flow hedges	(13)	18	4	6	(2)	(60)	–	–	(11)	(36)
Movements in other derivative contracts [1]	(681)	(23)	63	(62)	–	–	80	(75)	(538)	(160)
Contracts settled	538	238	(9)	33	(31)	(75)	14	4	512	200
Reclassification to held for sale	(12)	–	(15)	–	–	–	–	–	(27)	–
At 31 December	(3,039)	(2,871)	32	(11)	57	233	37	(57)	(2,913)	(2,706)

[1] Included in net financing.
[2] Includes the foreign exchange impact of cross-currency interest rate swaps.

Financial risk and revenue sharing arrangements (RRSAs) and other financial assets and liabilities

The Group has financial liabilities arising from financial RRSAs. These financial liabilities are valued at each reporting date using the amortised cost method. This involves calculating the present value of the forecast cash flows of the arrangements using the internal rate of return at the inception of the arrangements as the discount rate.

Movements in the carrying values were as follows:

	Financial RRSAs		Other – assets		Other – liabilities	
	2021 £m	2020 £m	2021 £m	2020 £m	2021 £m	2020 £m
At 1 January	(81)	(110)	15	16	(73)	(72)
Exchange adjustments included in OCI	4	(6)	–	–	4	(2)
Additions	–	–	–	–	(9)	(17)
Financing charge [1]	–	(3)	–	–	(1)	(13)
Excluded from underlying profit:						
Changes in forecast payments [1]	(7)	(3)	–	–	–	–
Cash paid	3	39	–	(1)	3	18
Other	–	–	–	–	1	13
Reclassification to held for sale	69	2	–	–	–	–
At 31 December	(12)	(81)	15	15	(75)	(73)

[1] Included in financing.

20 FINANCIAL INSTRUMENTS – CONTINUED

Effect of hedging instruments on the financial position and performance

To manage the risk of changes in the fair values of fixed rate borrowings (the hedged items), the Group has entered into fixed-to-floating interest rate swaps (the hedging instruments) which, for accounting purposes, are designated as fair value hedges. The impact of fair value hedges on the financial position and performance of the Group is as follows:

	Hedged item [1]				Hedging instrument [2]						
	Nominal £m	FV adjustment in the period £m	FV adjustment since inception £m	Carrying amount £m	Nominal £m	Carrying amount asset £m	Carrying amount liability £m	FV movement in the period £m	Hedge ineffect-iveness in the period [3] £m	Weighted average FX rate	Weighted average interest rate [4]
At 31 December 2021											
Sterling	**(375)**	**27**	**(19)**	**(394)**	**375**	**19**	**–**	**(27)**	**–**	**1.00**	**SONIA + 0.893**
US Dollar	**(658)**	**19**	**(125)**	**(781)**	**658**	**116**	**–**	**(20)**	**(1)**	**1.52**	**SONIA + 1.4658**
Euro	**(968)**	**91**	**1**	**(965)**	**968**	**–**	**(21)**	**(90)**	**1**	**1.91**	**SONIA + 0.9185**
At 31 December 2020											
Sterling	(375)	(10)	(46)	(420)	375	46	–	10	–	1.00	GBP LIBOR + 0.893
US Dollar	(658)	(18)	(144)	(800)	658	136	–	14	(4)	1.52	GBP LIBOR + 1.4658
Euro	(1,607)	(97)	(131)	(1,735)	1,607	111	–	90	(7)	1.15	GBP LIBOR + 0.8301

1 Hedged items are included in borrowings in the balance sheet.
2 Hedging instruments are included in other financial assets or liabilities in the balance sheet.
3 Hedge ineffectiveness is included in net financing in the income statement.
4 In anticipation of the cessation of GBP LIBOR at the end of 2021, the Group confirmed its adherence to the ISDA 2020 IBOR Fallbacks Protocol. Therefore the interest rate applicable to these swaps has been updated to Fallback Rate (SONIA plus credit adjustment spread) as defined in supplement 70 to the 2006 ISDA definitions which will be applied from 2022 onwards.

To manage the foreign exchange rate risk in cash flows on fixed-rate non-GBP borrowings (the hedged items), the Group has entered into fixed-to-fixed cross-currency interest rate swaps (the hedging instruments) to hedge the cash flows into GBP which, for accounting purposes, are designated as cash flow hedges. The impact of cash flow hedges on the financial position and performance of the Group is as follows:

	Hedged item		Hedging instrument [1]						Cash flow hedge reserve		
	Nominal £m	FV movement in the period £m	Nominal £m	Carrying amount £m	FV movement in the period £m	Hedge ineffect-iveness in the period £m	Weighted average FX rate	Weighted average interest rate	Amount recognised in OCI £m	Recycled to net financing £m	Closing cash flow hedge reserve £m
At 31 December 2021											
US Dollar	**(772)**	**(35)**	**772**	**(20)**	**35**	**–**	**1.29**	**5.3263**	**(36)**	**10**	**(10)**
Euro	**(677)**	**32**	**677**	**(37)**	**(32)**	**(1)**	**1.11**	**5.4463**	**39**	**(51)**	**(10)**
At 31 December 2020											
US Dollar	(772)	55	772	(55)	(55)	–	1.29	5.3263	55	(39)	16
Euro	(677)	5	677	(5)	(5)	–	1.11	5.4463	5	(3)	2

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

Risk management policies and hedging activities

The principal financial risks to which the Group is exposed are: foreign currency exchange rate risk; liquidity risk; credit risk; interest rate risk; and commodity price risk. The Board has approved policies for the management of these risks.

Foreign currency exchange rate risk – The Group has significant cash flows (most significantly USD, followed by the EUR) denominated in currencies other than the functional currency of the relevant trading entity. To manage its exposures to changes in values of future foreign currency cash flows, so as to maintain relatively stable long-term foreign exchange rates on settled transactions, the Group enters into derivative forward foreign currency transactions.

The Group economically hedges its GBP/USD exposure by forecasting highly probable net USD receipts up to ten years forward. Hedges are taken out within prescribed maximum and minimum hedge positions set out in the Group FX policy. The maximum and minimum policy bands decline gradually over the ten-year horizon and are calculated as a percentage of forecast net income. A similar policy is operated for the Group's EUR/USD exposure. For accounting purposes, these derivative contracts are not designated in hedging relationships with the exception of those taken out by the Group's Spanish subsidiary, ITP Aero, where they are designated in cash flow hedges. ITP Aero is exposed predominantly to net USD receipts that it hedges against EUR using foreign exchange forward contracts.

The Group also has exposures to cash flows on EUR and USD denominated fixed rate borrowings. To manage its exposures to changes in values of future foreign currency cash flows, the Group has entered into fixed-to -fixed cross-currency interest rate swaps which for accounting purposes are designated as cash flow hedges. The swaps have similar critical terms to the hedged items, such as the initial exchange amounts, payment dates and maturities. Therefore, there is an economic relationship and the hedge ratio is established as 1:1. Possible sources of ineffectiveness in the cash flow hedge relationship are changes in the credit risk of either party to the interest rate swap. Another possible source of ineffectiveness would be if the notional of the borrowings is less than the notional of the derivative, for example in the event of a partial repayment of hedged debt prior to its maturity.

The Group regards its interests in overseas subsidiary companies as long-term investments. The Group aims to match its translational exposures by matching the currencies of assets and liabilities.

Liquidity risk – The Group's policy is to hold financial investments and maintain undrawn committed facilities at a level sufficient to ensure that the Group has available funds to meet its medium-term capital and funding obligations and to meet any unforeseen obligations and opportunities. The Group holds cash and short-term investments, which together with the undrawn committed facilities, enable the Group to manage its liquidity risk.

Credit risk – The Group is exposed to credit risk to the extent of non-payment by either its customers or the counterparties of its financial instruments. The effective monitoring and controlling of credit risk is a key component of the Group's risk management activities. The Group has credit policies covering both trading and financial exposures. Credit risks arising from treasury activities are managed by a central treasury function in accordance with the Group credit policy. The objective of the policy is to diversify and minimise the Group's exposure to credit risk from its treasury activities by ensuring the Group transacts strictly with 'BBB' or higher rated financial institutions based on pre-established limits per financial institution. At the balance sheet date, there were no significant concentrations of credit risk to individual customers or counterparties. The Group's revenue is generated from customers located across multiple geographical locations (see note 2), these customers are typically: airframers and airline operators relating to Civil Aerospace; government defence departments for the UK and US; multiple smaller entities for Power Systems; and aero engine manufacturers for ITP Aero. Whilst there are a limited number of customers related to Civil Aerospace and Defence, they are spread across various geographical locations. The maximum exposure to credit risk at the balance sheet date is represented by the carrying value of each financial asset, including derivative financial instruments.

Interest rate risk – The Group's interest rate risk is primarily in relation to its fixed rate borrowings (fair value risk), floating rate borrowings and cash and cash equivalents (cash flow risk). Interest rate derivatives are used to manage the overall interest rate profile of the Group. The fixed or floating rate interest rate decision on long-term borrowings is determined for each new agreement at the point it is entered into. The aggregate interest rate position of the Group is reviewed regularly and can be revised at any time in order to react to changes in market conditions or circumstances.

The Group also has exposures to the fair values of non-derivative financial instruments such as EUR, GBP and USD fixed rate borrowings. To manage the risk of changes in these fair values, the Group has entered into fixed-to-floating interest rate swaps and cross-currency interest rate swaps which for accounting purposes are designated as fair value hedges. The swaps have similar critical terms to the hedged items, such as the reference rate, reset dates, notional amounts, payment dates and maturities. Therefore, there is an economic relationship and the hedge ratio is established as 1:1. Possible sources of ineffectiveness in the fair value hedge relationship are changes in the credit risk of either party to the interest rate swap and, for cross-currency interest rate swaps, the cross-currency basis risk as this risk is present in the hedging instrument only. Another possible source of ineffectiveness would be if the notional of the borrowings is less than the notional of the derivative, for example in the event of a partial repayment of hedged debt prior to its maturity.

The Group has exposure to changes in cash flows due to changes in interest rates. To manage this risk the Group has entered into floating-to-fixed interest rate swaps to hedge a proportion of its floating rate exposure to fixed rates. The swaps have similar critical terms to the floating leg of swaps that form part of the fair value hedges, such as the reference rate, reset dates, notional amounts, payment dates and maturities. For accounting purposes, these derivative contracts are generally not designated as hedging instruments.

20 FINANCIAL INSTRUMENTS – CONTINUED

ITP Aero, has also entered into a floating-to-fixed interest rate swap to hedge the cash flow risk on a floating rate borrowing which for accounting purposes is designated as a cash flow hedge.

Commodity risk – The Group has exposures to the price of jet fuel and base metals arising from business operations. To minimise its cash flow exposures to changes in commodity prices, the Group enters into derivative commodity transactions. The commodity hedging policy is similar to the Group FX policy, in that the Group forecasts highly probable exposures to commodities, and takes out hedges within prescribed maximum and minimum levels as set out in the policy. The maximum and minimum policy bands decline gradually over time. For accounting purposes, these derivative contracts are generally not designated in hedging relationships.

Other price risk – The Group's cash equivalent balances represent investments in money-market instruments, with a term of up to three months. The Group does not consider that these are subject to significant price risk.

Derivative financial instruments

The nominal amounts, analysed by year of expected maturity, and fair values of derivative financial instruments are as follows:

		Expected maturity				Fair value	
	Nominal amount £m	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Assets £m	Liabilities £m
At 31 December 2021							
Foreign exchange contracts:							
Non-hedge accounted	**28,767**	**6,975**	**8,139**	**12,471**	**1,182**	**171**	**(3,210)**
Interest rate contracts:							
Fair value hedges	**2,001**	**–**	**–**	**1,517**	**484**	**135**	**(21)**
Cash flow hedges	**1,449**	**–**	**–**	**677**	**772**	**–**	**(57)**
Non-hedge accounted	**2,001**	**–**	**–**	**1,517**	**484**	**41**	**(4)**
Commodity contracts:							
Non-hedge accounted	**179**	**85**	**60**	**34**	**–**	**32**	**–**
	34,397	**7,060**	**8,199**	**16,216**	**2,922**	**379**	**(3,292)**
At 31 December 2020							
Foreign exchange contracts:							
Cash flow hedges [1]	544	206	187	151	–	30	(4)
Non-hedge accounted	35,715	6,172	6,495	17,956	5,092	411	(3,308)
Interest rate contracts:							
Fair value hedges	2,640	639	–	1,142	859	293	–
Cash flow hedges	1,461	4	4	4	1,449	–	(60)
Non-hedge accounted	2,001	–	–	1,142	859	7	(64)
Commodity contracts:							
Cash flow hedges [1]	41	6	7	19	9	12	–
Non-hedge accounted	217	97	77	43	–	13	(36)
	42,619	7,124	6,770	20,457	8,268	766	(3,472)

[1] Cash flow hedges in ITP Aero on foreign exchange contracts and commodity contracts have been held for sale since 30 June 2021.

As described above, all derivative financial instruments are entered into for risk management purposes, although these may not be designated into hedging relationships for accounting purposes.

20 FINANCIAL INSTRUMENTS – CONTINUED

Currency analysis

Foreign exchange contracts are denominated in the following currencies:

	Nominal amount of currencies purchased forward				
	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
At 31 December 2021					
Currencies sold forward:					
Sterling	–	5,479	–	250	5,729
US dollar	19,916	–	2,430	325	22,671
Euro	–	263	–	46	309
Other	2	41	14	1	58
At 31 December 2020					
Currencies sold forward:					
Sterling	–	7,132	–	226	7,358
US dollar	23,857	–	3,910	486	28,253
Euro	5	306	–	161	472
Other	10	116	47	3	176

The nominal value of interest rate and commodity contracts are denominated in the following currencies:

	2021 £m	2020 £m
Sterling	2,376	2,376
US dollar	1,600	1,676
Euro	1,654	2,308

20 FINANCIAL INSTRUMENTS – CONTINUED

Non-derivative financial instruments are denominated in the following currencies:

	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
At 31 December 2021					
Other non-current investments	12	23	1	–	36
Trade receivables and similar items	176	2,776	450	64	3,466
Other non-derivative financial assets	17	640	30	18	705
Other assets	–	28	–	–	28
Short-term investments	–	–	8	–	8
Cash and cash equivalents	700	673	1,135	113	2,621
Assets	905	4,140	1,624	195	6,864
Borrowings	(2,915)	(1,518)	(1,598)	(1)	(6,032)
Lease liabilities	(188)	(1,300)	(48)	(208)	(1,744)
Financial RRSAs	–	–	(12)	–	(12)
Other liabilities	(17)	(58)	–	–	(75)
C Shares	(25)	–	–	–	(25)
Trade payables and similar items	(503)	(3,035)	(444)	(63)	(4,045)
Other non-derivative financial liabilities	(287)	(1,957)	(113)	(46)	(2,403)
Contract liabilities	–	(264)	–	–	(264)
Liabilities	(3,935)	(8,132)	(2,215)	(318)	(14,600)
	(3,030)	(3,992)	(591)	(123)	(7,736)

At 31 December 2020					
Other non-current investments	1	15	3	–	19
Trade receivables and similar items	154	2,933	440	57	3,584
Other non-derivative financial assets	80	599	44	17	740
Other assets	–	28	–	–	28
Cash and cash equivalents [1]	1,436	561	1,314	141	3,452
Assets	1,671	4,136	1,801	215	7,823
Borrowings	(1,266)	(1,526)	(2,494)	(1)	(5,287)
Lease liabilities	(211)	(1,559)	(67)	(206)	(2,043)
Financial RRSAs	–	–	(81)	–	(81)
Other liabilities	(16)	(57)	–	–	(73)
C Shares	(28)	–	–	–	(28)
Trade payables and similar items	(682)	(2,707)	(554)	(185)	(4,128)
Other non-derivative financial liabilities	(333)	(2,540)	(125)	(23)	(3,021)
Contract liabilities	–	(186)	–	–	(186)
Liabilities	(2,536)	(8,575)	(3,321)	(415)	(14,847)
	(865)	(4,439)	(1,520)	(200)	(7,024)

[1] Cash and cash equivalents at 2020 have been re-presented to exclude cash held for sale.

20 FINANCIAL INSTRUMENTS – CONTINUED

Currency exposures

The Group's actual currency exposures on financial instruments, after taking account of derivative foreign currency contracts, which are not designated as hedging instruments for accounting purposes, are as follows:

Functional currency of Group operations	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
At 31 December 2021					
Sterling	–	1	1	(4)	(2)
US dollar	(8)	–	–	4	(4)
Euro	1	(4)	–	3	–
Other	82	14	51	2	149
At 31 December 2020					
Sterling	–	–	–	(4)	(4)
US dollar	(11)	–	(2)	2	(11)
Euro	1	3	–	(17)	(13)
Other	78	9	59	–	146

Ageing beyond contractual due date of financial assets

	Within terms £m	Up to three months overdue £m	Between three months and one year overdue £m	More than one year overdue £m	Total £m
At 31 December 2021					
Other non-current asset investments	36	–	–	–	36
Trade receivables and similar items	2,749	369	211	137	3,466
Other non-derivative financial assets	699	–	5	1	705
Other assets	28	–	–	–	28
Derivative financial assets	379	–	–	–	379
Short-term investments	8	–	–	–	8
Cash and cash equivalents	2,621	–	–	–	2,621
	6,520	369	216	138	7,243
At 31 December 2020					
Other non-current asset investments	19	–	–	–	19
Trade receivables and similar items	2,673	467	373	71	3,584
Other non-derivative financial assets	738	1	–	1	740
Other assets	28	–	–	–	28
Derivative financial assets	766	–	–	–	766
Cash and cash equivalents [1]	3,452	–	–	–	3,452
	7,676	468	373	72	8,589

[1] Cash and cash equivalents at 2020 have been re-presented to exclude cash held for sale.

20 FINANCIAL INSTRUMENTS – CONTINUED

Contractual maturity analysis of non-derivative financial liabilities

	Gross values				
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Carrying value £m
At 31 December 2021					
Borrowings	(259)	(265)	(4,806)	(1,849)	(6,032)
Lease liabilities	(322)	(261)	(724)	(852)	(1,744)
Financial RRSAs	(6)	(5)	(2)	–	(12)
Other liabilities	(27)	(9)	(24)	(15)	(75)
C Shares	(25)	–	–	–	(25)
Trade payables and similar items	(3,815)	(18)	(94)	(118)	(4,045)
Other non-derivative financial liabilities	(1,812)	(83)	(207)	(301)	(2,403)
Contract liabilities	(264)	–	–	–	(264)
	(6,530)	(641)	(5,857)	(3,135)	(14,600)
At 31 December 2020					
Borrowings	(1,174)	(183)	(1,722)	(3,041)	(5,287)
Lease liabilities	(320)	(373)	(746)	(1,091)	(2,043)
Financial RRSAs	(6)	(5)	(7)	(69)	(81)
Other liabilities	(25)	(8)	(23)	(17)	(73)
C Shares	(28)	–	–	–	(28)
Trade payables and similar items	(3,969)	(53)	(23)	(83)	(4,128)
Other non-derivative financial liabilities	(2,260)	(228)	(176)	(357)	(3,021)
Contract liabilities	(186)	–	–	–	(186)
	(7,968)	(850)	(2,697)	(4,658)	(14,847)

Expected maturity analysis of derivative financial instruments

	Gross values				
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Carrying value £m
At 31 December 2021					
Derivative financial assets:					
Cash inflows	840	1,051	3,145	456	
Cash outflows	(811)	(1,017)	(2,922)	(445)	
Other net cash flows [1]	26	27	43	2	
	55	61	266	13	379
Derivative financial liabilities:					
Cash inflows	6,246	7,198	11,441	1,987	
Cash outflows	(6,917)	(8,022)	(13,200)	(2,314)	
Other net cash flows [1]	(2)	(1)	–	–	
	(673)	(825)	(1,759)	(327)	(3,292)
At 31 December 2020					
Derivative financial assets:					
Cash inflows	2,153	984	6,358	2,777	
Cash outflows	(2,038)	(937)	(6,122)	(2,634)	
Other net cash flows [1]	18	20	35	12	
	133	67	271	155	766
Derivative financial liabilities:					
Cash inflows	5,019	5,810	13,308	4,340	
Cash outflows	(5,557)	(6,398)	(15,189)	(4,993)	
Other net cash flows [1]	(36)	(27)	(40)	(4)	
	(574)	(615)	(1,921)	(657)	(3,472)

[1] Derivative financial assets and liabilities that are settled on a net cash basis.

20 FINANCIAL INSTRUMENTS – CONTINUED

Interest rate risk

In respect of income-earning financial assets and interest-bearing financial liabilities, the following table indicates their effective interest rates. The value shown is the carrying amount before taking account of swaps.

	2021			2020		
	Fixed rate £m	Floating rate £m	Total £m	Fixed rate £m	Floating rate £m	Total £m
Short-term investments	–	8	8	–	–	–
Cash and cash equivalents [1]	–	2,621	2,621	–	3,452	3,452
Borrowings	(4,041)	(1,991)	(6,032)	(4,576)	(711)	(5,287)
Lease liabilities	(1,084)	(660)	(1,744)	(1,224)	(819)	(2,043)
	(5,125)	(22)	(5,147)	(5,800)	1,922	(3,878)
Weighted average interest rates						
Borrowings	3.7%	4.1%		3.1%	1.3%	
Lease liabilities [2]	4.0%	2.0%		3.8%	2.4%	

[1] Cash and cash equivalents comprises bank balances and term deposits and earn interest based on short-term floating market interest rates. Cash and cash equivalents at 2020 have been re-presented to exclude cash held for sale.
[2] Interest rates for lease liabilities are considered to be the discount rates at the balance sheet date.

£8m (2020: £15m) of the Group's borrowings (including borrowings classified as held for sale) are subject to the Group meeting certain obligations, including customary financial covenants. If the Group fails to meet its obligations, these arrangements give rights to the lenders, upon agreement, to accelerate repayment of the facilities. At 31 December 2021, none of these were in breach (2020: none). There are no rating triggers contained in any of the Group's facilities that could require the Group to accelerate or repay any facility for a given movement in the Group's credit rating.

£99m (2020: £166m) of the Group's lease liabilities include a customary loan-to-value covenant. The Group has several contractual cures available in the event the stipulated loan-to-value ratio is exceeded. Failure by the Group to satisfy its contractual obligations under the covenant gives rights to the lessor to terminate its lease and claim termination amounts for the outstanding lease balance. At 31 December 2021, none (2020: none) of these were in breach.

Sensitivity analysis

Sensitivities at 31 December (all other variables held constant) – impact on profit after tax and equity	2021 £m	2020 £m
Sterling 10% weaker against the US dollar	(1,687)	(1,992)
Sterling 10% stronger against the US dollar	1,382	1,642
Euro 10% weaker against the US dollar	(227)	(315)
Euro 10% stronger against the US dollar	185	258
Sterling 10% weaker against the Euro	(15)	(14)
Sterling 10% stronger against the Euro	12	12
Commodity prices 10% lower	(17)	(20)
Commodity prices 10% higher	17	20
Interest rates 50 basis points lower	(67)	(77)
Interest rates 50 basis points higher	65	82

C Shares and payments to shareholders

The Company issues non-cumulative redeemable preference shares (C Shares) as an alternative to paying a cash dividend. C Shares in respect of a year are issued in the following year. Shareholders are able to redeem any number of their C Shares for cash. Any C Shares retained attract a dividend of Bank of England base rate on the 0.1p nominal value, paid on a twice-yearly basis, and have limited voting rights. The Company has the option to compulsorily redeem the C Shares, at any time, if the aggregate number of C Shares in issue is less than 10% of the aggregate number of C Shares issued, or on the acquisition or capital restructuring of the Company.

Movements in issued and fully paid C Shares during the year were as follows:

	2021		2020	
	Millions	Nominal value £m	Millions	Nominal value £m
At 1 January	27,540	28	30,608	31
Issued	–	–	88,825	89
Redeemed	(2,612)	(3)	(91,893)	(92)
At 31 December	24,928	25	27,540	28

Payments to shareholders in respect of the year represent the value of C Shares to be issued in respect of the results for the year. There have been no issues (2020: no issues) of C Shares declared in respect of the year to 31 December 2021.

21 PROVISIONS FOR LIABILITIES AND CHARGES

	At 1 January 2021 £m	Charged to income statement [1] £m	Reversed £m	Utilised £m	Transfers to held for sale £m	Exchange differences £m	At 31 December 2021 £m
Trent 1000 exceptional costs	321	80	(45)	(199)	–	–	157
Contract losses	808	272	(190)	(27)	(13)	(5)	845
Restructuring	236	5	(138)	(74)	(5)	(3)	21
Warranty and guarantees	327	84	(5)	(75)	(11)	(15)	305
Customer financing	17	–	–	–	–	–	17
Insurance	60	22	(20)	(10)	–	–	52
Tax related interest and penalties	33	5	(13)	(11)	–	–	14
Employer liability claims	50	3	(3)	(2)	(1)	–	47
Other	93	61	(11)	(17)	–	(2)	124
	1,945	532	(425)	(415)	(30)	(25)	1,582
Current liabilities	826						475
Non-current liabilities	1,119						1,107

[1] The charge to the income statement includes £32m (2020: £48m) as a result of the unwinding of the discounting of provisions previously recognised.

Trent 1000 exceptional costs
In November 2019, the Group announced the outcome of testing and a thorough technical and financial review of the Trent 1000 TEN programme, following technical issues which were identified in 2019, resulting in a revised timeline and a more conservative estimate of durability for the improved HP turbine blade for the TEN variant. During the year, the Group has utilised £199m of the Trent 1000 exceptional costs provision. This represents customer disruption costs settled in cash and credit notes, and remediation shop visit costs. 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. In the year, additional contract losses for the Group of £272m have been recognised as a result of changes in future cost estimates, primarily in relation to LTSA shop visits; £20m was a result of revised estimates in relation to climate change. Contract losses of £190m previously recognised have been reversed following a reassessment of the number of engines impacted by the Trent 1000 technical issues and the cost of meeting contractual obligations. 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. From 1 January 2022, provisions for contract losses will be measured on a fully costed basis. See note 1 for further detail.

Warranties 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.

Restructuring
In May 2020, the Group announced a fundamental restructuring programme in response to the financial and operational impact caused by COVID-19 with a plan to remove at least 9,000 roles across the Group. During the year, £74m of the provision was utilised as part of these plans and £138m of the provision released following reassessment of the anticipated cost per role and a higher than expected rate of natural attrition. The remaining provision is expected to be utilised by the end of 2022.

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 $1.7bn (2020: $1.9bn) (on a discounted basis) to provide facilities to enable customers to purchase aircraft (of which approximately $952m 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, including the COVID-19 pandemic, 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.

Commitments on delivered aircraft in excess of the amounts provided are shown in the table on page 172. 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 commitments are denominated in US dollars. As the Group does not generally adopt cash flow hedge accounting for future foreign exchange transactions, this amount is reported together with the sterling equivalent at the reporting date spot rate. The values of aircraft providing security are based on advice from a specialist aircraft appraiser.

21 PROVISIONS FOR LIABILITIES AND CHARGES – CONTINUED

	2021		2020	
	£m	*$m*	£m	*$m*
Gross commitments	32	*43*	38	*52*
Value of security [1]	(10)	*(13)*	(14)	*(19)*
Guarantees	(2)	*(3)*	(5)	*(6)*
Net commitments	20	*27*	19	*27*
Net commitments with security reduced by 20% [1]	22	*29*	22	*30*

[1] Although sensitivity calculations are complex, the reduction of relevant security by 20% illustrates the sensitivity of the contingent liability to changes in this assumption.

Insurance
The Group's captive insurance company retains a portion of the exposures it insures on behalf of the remainder of the Group which include policies for aviation claims, employer liabilities and healthcare claims. Significant delays can occur in the notification and settlement of claims and judgement is involved in assessing outstanding liabilities, the ultimate cost and timing of which cannot be known with certainty at the balance sheet date. The insurance provisions are based on information currently available, however, it is inherent in the nature of the business that ultimate liabilities may vary if the frequency or severity of claims differs from estimated. Provisions for outstanding claims are established to cover the outstanding expected liability as well as claims incurred but not yet reported.

Tax related interest and penalties
Provisions for tax related interest and penalties relate to uncertain tax positions in some of the jurisdictions in which the Group operates. Utilisation of the provisions will depend on the timing of resolution of the issues with the relevant tax authorities.

Employer liability claims
The provision relating to employer healthcare liability claims is as a result of an historical insolvency of the previous provider and is expected to be utilised over the next 30 years.

Other
During the year, £61m of other provisions have been charged to the income statement. The largest item is £29m for costs related to the termination of a contract under which the Group now has an obligation to enter an onerous lease. On commencement of that lease, expected to be in 2022, this balance will be recognised as a lease liability. The additional items that make up the remaining charge in the year are individually immaterial and predominantly relate to claims. At 31 December 2021, other provisions includes those items as well as others (predominantly supplier claims), where the related legal proceedings are ongoing and utilisation will depend upon their resolution. The value of the provision reflects the single most likely outcome in each case.

22 POST-RETIREMENT BENEFITS

The Group operates a number of defined benefit and defined contribution schemes:

- The UK defined benefit scheme is funded, with the assets held in a separate trustee administered fund. Employees are entitled to retirement benefits based on either their final or career average salaries and length of service. On 31 December 2020, the scheme was closed to future accrual.
- Overseas defined benefit schemes are a mixture of funded and unfunded plans and provide benefits in line with local practice. Additionally in the US, and to a lesser extent in some other countries, the Group's employment practices include the provision of healthcare and life insurance benefits for retired employees. These schemes are unfunded.

The valuations of the defined benefit schemes are based on the results of the most recent funding valuation, where relevant, updated by the scheme actuaries to 31 December 2021.

Changes to the UK defined benefit scheme
On 20 May 2020, the Group announced its intention to reshape and resize the Group due to the financial and operational impact of COVID-19. As part of this restructuring programme, a voluntary severance programme was offered to certain UK employees and pension liabilities were remeasured in 2020 to reflect the number of members who were expected to leave the scheme. During the year, a £4m past service credit has arisen from the updated scope of the fundamental restructuring programmes following a higher than expected rate of natural attrition.

On the 29 July 2020, the Group announced a consultation with the active members of the UK scheme on a proposal to close the scheme to future accrual on 31 December 2020. As at 31 December 2020, a non-underlying past-service credit of £67m was recognised. Following the confirmation of the scheme closure, the Group held discussions with the employees' representatives and the Trustee regarding additional transitional protections that could be granted from the scheme. At 31 December 2021, £7m had been recognised as a non-underlying past service credit which relates to the differences between the final protections agreed and the obligation estimated at 31 December 2020.

During the year to 31 December 2021, 236 employed deferred members transferred employment in anticipation of a business disposal. As a consequence of this, a £4m non-underlying past service credit has been recognised.

22 POST-RETIREMENT BENEFITS – CONTINUED

Amounts recognised in the income statement

	2021			2020		
	UK schemes £m	**Overseas schemes £m**	**Total £m**	UK schemes £m	Overseas schemes £m	Total £m
Defined benefit schemes:						
Current service cost and administrative expenses	**10**	**61**	**71**	153	67	220
Past-service (credit)/cost [1]	**(15)**	**(33)**	**(48)**	(308)	20	(288)
	(5)	**28**	**23**	(155)	87	(68)
Defined contribution schemes	**146**	**81**	**227**	80	84	164
Operating cost	**141**	**109**	**250**	(75)	171	96
Net financing (credit)/charge in respect of defined benefit schemes	**(16)**	**19**	**3**	(26)	27	1
Total income statement charge	**125**	**128**	**253**	(101)	198	97

[1] The past service credit recognised during the year comprises the changes in the UK schemes above and £32m from the remeasurement of the US defined benefit liability to remove spousal benefits not included in the plan benefits. During the year to 31 December 2020, a UK past-service credit of £308m was recognised which comprised £213m arising from the restructuring programme and the introduction of the bridging pension option (BPO), £67m as a result of the closure of the scheme to future accrual, £35m as a result of changes to management benefits and a £7m past-service cost recognised as a result of the 20 November High Court judgement that previous statutory transfer values including guaranteed minimum pensions built up between May 1990 and April 1997 must be equalised between men and women.

The operating cost is charged as follows:

	Defined benefit		Defined contribution		Total	
	2021 £m	2020 £m	**2021 £m**	Restated 2020 £m	**2021 £m**	Restated 2020 £m
Cost of sales	**50**	170	**158**	115	**208**	285
Commercial and administrative costs	**(38)**	(271)	**32**	21	**(6)**	(250)
Research and development costs	**11**	33	**35**	23	**46**	56
	23	(68)	**225**	159	**248**	91
Discontinued operations	**–**	–	**2**	5	**2**	5
	23	(68)	**227**	164	**250**	96

Pension contributions to UK pension arrangements are generally paid via a salary sacrifice scheme under which employees agree to a reduction in gross contractual pay in return for the Group making additional pension contributions on their behalf. As a result, there is a decrease in wages and salaries and a corresponding increase in pension costs of £45m (2020: £46m) in the year.

Net financing comprises:

	2021			2020		
	UK schemes £m	**Overseas schemes £m**	**Total £m**	UK schemes £m	Overseas schemes £m	Total £m
Financing on scheme obligations	**137**	**41**	**178**	148	54	202
Financing on scheme assets	**(153)**	**(22)**	**(175)**	(174)	(27)	(201)
Net financing (income)/charge in respect of defined benefit schemes	**(16)**	**19**	**3**	(26)	27	1
Financing income on scheme surpluses	**(16)**	**(1)**	**(17)**	(26)	(2)	(28)
Financing cost on scheme deficits	**–**	**20**	**20**	–	29	29

Amounts recognised in OCI in respect of defined benefit schemes

	2021			2020		
	UK schemes £m	**Overseas schemes £m**	**Total £m**	UK schemes £m	Overseas schemes £m	Total £m
Actuarial gains and (losses) arising from:						
Demographic assumptions [1]	**(101)**	**(2)**	**(103)**	(85)	34	(51)
Financial assumptions [2]	**416**	**159**	**575**	(1,387)	(246)	(1,633)
Experience adjustments [3]	**(88)**	**12**	**(76)**	(157)	(7)	(164)
Return on scheme assets excluding financing income [2]	**(112)**	**(30)**	**(142)**	1,166	92	1,258
	115	**139**	**254**	(463)	(127)	(590)

[1] For the UK scheme, this reflects latest available CMI mortality projections and an update of the post-retirement mortality assumptions based on an analysis prepared for the 31 March 2020 funding valuation.
[2] These arise primarily due to changes in interest rates and inflation.
[3] This reflects updated membership data available from the 31 March 2020 funding valuation, actual experience of options selected by members leaving employment under the voluntary severance arrangements (see above) offset by lower than expected pension and deferred pension increases.

22 POST-RETIREMENT BENEFITS – CONTINUED

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

	2021			2020		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Present value of funded obligations	(8,010)	(863)	(8,873)	(8,879)	(895)	(9,774)
Fair value of scheme assets	9,128	861	9,989	9,762	894	10,656
Net asset/(liability) on funded schemes	1,118	(2)	1,116	883	(1)	882
Present value of unfunded obligations	–	(1,341)	(1,341)	–	(1,568)	(1,568)
Net asset/(liability) recognised in the balance sheet	1,118	(1,343)	(225)	883	(1,569)	(686)
Post-retirement scheme surpluses [1]	1,118	30	1,148	883	24	907
Post-retirement scheme deficits	–	(1,373)	(1,373)	–	(1,580)	(1,580)
Included in liabilities associated with assets held for sale	–	–	–	–	(13)	(13)

[1] The surplus in the UK scheme is recognised as on an ultimate wind-up when there are no longer any remaining members, any surplus would be returned to the Group, which has the power to prevent the surplus being used for other purposes in advance of this event.

Overseas schemes are located in the following countries:

	2021			2020		
	Assets £m	Obligations £m	Net £m	Assets £m	Obligations £m	Net £m
Canada	245	(275)	(30)	243	(293)	(50)
Germany	2	(883)	(881)	2	(1,016)	(1,014)
US pension schemes	614	(643)	(29)	649	(669)	(20)
US healthcare schemes	–	(400)	(400)	–	(469)	(469)
Other	–	(3)	(3)	–	(16)	(16)
Net asset/(liability) recognised in the balance sheet	861	(2,204)	(1,343)	894	(2,463)	(1,569)

Defined benefit schemes

Assumptions

Significant actuarial assumptions for the UK scheme at the balance sheet date were as follows:

		2021	2020
Discount rate		1.90%	1.45%
Inflation assumption (RPI) [1]		3.60%	3.10%
Rate of increase in salaries [2]		n/a	2.55%
Transfer assumption (employed deferred/deferred)		50%/40%	40%/40%
Bridging Pension Option assumption		25%	30%
Life expectancy from age 65:	current male pensioner	21.8 years	21.8 years
	future male pensioner currently aged 45	23.2 years	23.2 years
	current female pensioner	23.6 years	23.6 years
	future female pensioner currently aged 45	25.4 years	25.4 years

[1] This is the assumption for the Retail Price Index. The Consumer Price Index is assumed to be on average 0.55% lower, taking account of the announcement in 2020 that from 2030, RPI will be replaced by CPIH (2020: 0.55% lower).

[2] Following the closure to future accrual during 2020, future salaries do not affect the defined benefit obligation. In 2020, this assumption (with zero increase in 2021) was made to determine the split between past-service credit arising from the closure included in the income statement and the actuarial gain or loss included in OCI.

Discount rates are determined by reference to the market yields on AA rated corporate bonds. The rate is determined by using the profile of forecast benefit payments to derive a weighted average discount rate from the yield curve.

The inflation assumption is determined by the market-implied assumption based on the yields on long-term index-linked government securities and increases in salaries are based on actual experience, allowing for promotion, of the real increase above inflation.

The mortality assumptions adopted for the UK pension schemes are derived from the SAPS S3 'All' actuarial tables, with future improvements in line with the CMI 2020 core projections updated to reflect use of an 'A' parameter of 0.25% for future improvements and long-term improvements of 1.25%. Where appropriate, these are adjusted to take account of the scheme's actual experience.

The assumption for transfers and the BPO has been updated based on actual experience and actuarial advice.

Other assumptions have been set on advice from the actuary, having regard to the latest trends in scheme experience and the assumptions used in the most recent funding valuation. The rate of increase of pensions in payment is based on the rules of the scheme, combined with the inflation assumption where the increase is capped.

22 POST-RETIREMENT BENEFITS – CONTINUED

Assumptions for overseas schemes are less significant and are based on advice from local actuaries. The principal assumptions are:

	2021	2020
Discount rate	2.20%	1.80%
Inflation assumption	2.10%	1.90%
Long-term healthcare cost trend rate	4.75%	4.73%
Male life expectancy from age 65: current pensioner	20.7 years	20.8 years
future pensioner currently aged 45	22.5 years	22.4 years

Changes in present value of defined benefit obligations

	2021			2020		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	(8,879)	(2,463)	(11,342)	(8,499)	(2,194)	(10,693)
Exchange differences	–	49	49	–	(5)	(5)
Current service cost	(4)	(60)	(64)	(147)	(65)	(212)
Past-service cost	15	33	48	308	(15)	293
Finance cost	(137)	(41)	(178)	(148)	(53)	(201)
Contributions by employees	–	(2)	(2)	(2)	(3)	(5)
Benefits paid out [1]	768	101	869	816	100	916
Disposal of businesses	–	12	12	–	–	–
Actuarial gains/(losses)	227	169	396	(1,629)	(225)	(1,854)
Transfers	–	(2)	(2)	–	(3)	(3)
Settlement	–	–	–	422	–	422
At 31 December	(8,010)	(2,204)	(10,214)	(8,879)	(2,463)	(11,342)
Funded schemes	(8,010)	(863)	(8,873)	(8,879)	(895)	(9,774)
Unfunded schemes	–	(1,341)	(1,341)	–	(1,568)	(1,568)
The defined benefit obligations are in respect of:						
Active plan participants [2]	(3,451)	(1,193)	(4,644)	(4,369)	(1,362)	(5,731)
Deferred plan participants	(2,258)	(176)	(2,434)	(2,750)	(197)	(2,947)
Pensioners	(2,301)	(835)	(3,136)	(1,760)	(904)	(2,664)
Weighted average duration of obligations (years)	22	15	21	23	16	22

[1] Benefits paid out includes amounts paid to members transferring out of the scheme. This has increased in 2020 and 2021 as a result of the voluntary severance programme.
[2] Although the UK scheme closed to future accrual on 31 December 2020, members who became deferred as a result of the closure and remain employed by the Group retain some additional benefits compared with other deferred members. The obligations for these members are shown as active plan participants.

Changes in fair value of scheme assets

	2021			2020		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	9,762	894	10,656	9,640	845	10,485
Exchange differences	–	12	12	–	(27)	(27)
Administrative expenses	(6)	(1)	(7)	(6)	(2)	(8)
Financing	153	22	175	174	27	201
Return on plan assets excluding financing	(112)	(30)	(142)	1,166	92	1,258
Contributions by employer [1]	99	63	162	24	56	80
Contributions by employees	–	2	2	2	3	5
Benefits paid out	(768)	(101)	(869)	(816)	(100)	(916)
Settlement	–	–	–	(422)	–	(422)
At 31 December	9,128	861	9,989	9,762	894	10,656
Total return on scheme assets	41	(8)	33	1,340	119	1,459

[1] During the year, contributions by the employer of £99m to the UK scheme were deferred payments paid during the year but related to pensionable service for the prior year.

22 POST-RETIREMENT BENEFITS – CONTINUED

Fair value of scheme assets at 31 December

	2021			2020		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Sovereign debt	5,756	217	5,973	7,220	276	7,496
Derivatives on sovereign debt	–	–	–	–	–	–
Corporate debt instruments	3,122	389	3,511	2,878	521	3,399
Interest rate swaps	54	–	54	52	–	52
Inflation swaps	106	–	106	(55)	–	(55)
Cash and similar instruments [1]	(811)	144	(667)	(1,156)	10	(1,146)
Liability driven investment (LDI) portfolios [2]	8,227	750	8,977	8,939	807	9,746
Listed equities	–	101	101	–	71	71
Unlisted equities	54	–	54	64	–	64
Synthetic equities [3]	43	4	47	41	12	53
Sovereign debt	–	4	4	–	–	–
Corporate debt instruments	802	–	802	709	–	709
Cash	–	2	2	–	6	6
Other	2	–	2	9	(2)	7
At 31 December	9,128	861	9,989	9,762	894	10,656

1 UK cash and similar instruments include repurchase agreements on UK Government bonds amounting to £(1,087)m (2020: £(1,539)m). The latest maturity date for these short-term borrowings is September 2023.
2 A portfolio of gilt and swap contracts, backed by investment-grade credit instruments and diversified liquidity funds, that is designed to hedge the majority of the interest rate and inflation risks associated with the schemes' obligations.
3 Portfolios of swap contracts designed to provide investment returns in line with global equity markets. The maximum exposure (notional value and accrued returns) on the portfolios was £550m (2020: £727m).

The investment strategy for the UK scheme is controlled by the Trustee in consultation with the Group. The scheme assets do not directly include any of the Group's own financial instruments, nor any property occupied by, or other assets used by, the Group. At 31 December 2021, there was no indirect holding of the Group's financial instruments (2020: none).

Future contributions

The Group expects to contribute approximately £66m to its defined benefit schemes in 2022 (2021: £160m): UK: nil, Overseas: £66m (2020: UK: £100m, Overseas: £60m).

In the UK, cash funding is based on a statutory triennial funding valuation process. This process includes a negotiation between the Group and the Trustee on the actuarial assumptions used to value the liabilities (Technical Provisions); assumptions which may differ from those used for accounting set out on page 174. The assumptions used to value Technical Provisions must be prudent rather than a best estimate of the liability. Most notably, the Technical Provision discount rate is currently based upon UK Government yields plus a margin (0.5% at the 31 March 2020 valuation) rather than being based on yields of AA corporate bonds. Following the triennial valuation process, a Schedule of Contributions (SoC) must be agreed which sets out the agreed rate of cash contributions and any contributions from the employer to eliminate a deficit. The most recent valuation, as at 31 March 2020, agreed by the Trustee in June 2021, showed that the UK scheme was estimated to be 105% funded on the Technical Provisions basis. This funding level reflected the short-term market impact of the COVID-19 pandemic. Funding has now returned to pre-pandemic levels and was estimated to be 112% at 31 December 2021. Following the closure of the scheme to future accrual on 31 December 2020, no contributions will be made in respect of future accrual and no deficit reduction contributions are required. The 2021 contributions included above are in respect of 2020 accrual, the payment of some of which were deferred in agreement with the Trustee as a result of the COVID-19 pandemic. All cash due has been paid in full. The current SoC includes an arrangement for potential contributions during 2024 to 2027 (capped at £145m in total) if the Technical Provisions funding position is below 107% at 31 March 2023.

22 POST-RETIREMENT BENEFITS – CONTINUED

Sensitivities

The calculations of the defined benefit obligations are sensitive to the assumptions set out on pages 174 and 175. The following table summarises how the estimated impact of a change in a significant assumption would affect the UK defined benefit obligation at 31 December 2021, while holding all other assumptions constant. This sensitivity analysis may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

For the most significant funded schemes, the investment strategies hedge the risks from interest rates and inflation measured on a proxy solvency basis.

For the UK scheme, the interest rate and inflation hedging is currently based on UK Government bond yields without any adjustment for any credit spread. The sensitivity analysis set out below have been determined based on a method that estimates the impact on the defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

		2021 £m	2020 £m
Reduction in the discount rate of 0.25% [1]	Obligation	(460)	(530)
	Plan assets (LDI portfolio)	484	602
Increase in inflation of 0.25% [1]	Obligation	(210)	(290)
	Plan assets (LDI portfolio)	147	267
Increase of 1% in transfer value assumption	Obligations	(55)	(67)
Increase of 5% of transfers instead of BPO	Obligations	(30)	(45)
One year increase in life expectancy	Obligations	(365)	(455)

[1] The differences between the sensitivities on obligations and plan assets arise largely due to differences in the methods used to value the obligations for accounting purposes and the adopted proxy solvency basis.

23 SHARE CAPITAL

	Non-equity		Equity	
	Special Share of £1	Nominal value £m	Ordinary shares of 20p each Millions	Nominal value £m
Issued and fully paid				
At 1 January 2020	1	–	1,931	386
Shares issued on rights issue	–	–	6,437	1,288
At 31 December 2020	1	–	8,368	1,674
At 31 December 2021	**1**	**–**	**8,368**	**1,674**

The rights attaching to each class of share are set out on page 217.

In accordance with IAS 32 *Financial Instruments: Presentation*, the Company's non-cumulative redeemable preference shares (C Shares) are classified as financial liabilities. Accordingly, movements in C Shares are included in note 20.

24 SHARE-BASED PAYMENTS

Effect of share-based payment transactions on the Group's results and financial position

	2021 £m	2020 £m
Total expense recognised for equity-settled share-based payments transactions	28	27
Total credit recognised for cash-settled share-based payments transactions	–	(2)
Share-based payments recognised in the consolidated income statement	28	25
Liability for cash-settled share-based payment transactions	–	–

A description of the share-based payment plans is included in the Directors' Remuneration Report on pages 87 to 104.

Movements in the Group's share-based payment plans during the year

	ShareSave		LTIP	DSBP
	Number Millions	Weighted average exercise price Pence [1]	Number Millions	Number Millions
Outstanding at 1 January 2020	31.9	693	13.2	0.4
Granted	–	–	23.0	0.3
Forfeited	(15.9)	237	(2.8)	–
Exercised	–	–	(3.2)	(0.2)
Changes as a result of the rights issue [1]	33.6	239	37.4	0.9
Outstanding at 1 January 2021	**49.6**	**239**	**67.6**	**1.4**
Granted	56.8	97	33.8	0.1
Forfeited	(31.3)	239	(14.3)	(0.1)
Exercised	–	–	(10.1)	(0.6)
Outstanding at 31 December 2021	**75.1**	**132**	**77.0**	**0.8**
Exercisable at 31 December 2021	–	–	–	–
Exercisable at 31 December 2020	–	–	–	–

[1] The weighted average exercise price for share movements during 2020 was re-based following the rights issue in November 2020.

The weighted average share price at the date share options were exercised was 119p (2020: 203p). The closing price at 31 December 2021 was 123p (2020: 111p).

The weighted average remaining contractual life for the share options as at 31 December 2021 was two years (2020: two years).

Fair values of share-based payment plans

The weighted average fair value per share of equity-settled share-based payment plans granted during the year, estimated at the date of grant, are as follows:

	2021	2020
LTIP	104p	388p
LTIP (ELT & Board)	n/a	354p
ShareSave – three-year grant	67p	n/a
DSBP	105p	490p

LTIP

The fair value of shares awarded is calculated using a pricing model that takes account of the non-entitlement to dividends (or equivalent) during the vesting period and the market-based performance condition based on expectations about volatility and the correlation of share price returns in the group of FTSE 100 companies and which incorporates into the valuation the interdependency between share price performance and TSR vesting. This adjustment decreases the fair value of the award relative to the share price at the date of grant.

ShareSave

The fair value of the options granted is calculated using a pricing model that assumes that participants will exercise their options at the beginning of the six-month window if the share price is greater than the exercise price. Otherwise it assumes that options are held until the expiration of their contractual term. This results in an expected life that falls somewhere between the start and end of the exercise window.

Deferred Share Bonus Plan (DSBP)

The fair value of shares awarded under DSBP is calculated as the share price on the date of the award, excluding expected dividends (or equivalent).

25 CONTINGENT LIABILITIES

Contingent liabilities in respect of customer financing commitments are described in note 21.

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. While the outcome of some of these matters cannot precisely be foreseen, the Directors do not expect any of these arrangements, legal actions or claims, after allowing for provisions already made, to result in significant loss to the Group.

26 RELATED PARTY TRANSACTIONS

	2021 £m	2020 £m
Sales of goods and services to joint ventures and associates [1]	**3,548**	3,768
Purchases of goods and services from joint ventures and associates [1]	**(3,677)**	(4,292)
Lease payments to joint ventures and associates	**(225)**	(226)
Guarantees of joint arrangements' and associates' borrowings	**1**	3
Guarantees of non-wholly owned subsidiaries' borrowings	**3**	3
Dividends received from joint ventures and associates	**27**	60
Other income received from joint ventures and associates	**3**	3

[1] Sales of goods and services to joint ventures and associates and purchases of goods and services from 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 joint ventures and associates are sales of spare engines amounting to £157m (2020: £102m). Profit recognised in the year on such sales amounted to £47m (2020: £91m), including profit on current year sales and recognition of profit deferred on similar sales in previous years. Cash receipts relating to the sale of spare engines amounted to £181m (2020: £193m).

The aggregated balances with joint ventures are shown in notes 14 and 19. Transactions with Group pension schemes are shown in note 22.

In the course of normal operations, related party transactions entered into by the Group have been contracted on an arm's-length basis.

Key management personnel are deemed to be the Directors (pages 71 to 73) and the members of the Executive Team (described on page 70). Remuneration for key management personnel is shown below:

	2021 £m	2020 £m
Salaries and short-term benefits	**20**	7
Post-retirement schemes	**–**	–
Share-based payments	**4**	1
	24	8

More detailed information regarding the Directors' remuneration, shareholdings, pension entitlements, share options and other long-term incentive plans is shown in the Directors' Remuneration Report on pages 87 to 104. The charge for share-based payments above is based on when the award is charged to the income statement in accordance with IFRS 2 *Share-Based Payments*, rather than when the shares vest, which is the basis used in the Directors' Remuneration Report.

27 DISPOSALS, ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

Disposals

On 28 February 2020, the Group announced the decision to carry out a strategic review of Bergen Engines AS, the Group's medium-speed gas and diesel engine business. Bergen Engines AS formed part of the Power Systems business and from 31 December 2020 it has been classified as a disposal group held for sale. During the year to 31 December 2021, an impairment charge of £9m was recognised against the disposal group as a result of a change in the anticipated proceeds. On 31 December 2021, the Group completed the sale of Bergen Engines AS to Langley Holdings plc for a value of €91m. In accordance with IAS 21 *The Effects of Changes in Foreign Exchange Rates*, the Group has recycled the cumulative currency translation reserve through the income statement in 2021.

On 7 December 2020 the Group signed an agreement for the sale of Civil Nuclear Instrumentation & Control business to Framatome and consequently, in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, the business was classified as a disposal group held for sale at 31 December 2020. During the year to 31 December 2021, no impairment charge was recognised. On 5 November 2021, the Group completed the sale to Framatome for a value of £85m. In accordance with IAS 21, the Group has recycled the cumulative currency translation reserve through the income statement in 2021.

	Bergen Engines £m	Civil Nuclear £m	Total subsidiaries £m
Proceeds			
Cash consideration	77	85	162
Cash and cash equivalents disposed	(29)	(14)	(43)
Net cash consideration per cash flow statement	48	71	119
Disposal costs paid	(9)	(3)	(12)
Cash inflow per cash flow statement	39	68	107
Intangible assets	–	16	16
Property, plant and equipment	–	6	6
Right-of-use assets	–	7	7
Deferred tax assets	3	5	8
Inventory	81	17	98
Trade receivables and other assets	70	41	111
Current tax (liabilities)/assets	(1)	3	2
Lease liabilities	(3)	(5)	(8)
Trade payables and other liabilities	(99)	(74)	(173)
Provisions for liabilities and charges	(17)	(4)	(21)
Post-retirement scheme deficits	–	(12)	(12)
Less: Net assets disposed	34	–	34
Profit on disposal before disposal costs and continuing obligations	14	71	85
Cumulative currency translation (loss)/gain	(1)	2	1
Disposal costs	(20)	(3)	(23)
(Loss)/profit before taxation	(7)	70	63

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 €28m is recognised for amounts that are now expected to be payable in relation to the years 2022 and 2023 (2020: €29m liability in relation to the years 2021-2023). Cash of €9m has been paid during the year with an increase in the liability of €8m (£7m) reflected as an adjustment to sales proceeds. The maximum adjustment to sales proceeds has now been provided for in all future years to 2023.

Reconciliation of profit/(loss) to the income statement:

	Total £m
Profit on disposal of businesses (see above)	63
Adjustment to L'Orange sales proceeds	(7)
Profit on acquisition & disposal of businesses per income statement	56

Reconciliation of cash flow on disposal of businesses to the cash flow statement:

	Total £m
Net consideration on disposal of businesses (see above)	107
Cash outflow on disposals completed in prior periods	(8)
Cash flow on disposal of businesses per cash flow statement	99

27 DISPOSALS, ASSETS 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 (see note 2 for more detail) 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 31 December 2021. The assets of ITP Aero have been assessed for impairment in line with the requirements of IFRS 5 and no impairment is required at 31 December 2021. ITP Aero had an additional £153m of cash which was held by another Group company at 31 December 2021 and consequently is not included in the disposal group as the resulting intra-group balances are eliminated on consolidation. On completion, such cash is expected to be included in the disposal group. In addition, the Group records significant adjustments to eliminate the impact of ITP Aero margin within onerous contract provisions within Civil Aerospace. Certain consolidation adjustments are not included in the balances held for sale but will be derecognised upon the sale of ITP Aero and the related income statement charge will be recognised as part of the profit on disposal.

On 13 September 2021, the Group signed an agreement with Equitix Investment Management Limited to dispose its 23.1% shareholding in AirTanker Holdings Limited for a cash consideration of £189m. The sale completed on 9 February 2022. In accordance with IFRS 5, the Group has classified £47m of the AirTanker assets as held for sale at 31 December 2021.

At 31 December 2021, the Group recognised property, plant and equipment and the deferred income of a related grant as held for sale in line with IFRS 5. These assets relate to the Group's site rationalisation activities.

The table below summarises the categories of assets and liabilities classified as held for sale at 31 December 2021 and 2020.

	2021			2020		
	ITP Aero £m	Other [1] £m	Total £m	Bergen Engines £m	Civil Nuclear £m	Total £m
Intangible assets	872	–	872	–	16	16
Property, plant and equipment	313	26	339	3	4	7
Right-of-use assets	12	–	12	2	7	9
Investment in associates and joint ventures	1	34	35	–	–	–
Deferred tax assets	167	–	167	2	4	6
Inventory	222	–	222	97	14	111
Trade receivables and other assets	342	14	356	50	38	88
Cash and cash equivalents	25	–	25	25	26	51
Assets held for sale	1,954	74	2,028	179	109	288
Trade payables and other liabilities	(540)	(7)	(547)	(100)	(84)	(184)
Provisions for liabilities and charges	(22)	–	(22)	(11)	(7)	(18)
Borrowings and lease liabilities	(72)	–	(72)	(4)	(7)	(11)
Deferred tax liabilities	(82)	–	(82)	(2)	–	(2)
Post-retirement scheme deficits	–	–	–	–	(13)	(13)
Liabilities associated with assets held for sale	(716)	(7)	(723)	(117)	(111)	(228)
Net assets/(liabilities) held for sale	1,238	67	1,305	62	(2)	60

[1] Other assets and liabilities held for sale comprise: 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.

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 year that have been classified as discontinued operations.

	2021 £m	2020 £m
Revenue [1]	365	333
Operating loss [1]	(4)	(109)
Profit/(loss) before taxation [1]	2	(111)
Income tax credit	34	43
Profit/(loss) for the year from discontinued operations on ordinary activities	36	(68)
Costs of disposal on discontinued operations [2]	(39)	–
Loss for the year from discontinued operations	(3)	(68)
Net cash inflow from operating activities [2]	12	40
Net cash outflow from investing activities	(32)	(39)
Net cash outflow from financing activities	(25)	(22)
Exchange gain/(losses)	4	(4)
Net change in cash and cash equivalents	(41)	(25)

[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 as held for sale).

[2] Cash flows from operating activities include £39m costs of disposal paid during the year to 31 December 2021 that are not a movement in the cash balance of the disposal group as they were borne centrally.

28 DERIVATION OF SUMMARY FUNDS FLOW STATEMENT

	2021		2020		
	£m	£m	£m	£m	Source
Underlying operating profit/(loss) (see note 2)		414		(2,008)	
Operating loss from discontinued operations (see note 27)		(43)		(109)	
Amortisation and impairment of intangible assets	290		902		Cash flow statement (CFS)
Depreciation and impairment of property, plant and equipment	462		821		CFS
Depreciation and impairment of right-of-use assets	257		732		CFS
Adjustment to residual value guarantees in lease liabilities	(4)		(102)		CFS
Impairment of joint ventures, associates and other investments	7		24		Note 12
Reversal of non-underlying impairments of non-current assets	9		(1,244)		Reversal of underlying adjustment (note 2)
Acquisition accounting	(50)		(85)		Reversal of underlying adjustment (note 2)
Depreciation, amortisation and impairment		971		1,048	
Additions of intangible assets		(185)		(316)	CFS less exceptional restructuring (see below)
Purchases of property, plant and equipment		(311)		(579)	CFS less exceptional restructuring (see below)
Lease payments (capital plus interest)		(403)		(379)	CFS (capital and interest payments adjusted for foreign exchange (FX))
(Increase)/decrease in inventories		(169)		588	CFS
Movement in receivables/payables	(469)		(2,297)		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)	(289)		(263)		CFS adjusted for the impact of exceptional programme charges and FX and excluding Civil LTSAs (shown separately below)
Underlying movement in Civil Aerospace LTSA contract balances	66		479		Movement in Civil LTSA balances within movement of contract balances in CFS less impact of FX
Revaluation of trading assets (excluding exceptional items)	32		219		Adjustment to reflect the impact of the FX contracts held on receivables/payables
Realised derivatives in financing	85		226		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		(575)		(1,636)	
Movement on provisions		(136)		(195)	CFS adjusted for the impact of exceptional programme charges and anticipated recoveries, exceptional restructuring and FX contracts held
Net interest received and paid		(197)		(75)	CFS
Fees paid on undrawn facilities		(62)		(97)	CFS
Cash flows on settlement of excess derivative contracts		(452)		(202)	CFS
Cash flows on financial instruments net of realised losses included in operating profit		(85)		(105)	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		68		(49)	Principally disposals of non-current assets, additions and disposals of other investments, joint venture trading and the effect of share-based payments
Trading cash flow		(1,165)		(4,114)	
Trading cash flow from continuing operations		*(1,211)*		*(4,198)*	
Contributions to defined benefit schemes (in excess of)/less than underlying operating profit charge		(92)		160	CFS
Tax		(185)		(231)	CFS
Free cash flow		(1,442)		(4,185)	
Free cash flow from continuing operations		*(1,485)*		*(4,255)*	

28 DERIVATION OF SUMMARY FUNDS FLOW STATEMENT – CONTINUED

	2021		2020		
	£m	£m	£m	£m	Source
Free cash flow		(1,442)		(4,185)	
Net cash flow from changes in borrowings and lease liabilities	666		1,630		CFS excluding repayment of debt acquired.
(Decrease)/increase in short-term investments	(8)		6		CFS
Movement in net debt from cash flows		658		1,636	
Exclude: Capital element of lease repayments	374		284		CFS
Movement in net debt from cash flows (excluding lease liabilities)		1,032		1,920	
Shareholder payments		(4)		(92)	CFS (includes dividends to NCI)
Proceeds of rights issue (net of expenses and rights taken by employee share trust)		–		1,972	CFS
Acquisition of businesses	–		(130)		CFS
Disposal of businesses	99		23		CFS
Other acquisition and disposals	(50)		(12)		£50m related to costs incurred on central M&A activity.
Changes in Group structure		49		(119)	
Exceptional restructuring costs		(231)		(323)	£168m related to severance costs and £63m capital expenditure (2020: £268m and £55m, respectively)
Financial penalties paid		(156)		(135)	CFS
Other		(23)		(33)	Cash outflow on M&A spend and timing of cash flows on a prior period disposal.
Change in cash and cash equivalents		(775)		(995)	

The comparative information for the year ended 31 December 2020 has been re-presented to be on a comparable basis with the presentation adopted at the year ended 31 December 2021. There is no change to trading or group free cash flow. In summary foreign exchange transactions have been re-presented within line items to be consistent with presentation throughout the financial statements.

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 activity related to business acquisitions or disposals, financial penalties paid, exceptional restructuring costs and foreign exchange changes on net funds. The Board considers that free cash flow reflects cash generated from the Group's underlying trading.

Trading cash flow is defined as free cash flow (as defined above) before the deduction of recurring tax and post-employment benefit expenses.

COMPANY BALANCE SHEET

At 31 December 2021

	Notes	2021 £m	2020 £m
ASSETS			
Investments – subsidiary undertakings	2	14,716	14,688
Trade receivables and other assets	3	1	–
Current assets		1	–
TOTAL ASSETS		14,717	14,688
LIABILITIES			
Trade payables and other liabilities	4	(335)	(331)
Other financial liabilities	5	(25)	(28)
Current liabilities		(360)	(359)
NET ASSETS	7	14,357	14,329
EQUITY			
Called-up share capital	6	1,674	1,674
Share premium		1,012	1,012
Merger reserve		6,962	6,962
Capital redemption reserve		2,747	2,744
Other reserve		303	275
Retained earnings		1,659	1,662
TOTAL EQUITY		14,357	14,329

The Company has elected to take the exemption under section 408 of the Companies Act 2006 from presenting the parent company income statement. The result for the Company for the year was nil (2020: loss of £1m).

The Financial Statements on pages 184 to 189 were approved by the Board on 24 February 2022 and signed on its behalf by:

Warren East
Chief Executive

Panos Kakoullis
Chief Financial Officer

Company's registered number: 7524813

COMPANY STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2021

	Attributable to ordinary shareholders						
	Share capital £m	Share premium £m	Merger reserve [1] £m	Capital redemption reserve £m	Other reserve [2] £m	Retained earnings [3,4] £m	Total equity £m
At 1 January 2020	386	319	7,051	2,652	248	1,765	12,421
Loss for the year	–	–	–	–	–	(1)	(1)
Arising on issues of ordinary shares							
– Rights issue [5]	1,288	693	–	–	–	(10)	1,971
Issue of C Shares	–	–	(89)	–	–	1	(88)
Redemption of C Shares	–	–	–	92	–	(92)	–
Ordinary shares purchased	–	–	–	–	–	(1)	(1)
Share-based payments – direct to equity	–	–	–	–	27	–	27
At 1 January 2021	**1,674**	**1,012**	**6,962**	**2,744**	**275**	**1,662**	**14,329**
Redemption of C Shares	–	–	–	3	–	(3)	–
Share-based payments – direct to equity	–	–	–	–	28	–	28
At 31 December 2021	**1,674**	**1,012**	**6,962**	**2,747**	**303**	**1,659**	**14,357**

1 The Company's merger reserve was created as a result of a High Court approved scheme of arrangement in 2011, when the Company became the holding company for the Rolls-Royce Group.

2 Other reserve represents the value of the share-based payments in respect of employees of subsidiary undertakings for which payment has not been received.

3 The reserves, which are distributable to the Company's equity shareholders, are determined with reference to the Companies Act 2006 and requires judgement in determining the amount available for distribution, subject to the restrictions explained in note 17 of the Consolidated Financial Statements. Further guidance is given in the Institute of Chartered Accountants in England and Wales technical release 02/17BL in relation to what profits can be treated as distributable. At 31 December 2021, all the Company's retained earnings are distributable, however, the available amount may be different at the point any future distributions are made.

4 At 31 December 2021, 29,405,191 ordinary shares with a net book value of £65m (2020: 39,866,717 ordinary shares with a net book value of £89m) were held for the purpose of share-based payment plans and included in accumulated losses. During the year, 10,667,095 ordinary shares with a net book value of £24m (2020: 3,458,865 ordinary shares with a net book value of £29m) vested in share-based payment plans. During the year, the Company acquired none (2020: 85,724) of its ordinary shares via reinvestment of dividends received on its own shares and purchased none (2020: 30,763,282) of its ordinary shares through purchases on the London Stock Exchange.

5 On 12 November 2020, the Company completed a rights issue to existing shareholders on the basis of ten ordinary shares for every three fully-paid ordinary shares held. As a result, 6,436,601,676 ordinary shares with an aggregate nominal value of £1,288m were issued for cash consideration of £2,060m. Transaction costs of £79m were incurred resulting in £693m being recognised in share premium.

1 ACCOUNTING POLICIES

Basis of accounting

Rolls-Royce Holdings plc (the Company) is a public company limited by shares incorporated and domiciled in England in the United Kingdom. These Financial Statements have been prepared in accordance with Financial Reporting Standard 101 *Reduced Disclosure Framework* on the historical cost basis.

These financial statements have been prepared on a going concern basis. Further details are given in the Going Concern Statement on pages 58 to 59. After due consideration, the Directors consider that the Group has sufficient liquidity headroom to continue in operational existence for a period of at least 18 months from the date of this report and there are no material uncertainties that may cast doubt on the Company's going concern status, accordingly they are satisfied that it is appropriate to adopt the going concern basis of accounting in preparing the Company Financial Statements.

In accordance with the Companies Act 2006, the Company Financial Statements have been prepared in accordance with UK-adopted international accounting standards. Where necessary, amendments are made in these Financial Statements in order to comply with Companies Act 2006 and to take advantage of the exemptions available under FRS 101 in respect of the following disclosures:

- a cash flow statement and related notes;
- comparative period reconciliation for investments and financial liabilities;
- comparative period reconciliation for share capital;
- the effects of new, but not yet effective accounting standards; and
- the requirements of IAS 24 *Related Party Transactions* and has, therefore, not disclosed transactions between the Company and its wholly-owned subsidiaries.

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these Financial Statements.

There were no changes to accounting standards that had a material impact on these Financial Statements.

The Company's Financial Statements are presented in sterling, which is the Company's functional currency.

As permitted by section 408 of the Companies Act 2006, a separate income statement for the Company has not been included in these Financial Statements. As permitted by the audit fee disclosure regulations, disclosure of non-audit fees information is not included in respect of the Company.

Key areas of judgement and sources of estimation uncertainty

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires the Directors to exercise their judgement in the process of applying the accounting policies. The Directors have not identified any critical estimates where there is a significant risk of material change in the next 12 months at 31 December 2021.

Key areas of judgements – carrying value of investments in subsidiary undertakings

The carrying value of the investment in subsidiary undertakings is reviewed for indicators of impairment on an annual basis. Where such indicators are present, a quantified impairment test would be required and the value in use calculated based upon a discounted cash flow methodology using the most recent forecasts prepared by management of the Rolls-Royce Holdings plc group. At 31 December 2021, the Directors assessed the impact of new potential indicators of impairment and concluded that there was no risk of impairment. In making this judgement, the Directors considered the headroom determined in the impairment review performed at 31 December 2020 and whether developments in the year could have materially eroded the headroom. As part of this assessment, the Directors considered the:

- performance of the Group in the year compared to the forecasts used in the 2020 impairment model;
- latest forecast of the Group's performance over the next five years compared to those used in the 2020 impairment model;
- improvement in the Group's share price since December 2020;
- results of completed and agreed disposals in the year;
- establishment of the small modular reactors business and continued development of electrical opportunities; and
- movements in the cost of capital which has moderately decreased.

When making these considerations, the Group has assessed the impact of climate change by quantifying the potential impact of carbon prices, commodity prices and aviation and engine demand on the headroom determined in 2020. The assumptions are consistent with those detailed in note 1 of the Consolidated Financial Statements. As a result of this assessment, the Directors did not identify any new potential indicators of impairment and therefore, no impairment test was performed.

Significant accounting policies

Investments in subsidiary undertakings

Investments included in fixed assets are investments in subsidiary companies and these are held at historical cost less impairments which is considered annually by the Directors.

Trade receivables

Trade receivables are recognised initially at the transaction price. They are subsequently measured at amortised cost using the effective interest method, less provision for impairment. A provision for the impairment of trade receivables is established when there is objective evidence that the Company will not be able to collect all amounts due according to the original terms of the receivables. The Company applies the IFRS 9 *Financial Instruments* simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables.

1 ACCOUNTING POLICIES – CONTINUED

Trade payables

Trade payables are recognised initially at the transaction price and subsequently measured at amortised cost using the effective interest method.

Financial instruments

In accordance with IAS 32 *Financial Instruments: Presentation*, the Company's C Shares are classified as financial liabilities and held at amortised cost from the date of issue until redeemed.

Equity

Ordinary shares are classified as equity. Equity instruments are measured at the fair value of the cash or other resources received or receivable, net of the direct costs of issuing the equity instruments. The cost of issuing ordinary shares are charged to the share premium account.

Share-based payments

As described in the Directors' Remuneration Report on pages 87 to 104, the Company grants awards of its own shares to employees of its subsidiary undertakings (see note 24 of the Consolidated Financial Statements). The costs of share-based payments in respect of these awards are accounted for, by the Company, as an additional investment in its subsidiary undertakings. The costs are determined in accordance with IFRS 2 *Share-based Payment*. Any payments made by the subsidiary undertakings in respect of these arrangements are treated as a return of this investment.

2 INVESTMENTS–SUBSIDIARY UNDERTAKINGS

	£m
Cost:	
At 1 January 2021	**14,688**
Cost of share-based payments in respect of employees of subsidiary undertakings less receipts from subsidiaries in respect of those payments	28
At 31 December 2021	**14,716**

Details of the Company's subsidiary undertakings and joint venture and associates undertakings are listed on pages 190 and 195.

The carrying value of the Company's investments in subsidiary undertakings has been reviewed for new indicators of impairment in accordance with IAS 36 *Impairment of Assets*. No indicators of impairment were identified at 31 December 2021.

In the prior year, the recoverable amount was determined based on value in use which required the determination of appropriate assumptions (which were sources of estimation uncertainty) in relation to the cash flow forecasts (including the impact of climate change), the long-term growth rate to be applied and the risk-adjusted discount rate used to discount the estimated cash flows to present value. The considerations of the impact of climate change are included in note 1 of the Consolidated Financial Statements. The Directors determined that no impairment charge was required and an increase in the discount rate used from c. 9% to c. 10% would have caused the carrying amount of the Company's investment to equal its recoverable amount. As per note 1, there has been a moderate decrease in the cost of capital during 2021.

3 TRADE AND OTHER RECEIVABLES

	2021 £m	2020 £m
Other receivables	1	–

4 TRADE AND OTHER PAYABLES

	2021 £m	2020 £m
Amounts owed to subsidiary undertakings	335	331

Amounts owed to subsidiary undertakings are interest-free and repayable on demand.

5 FINANCIAL LIABILITIES

C Shares

Movements during the year were as follows:

	C Shares of 0.1p Millions	Nominal value £m
At 1 January 2021	27,540	28
Redeemed	(2,612)	(3)
At 31 December 2021	24,928	25

The rights attaching to C Shares are set out on page 217.

6 SHARE CAPITAL

	Non-equity			Equity	
	Special Share of £1	Preference shares of £1 each	Nominal value £m	Ordinary shares of 20p each Millions	Nominal value £m
Issued and fully paid					
At 1 January 2021	1	–	–	8,368	1,674
At 31 December 2021	1	–	–	8,368	1,674

The rights attaching to each class of share are set out on page 217.

In accordance with IAS 32, the Company's non-cumulative redeemable preference shares (C Shares) are classified as financial liabilities. Accordingly, movements in C Shares are included in note 5.

7 RECONCILIATION OF NET ASSETS BETWEEN ROLLS-ROYCE HOLDINGS PLC GROUP AND COMPANY

As at 31 December 2021, Rolls-Royce Holdings plc consolidated group had net liabilities of £4.6bn (2020: £4.9bn) compared with £14.4bn (2020: £14.3bn) of net assets of the Company. The Company is a holding company and does not trade in its own right. The Company was incorporated in 2011 and became the Rolls-Royce holding company through a Scheme of Arrangement. On becoming the Rolls-Royce holding company, the value of the Company's investment in subsidiaries was based on the market capitalisation of the Rolls-Royce group at that time. There was an increase in the investment as a result of a capital injection to Rolls-Royce Group Limited during 2020. The Group's Consolidated Financial Statements are prepared on a historical cost basis except where UK adopted international accounting standards requires a valuation basis to be applied (see page 186 for further details). As different principles are applied in preparing the Company and consolidated group balance sheets there is a difference in the financial position reported. Examples of such differences include the following items that are in the Consolidated balance sheet but not reflected in the Company's balance sheet: liabilities of £8,836m as a result of IFRS 15; and financial liabilities of £3,039m arising from the recognition at fair value of foreign exchange derivatives held to manage exposure on the Group's future trading.

8 CONTINGENT LIABILITIES

Where the Company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its group, these guarantee contracts are considered to be contingent liabilities until such time as it becomes probable that the Company will be required to make a payment under the guarantee.

At 31 December 2021, these guarantees amounted to £10,458m (2020: £10,522m) of which total drawn is £5,958m (2020: £5,022m).

9 OTHER INFORMATION

Employees
The Company had no employees in 2021 (2020: none).

Share-based payments
Shares in the Company have been granted to employees of the Group as part of share-based payment plans, and are charged in the employing company.

Emoluments of Directors
The remuneration of the Directors of the Company is shown below, further information is in the Directors' Remuneration Report on pages 87 to 104.

The total amount of remuneration paid to Directors for the year ended 31 December 2021 was £6,920,000 (2020: £2,690,000). £3,840,000 of this was attributed to the highest paid Director (2020: £889,000). A cash allowance in lieu of company contributions to a pensions scheme was also paid to three Directors (2020: two), which totalled £185,000 (2020: £364,000). No Directors exercised share options during the year (2020: none) nor received vested shares under the Long-Term Incentive Plan (2020: none).

No Director accrued any retirement benefits in the year (2020: none).

SUBSIDIARIES

As at 31 December 2021, the companies listed below and on the following pages are indirectly held by Rolls-Royce Holdings plc except Rolls-Royce Group Limited which is 100% directly owned by Rolls-Royce Holdings plc. The financial year end of each company is 31 December unless otherwise indicated.

Company name	Address	Class of shares	% of class held
Aeromaritime America, Inc.	M&H Agent Services, Inc., 1850 North Central Avenue, Suite 2100, Phoenix, Arizona 85004, United States	Common	100
Aeromaritime Mediterranean Limited	7 Industrial Estate, Hal Far, Birzebbuga, BBG 3000, Malta	Ordinary	100
Aerospace Transmission Technologies GmbH [1]	Adelheidstrasse 40, D-88046, Friedrichshafen, Germany	Capital Stock	50
Amalgamated Power Engineering Limited [2]	London [3]	Deferred Ordinary	100 100
Bristol Siddeley Engines Limited [2]	London [3]	Ordinary	100
Brown Brothers & Company Limited [2]	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	Ordinary	100
C.A. Parsons & Company Limited [2]	London [3]	Ordinary	100
Derby Specialist Fabrications Limited [2]	London [3]	Ordinary	100
Europea Microfusioni Aerospaziali S.p.A.	Zona Industriale AS1, 83040 Morra de Sanctis, Avellino, Italy	Ordinary	100
Heaton Power Limited [2]	London [3]	Ordinary	100
Industria de Tuberías Aeronáuticas México S.A. de C.V.	Acceso IV, No.6B, Zona Industrial Benito Juárez, Querétaro, 76120, Mexico	Class A	100
Industria de Tuberías Aeronáuticas S.A.U.	Pabellón Industrial, Torrelarrgoiti, Parcela 5H, Naves 7 a 10, Zamudia, Vizcaya, Spain	Ordinary	100
Industria de Turbo Propulsores S.A.U.	Parque Technológico Edificio 300, 48170 Zamudio, Vizcaya, Spain	Ordinary	100
ITP Aero UK Limited	The Whittle Estate, Cambridge Road, Whetstone, Leicester, LE8 6LH, England	Ordinary	100
ITP Engines UK Limited	The Whittle Estate, Cambridge Road, Whetstone, Leicester, LE8 6LH, England	Ordinary	100
ITP Externals India Private Ltd	Plot 60/A, IDA Gandhi Nagar, Hyderabad, 500037, India	Ordinary	100
ITP Externals S.L.U.	Pabellón Industrial, Polígono Ugaldeguren I, PIIIA, Pab 1–2 Zamudio, Vizcaya, Spain	Ordinary	100
ITP Ingeniería y Fabricación S.A. de C.V.	Acceso IV, No.6D, Zona Industrial Benito Juárez, Querétaro, 76120, Mexico	Class A Class B	100 100
ITP México Fabricación S.A. de C.V.	Acceso IV, No.6, Zona Industrial Benito Juárez, Querétaro, 76120, Mexico	Class A	100
ITP México S.A. de C.V.	Acceso IV, No.6, Zona Industrial Benito Juárez, Querétaro, 76120, Mexico	Fixed capital B Variable capital B	100 100
ITP Next Generation Turbines S.L.U.	Parque Technológico Edificio 300, 48170 Zamudio, Vizcaya, Spain	Ordinary	100
John Thompson Cochran Limited [2]	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	6% Cumulative Preference Ordinary	100 100
Karl Maybach-Hilfe GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
Kinolt FZE [4]	Warehouse Number FZLIU10BD09, Liu 10, BD09 Jafza South Jebel Ali Free Zone, PO Box 263346, Dubai, United Arab Emirates	Ordinary	100
Kinolt Immo SA	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Kinolt Immobilien SA	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Kinolt LLC [4]	Electrozavodskaya str, 33, bld.5, floor 4, room VII, office 12, Moscow, 107076, Russia	Ordinary	100

1 Though the interest held is 50%, the Company controls the entity (see note 1 to the Consolidated Financial Statements) and, as a result, consolidates the entity and records a non-controlling interest.
2 Dormant entity.
3 Kings Place, 90 York Way, London, N1 9FX, England.
4 Entity in liquidation.
5 Though the interest held is 49%, the Company controls the entity (see note 1 to the Consolidated Financial Statements) and, as a result, consolidates the entity and records a non-controlling interest.
6 Reporting year end is 31 March.
7 Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
8 Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19809, United States.
9 Entity to take advantage of s479A Companies Act 2006 (s479A) audit exemption for the year ended 31 December 2021. Rolls-Royce plc will issue a guarantee pursuant to s479A in relation to the liabilities of the entity.
10 Entity to take advantage of s479A Companies Act 2006 (s479A) audit exemption for the year ending 31 March 2022. Rolls-Royce plc will issue a guarantee pursuant to S479A in relation to the liabilities of the entity.
11 The entity is not included in the consolidation as Rolls-Royce plc does not have a beneficial interest in the net assets of the entity.
12 The entity is accounted for as a joint operation (see note 1 to the Consolidated Financial Statements).

Company name	Address	Class of shares	% of class held
Kinolt Trading and Contracting LLC [5]	REGUS Service Office, Office No. 1034, Shoumoukh Tower, 10th Floor, Tower B, C-Ring Road, Al Sadd, PO Box 207207, Doha, Qatar	Ordinary	49
Kinolt Sistemas de UPS Limitada	Alameda dos Maracatins 780-2502, Indianopolis 04089-001, Sao Paulo, Brazil	Ordinary	100
Kinolt Sistemas de UPS SpA	Bucarest No 17 Oficina, No 33, Previdencia, Santiago, Chile	Ordinary	100
Kinolt UK Limited	101/102 Cirencester Business Park, Love Lane, Cirencester, GL7 1XD, United Kingdom	Ordinary	100
LLC Rolls-Royce Solutions Rus	Shabolovka Street 2, 119049, Moscow, Russian Federation	Ordinary	100
Manse Opus Management Company Limited [6]	Third Floor Queensberry House, 3 Old Burlington Street, London, United Kingdom, W1S 3AE	Limited by guarantee	33
MTU India Private Limited [6]	6th Floor, RMZ Galleria, S/Y No. 144 Bengaluru, Bangalore, Kamataka 560,064, India	Ordinary	100
MTU Polska Sp. z o.o.	Ul. Lekka 3., Lokal U4. Raum, PLZ: 01-910, Ort: Warszawa, Poland	Ordinary	100
NEI International Combustion Limited [2]	London [3]	Ordinary	100
NEI Mining Equipment Limited [2]	London [3]	Ordinary	100
NEI Nuclear Systems Limited [2]	London [3]	Ordinary	100
NEI Parsons Limited [2]	London [3]	Ordinary	100
NEI Peebles Limited [2]	London [3]	Ordinary	100
NEI Power Projects Limited [2]	London [3]	Ordinary	100
Nightingale Insurance Limited	PO Box 33, Dorey Court, Admiral Park, St Peter Port, GY1 4AT, Guernsey	Ordinary	100
No-Break Power Limited [2]	Unit 29 Birches Industrial Estate, East Grinstead, England, RH19 1XZ	Ordinary	100
Power Jets (Research and Development) Limited [2]	The Whittle Estate, Cambridge Road, Whetstone, Leicester, LE8 6LH, England	Ordinary	100
Powerfield Limited [2]	Derby [7]	Ordinary	100
Precision Casting Bilbao S.A.U.	Calle El Barracón 1, Baracaldo, Vizcaya, 48910, Spain	Ordinary	100
PT Rolls-Royce	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
PT Rolls Royce Solutions Indonesia	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
Rolls-Royce (Ireland) Unlimited Company [2]	Ulster International Finance, 1st Floor IFSC House, IFSC, Dublin 1, Ireland	Ordinary	100
Rolls-Royce (Thailand) Limited	4, 4.5 Level 12, Suite 1299, Rajdamri Road, Pathumwan, Bangkok, 10330, Thailand	Ordinary	100
Rolls-Royce Aero Engine Services Limited [2]	London [3]	Ordinary	100
Rolls-Royce Australia Pty Limited	Level 1, 60 Martin Place, Sydney NSW 2000, Australia	Ordinary	100
Rolls-Royce Australia Services Pty Limited	Level 1, 60 Martin Place, Sydney NSW 2000, Australia	Ordinary	100
Rolls-Royce Brasil Limitada	Rua Jose Versolato, No. 111, Torre B, Sala 2502, Centro, São Bernando do Campo, Sao Paulo, CEP 09750-730, Brazil	Quotas	100
Rolls-Royce Canada Limited	9500 Côte de Liesse, Lachine, Québec H8T 1A2, Canada	Common Stock	100
Rolls-Royce Chile SpA	Alcantra 200 office 601, Piso 6, C.O, 7550159 Las Condes, Santiago, Chile	Ordinary	100
Rolls-Royce China Holding Limited	305 Indigo Building 1, 20 Jiuxianqiao Road, Beijing, 100016, China	Registered Capital	100
Rolls-Royce Commercial Aero Engines Limited [2]	London [3]	Ordinary	100
Rolls-Royce Control Systems Holdings Co [2]	Wilmington [8]	Common Stock	100
Rolls-Royce Controls and Data Services Limited [2]	London [3]	Ordinary	100
Rolls-Royce Controls and Data Services (NZ) Limited	c/o Deloitte, 80 Queen Street, Auckland Central, Auckland 1010, New Zealand	Ordinary	100
Rolls-Royce Controls and Data Services (UK) Limited	Derby [7]	Ordinary	100
Rolls-Royce Corporation	Wilmington [8]	Common Stock	100
Rolls-Royce Crosspointe LLC	Wilmington [8]	Partnership (no equity)	100

Company name	Address	Class of shares	% of class held
Rolls-Royce Defense Products and Solutions, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Defense Services, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Deutschland Ltd & Co KG	Amtsgericht Potsdam, Blankenfelde-Mahlow, Germany	Ordinary	100
Rolls-Royce Electrical Norway AS	Jarleveien 8A, 7041, Trondheim 500, Norway	Ordinary	100
Rolls-Royce Energy Angola, Limitada [2]	Rua Rei Katyavala, Edificio Rei Katyavala, Entrada B, Piso 8, Luanda, Angola	Quota	100
Rolls-Royce Energy Systems Inc. [2]	Wilmington [8]	Common Stock	100
Rolls-Royce Engine Services Holdings Co.	Wilmington [8]	Common Stock	100
Rolls-Royce Engine Services Limitada Inc. [4]	Bldg. 06 Berthaphil Compound, Jose Abad Santos Avenue, Clark Special Economic Zone, Clark, Pampanga, Philippines	Capital Stock	100
Rolls-Royce Erste Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Rolls-Royce Finance Company Limited [2]	London [3]	Deferred Ordinary	100
Rolls-Royce Finance Holdings Co.	Wilmington [8]	Common Stock	100
Rolls-Royce Fuel Cell Systems Limited [9]	Derby [7]	Ordinary	100
Rolls-Royce General Partner (Ireland) Limited	29 Earlshot Terrace, Dublin 2, Ireland	Ordinary	100
Rolls-Royce General Partner Limited [2]	London [3]	Ordinary	100
Rolls-Royce Group Limited	London [3]	Ordinary Ordinary A	100
Rolls-Royce High Temperature Composites, Inc.	Corporation Service Company, 2710 Gateway Oaks Drive, Suite 150N, Sacramento, California 95833, United States	Ordinary	100
Rolls-Royce Holdings Canada Inc.	9500 Côte de Liesse, Lachine, Québec H8T 1A2, Canada	Common C	100
Rolls-Royce Hungary Kft	Gizella U. 51–57, 1143 Budapest, Hungary	Cash shares	100
Rolls-Royce India Limited [2, 6, 10]	Derby [8]	Ordinary	100
Rolls-Royce India Private Limited [6]	Birla Tower West, 2nd Floor 25, Barakhamba Road, New Delhi, 110001, India	Equity	100
Rolls-Royce Industrial & Marine Power Limited [2]	London [3]	Ordinary	100
Rolls-Royce Industrial Power (India) Limited [2, 6]	Derby [7]	Ordinary	100
Rolls-Royce Industrial Power Engineering (Overseas Projects) Limited	Derby [7]	Ordinary	100
Rolls-Royce Industries Limited [9]	Derby [7]	Ordinary	100
Rolls-Royce International Limited	Derby [7]	Ordinary	100
Rolls-Royce Japan Co., Limited	31st Floor, Kasumigaseki Building, 3-2-5 Kasumigaseki, Chiyoda-Ku, Tokyo, 100-6031, Japan	Ordinary	100
Rolls-Royce Leasing Limited	Derby [7]	Ordinary	100
Rolls-Royce Malaysia Sdn. Bhd.	C-2-3A TTDI Plaza, Jalan Wan Kadir 3, Taman Tun Dr Ismail, 6000 Kuala Lumpur, Malaysia	Ordinary	100
Rolls-Royce Marine North America, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Military Aero Engines Limited [2, 6, 10]	London [3]	Ordinary	100
Rolls-Royce New Zealand Limited	c/o Deloitte, 80 Queen Street, Auckland Central, Auckland 1010, New Zealand	Ordinary	100
Rolls-Royce North America (USA) Holdings Co.	Wilmington [8]	Common Stock	100
Rolls-Royce North America Holdings, Inc.	Wilmington [8]	Common Stock	100

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7 Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
8 Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19809, United States.
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Rolls-Royce North America Ventures, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce North America, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce North American Technologies, Inc.	Wilmington [8]	Common Stock	100
Rolls-Royce Oman LLC	Bait Al Reem, Business Office #131, Building No 81, Way No 3409, Block No 234, Al Thaqafa Street, Al Khuwair, PO Box 20, Postal Code 103, Oman	Ordinary	100
Rolls-Royce Operations (India) Private Limited [2, 6]	Birla Tower West, 2nd Floor, 25 Barakhamba Road, New Delhi, 110001, India	Ordinary	100
Rolls-Royce Overseas Holdings Limited	Derby [7]	Ordinary Ordinary A	100
Rolls-Royce Overseas Investments Limited	Derby [7]	Ordinary	100
Rolls-Royce Placements Limited	London [3]	Ordinary	100
Rolls-Royce plc	London [3]	Ordinary	100
Rolls-Royce Power Engineering plc	Derby [7]	Ordinary	100
Rolls-Royce Power Systems AG	Maybachplatz 1, 88045, Friedrichshafen, Germany	Ordinary	100
Rolls-Royce Retirement Savings Trust Limited [2, 6]	Derby [7]	Ordinary	100
Rolls-Royce Saudi Arabia Limited	PO Box 88545, Riyadh, 11672, Saudi Arabia	Cash shares	100
Rolls-Royce Singapore Pte. Limited	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100
Rolls-Royce SMR Limited	Derby [7]	Ordinary	91.2
Rolls-Royce Solutions (Suzhou) Co. Ltd	9 Long Yun Road, Suzhou Industrial Park, Suzhou 215024, Jiang Su, China	Ordinary	100
Rolls-Royce Solutions Africa (Pty) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Capital Stock	100
Rolls-Royce Solutions America Inc.	Wilmington [8]	Ordinary	100
Rolls-Royce Solutions Asia Pte. Limited	10 Tukang Innovation Drive, Singapore 618302	Ordinary	100
Rolls-Royce Solutions Augsburg GmbH	Dasinger Strasse 11, 86165, Augsburg, Germany	Capital Stock	100
Rolls-Royce Solutions Benelux B.V.	Merwedestraat 86, 3313 CS, Dordrecht, Netherlands	Ordinary	100
Rolls-Royce Solutions Berlin GmbH	Villa Rathenau, Wilhelminenhofstrasse 75, 12459 Berlin, Germany	Common Seed Preferred Series A Preferred	47.7 100 100
Rolls-Royce Solutions Brasil Limitada	Via Anhanguera, KM 29203, 05276-000 Sao Paulo – SP, Brazil	Ordinary	100
Rolls-Royce Solutions Enerji Deniz Ve Savunma Anonim Şirketi	Hatira Sokak, No. 5, Ömerli Mahellesi, 34555 Arnavutköy, Istanbul, Turkey	Ordinary	100
Rolls-Royce Solutions France S.A.S.	Immeuble Colorado, 8/10 rue de Rosa Luxembourg-Parc des Bellevues 95610, Erangy-sur-Oise, France	Ordinary	100
Rolls-Royce Solutions GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
Rolls-Royce Solutions Hong Kong Limited	No.8 Hart Avenue, Unit D, 8th Floor, Tsim Sha Tsui, Kowloon, Hong Kong	Ordinary	100
Rolls-Royce Solutions Ibérica s.l.u.	Calle Copérnico 26–28, 28823 Coslada, Madrid, Spain	Ordinary	100
Rolls-Royce Solutions Israel Limited	4 Ha'Alon Street, South Building, Third Floor, 4059300 Kfar Neter, Israel	Ordinary	100
Rolls-Royce Solutions Italia S.r.l.	Via Aurelia Nord, 328, 19021 Arcola (SP), Italy	Capital Stock	100
Rolls-Royce Solutions Japan Co. Limited	Resorttrust Building 4-14-3, Nishitenma Kita-ku, Osaka 530-0047, Japan	Ordinary	100
Rolls-Royce Solutions Korea Limited	22nd Floor, Olive Tower, 41 Sejongdaero 9 gil, Junggu, 100-737 Seoul, Republic of Korea	Ordinary	100
Rolls-Royce Solutions Liège Holding S.A.	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Rolls-Royce Solutions Liège S.A.	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Rolls-Royce Solutions Magdeburg GmbH	Friedrich-List-Strasse 8, 39122 Magdeburg, Germany	Capital Stock	100
Rolls-Royce Solutions Middle East FZE	S3B5SR06, Jebel Ali Free Zone, South P.O. Box 61141, Dubai, United Arab Emirates	Ordinary	100
Rolls-Royce Solutions Ruhstorf GmbH	Rotthofer Strasse 8, 94099 Ruhstorf a.d. Rott, Germany	Capital Stock	100
Rolls-Royce Solutions South Africa (Pty) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Ordinary	100

Company name	Address	Class of shares	% of class held
Rolls-Royce Solutions UK Limited	Derby [7]	Ordinary	100
Rolls-Royce Solutions Willich GmbH	Konrad-Zuse-Str. 3, 47877, Willich, Germany	Ordinary	100
Rolls-Royce Sp z.o.o.	Opolska 100 31-323, Krakow, Poland	Ordinary	100
Rolls-Royce Submarines Limited	Atlantic House, Raynesway, Derby, DE21 7BE, Derbyshire, England	Ordinary	100
Rolls-Royce Technical Support Sarl	Centreda I, Avenue Didier Daurat, 31700 Blagnac, Toulouse, France	Ordinary	100
Rolls-Royce Total Care Services Limited [9]	Derby [7]	Ordinary	100
Rolls Royce Turkey Güç Çözümleri San. ve Tic. Ltd.Şti.	Levazim Mahellesi, Koru Sokagi, Zorlu Center, No. 2 Teras Evler T2 D:204, Zincirlikuyu, Besiktas, Istanbul 34340, Turkey	Cash shares	100
Rolls-Royce UK Pension Fund Trustees Limited [2]	Derby [7]	Ordinary	100
Rolls-Royce Zweite Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Ross Ceramics Limited	Derby [7]	Ordinary	100
Servowatch Systems Limited	Endeavour House, Benbridge Industrial Estate, Holloway Road, Heybridge, Maldon, Essex, CM9 4ER, United Kingdom	Ordinary	100
Sharing in Growth UK Limited [11]	Derby [7]	Limited by guarantee	100
Spare IPG 20 Limited [2]	London [3]	Ordinary	100
Spare IPG 21 Limited [2]	London [3]	Ordinary	100
Spare IPG 24 Limited [2]	London [3]	Ordinary	100
Spare IPG 32 Limited [2]	London [3]	7.25% Cumulative Preference Ordinary	100
Spare IPG 4 Limited [2]	London [3]	Ordinary	100
The Bushing Company Limited [2]	London [3]	Ordinary	100
Timec 1487 Limited [2]	London [3]	Ordinary	100
Turbine Surface Technologies Limited [11]	Derby [7]	Ordinary A Ordinary B	Nil 100
Turborreactores S.A. de C.V.	Acceso IV, No.6C, Zona Industrial Benito Juárez, Querétaro, 76120, Mexico	Class A Class B	100
Vessel Lifter, Inc. [2]	Corporation Service Company, 1201 Hays Street, Tallahassee, Florida 32301, United States	Common Stock	100
Vinters Defence Systems Limited [2]	London [3]	Ordinary	100
Vinters Engineering Limited	Derby [7]	Ordinary	100
Vinters International Limited [9]	Derby [7]	Ordinary	100
Vinters Limited [9]	Derby [7]	Ordinary	100
Vinters-Armstrongs (Engineers) Limited [2]	London [3]	Ordinary	100
Vinters-Armstrongs Limited [2]	London [3]	Ordinary B	100
Yocova PTE. Ltd.	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100

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JOINT VENTURES AND ASSOCIATES

Company name	Address	Class of shares	% of class held	Group interest held %
Aero Gearbox International SAS [12]	18 Boulevard Louis Sequin, 92700 Colombes, France	Ordinary	50	50
Airtanker Holdings Limited	Airtanker Hub, RAF Brize Norton, Carterton, Oxfordshire, OX18 3LX, England	Ordinary	23	23
Airtanker Services Limited	Airtanker Hub, RAF Brize Norton, Carterton, Oxfordshire, OX18 3LX, England	Ordinary	23.5	23.5
Alpha Leasing (US) (No.2) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.4) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.5) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.6) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.7) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.8) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Leasing (US) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Alpha Partners Leasing Limited	1 Brewer's Green, London, SW1H 0RH, England	Ordinary A	100	50
CFMS Limited	43 Queen Square, Bristol, BS1 4QP, England	Limited by guarantee	–	50
Clarke Chapman Portia Port Services Limited	Maritime Centre, Port of Liverpool, Liverpool, L21 1LA, England	Ordinary A	100	50
Consorcio Español para el Desarrollo Industrial del Helicóptero de Ataque Tigre, A.I.E.	Avda. de Aragón 404, 28022 Madrid, Spain	Partnership (no equity held)	–	50
Consorcio Español para el Desarrollo Industrial del Programa Eurofighter, A.I.E.	Paseo de John Lennon, s/n, edificio T22, 2ª planta, Getafe, Madrid, Spain	Partnership (no equity held)	–	50
Egypt Aero Management Services (in liquidation)	EgyptAir Engine Workshop, Cairo International Airport, Cairo, Egypt	Ordinary	50	50
EPI Europrop International GmbH	Pelkovenstr. 147, 80992 München, Germany	Capital Stock	44	44
Eurojet Turbo GmbH	Lilienthalstrasse 2b, 85399 Halbergmoos, Germany	Ordinary	46	46
Force MTU Power Systems Private Limited	Mumbai Pune Road, Akurdi, Pune, Maharashtra 411035, India	Capital Stock	49	49
Genistics Holdings Limited	Derby [7]	Ordinary A	100	50
Global Aerospace Centre for Icing and Environmental Research Inc. [12]	1000 Marie-Victorin Boulevard, Longueuil Québec J4G 1A1, Canada	Ordinary	50	50
Hong Kong Aero Engine Services Limited	33rd Floor, One Pacific Place, 88 Queensway, Hong Kong	Ordinary	50	50
International Aerospace Manufacturing Private Limited [6,12]	Survey No. 3 Kempapura Village, Varthur Hobli, Bangalore, KA 560037, India	Ordinary	50	50
Light Helicopter Turbine Engine Company (unincorporated partnership)	Suite 119, 9238 Madison Boulevard, Madison, Alabama 35758, United States	Partnership (no equity held)	–	50
MEST Co., Limited	97 Bukjeonggongdan 2-gil, Yangsan-si, Gyeongsangnam-do, 50571, Republic of Korea	Normal	46.8	46.8
Metlase Limited	Unipart House, Garsington Road, Cowley, Oxford, OX4 2PG, England	Ordinary B	100	20
MTU Cooltech Power Systems Co., Limited	Building No. 2, No. 1633 Tianchen Road, Qingpu District, Shanghai, China	Equity	50	50
MTU Power Systems Sdn. Bhd.	Level 10 Menara LGB, 1 Jalan Wan Kadir Taman Tun Dr Ismail 6000 Kuala Lumpur, Malaysia	Ordinary A	100	49
MTU Turbomeca Rolls-Royce ITP GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	50	50

Company name	Address	Class of shares	% of class held	Group interest held %
MTU Turbomeca Rolls-Royce GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	33.3	33.3
MTU Yuchai Power Company Limited	No 7 Danan Road, Yuzhou, Yulin, Guangxi, China, 537005, China	Capital Stock	50	50
N3 Engine Overhaul Services GmbH & Co KG	Gerhard-Höltje-Strasse 1, D-99310, Arnstadt, Germany	Capital Stock	50	50
N3 Engine Overhaul Services Verwaltungsgesellschaft Mbh	Gerhard-Höltje-Strasse 1, D-99310, Arnstadt, Germany	Capital Stock	50	50
Rolls Laval Heat Exchangers Limited [2]	Derby [7]	Ordinary	50	50
Rolls-Royce & Partners Finance (US) (No 2) LLC	Wilmington [8]	Partnership (no equity held)	–	50
Rolls-Royce & Partners Finance (US) LLC	Wilmington [8]	Partnership (no equity held)	–	50
SAFYRR Propulsion Limited [2]	Derby [7]	B Shares	100	50
Shanxi North MTU Diesel Co. Limited	No.97 Daqing West Road, Datong City, Shanxi Province, China	Ordinary	49	49
Singapore Aero Engine Services Private Limited	11 Calshot Road, 509932, Singapore	Ordinary	50	50
Taec Ucak Motor Sanayi AS	Buyukdere Caddesi, Prof. Ahmet Kemal Aru, Sokagi Kaleseramik, Binasi Levent No. 4, Besiktas, Istanbul, Turkey	Cash Shares	49	49
Techjet Aerofoils Limited [12]	Tefen Industrial Zone, PO Box 16, 24959, Israel	Ordinary A Ordinary B	50 50	50
Texas Aero Engine Services LLC [2]	The Corporation Trust Company, 1209, Orange Street, Wilmington, Delaware 19801, United States	Partnership (no equity held)	–	50
TRT Limited	Derby [7]	Ordinary B	100	50
Turbo-Union GmbH	Lilienthalstrasse 2b, 85399 Halbergmoos, Germany	Capital Stock	40.0	40.0
United Battery Management GmbH	Wilhelminenhofstr. 76/77, 12459, Berlin, Germany	Ordinary	30	25.7
Xian XR Aero Components Co., Limited [12]	Xujiawan, Beijiao, Po Box 13, Xian 710021, Shaanxi, China	Ordinary	49	49

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