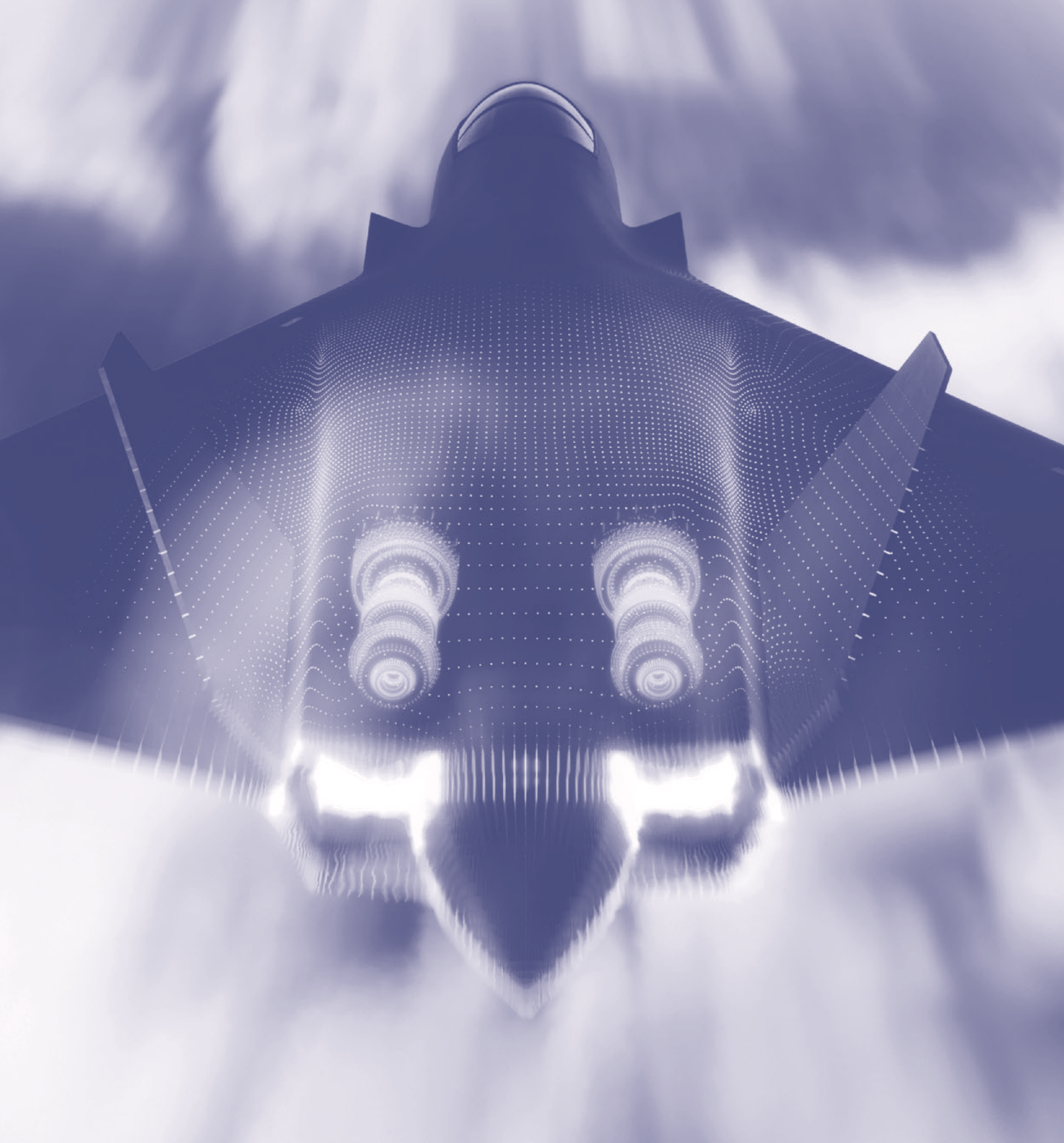
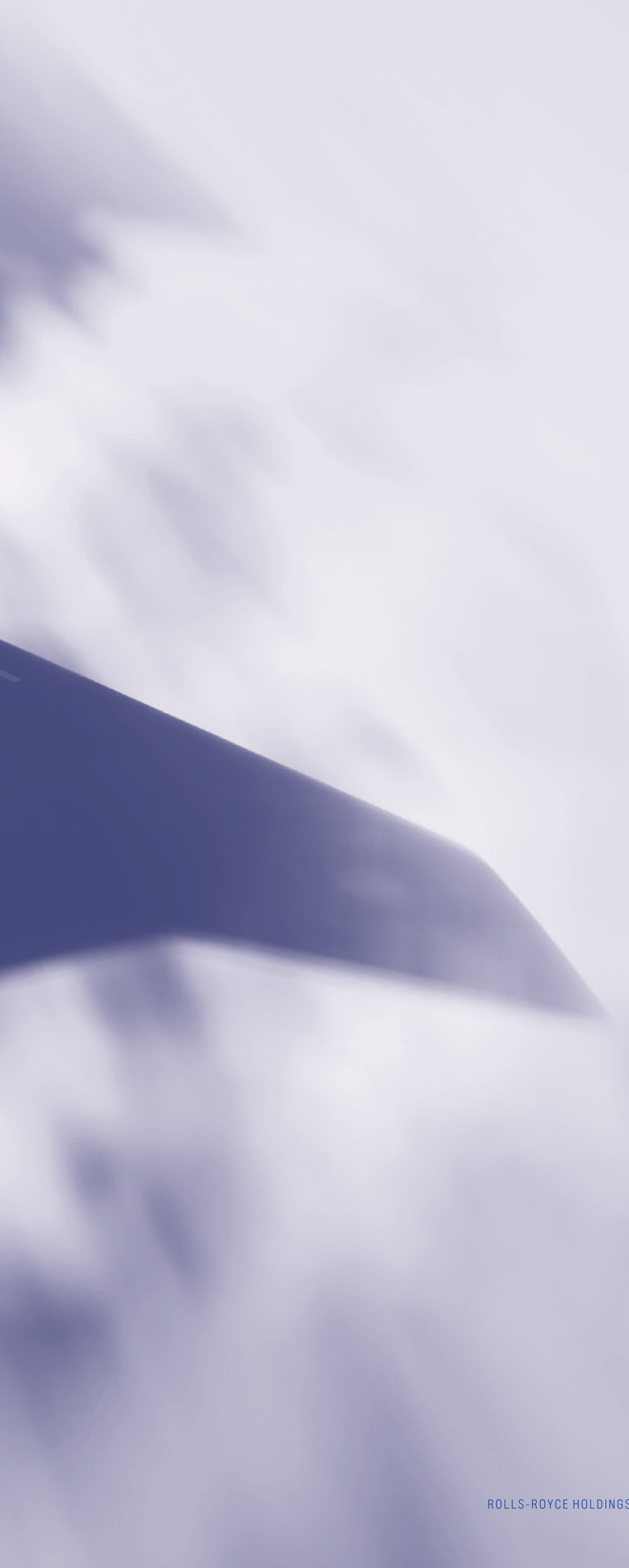
FINANCIAL STATEMENTS





Consolidated Financial Statements

Primary statements

Notes to the Consolidated Financial Statements

Company Financial Statements

Primary statements

Notes to the Company Financial Statements

Consolidated income statement

For the year ended 31 December 2020

	Notes	2020 £m	2019 £m
Revenue	2	11,824	16,587
Cost of sales [1, 2]		(12,034)	(15,645)
Gross (loss)/profit		(210)	942
Commercial and administrative costs [1]		(808)	(1,128)
Research and development costs [1]	3	(1,254)	(770)
Share of results of joint ventures and associates	13	191	104
Operating loss		(2,081)	(852)
(Loss)/gain arising on acquisition and disposal of businesses [3]	28	(14)	139
Loss before financing and taxation	2	(2,095)	(713)
Financing income	4	67	252
Financing costs [4]	4	(882)	(430)
Net financing costs		(815)	(178)
Loss before taxation [5]		(2,910)	(891)
Taxation	5	(259)	(420)
Loss for the year		(3,169)	(1,311)
Attributable to:			
Ordinary shareholders		(3,170)	(1,315)
Non-controlling interests		1	4
Loss for the year		(3,169)	(1,311)
Other comprehensive expense		(265)	(1,013)
Total comprehensive expense for the year		(3,434)	(2,324)
Loss per ordinary share attributable to ordinary shareholders:			
Basic [6]	6	(52.95)p	(23.70)p
Diluted [6]	6	(52.95)p	(23.70)p
Underlying earnings per ordinary share are shown in note 6			
Payments to ordinary shareholders in respect of the year:	21		
Pence per share [6]		–	1.6p
Total		–	87
Underlying (loss)/profit before taxation [5]	2	(3,958)	583

1 Included within cost of sales, commercial and administrative costs and research and development costs are: exceptional items relating to impairments and write-offs arising as a result of the financial and operational impact of COVID-19 plus other market-driven events; impairments and provisions related to the fundamental restructuring activity announced on 20 May 2020 to reshape and resize the Group have also been recorded; and reflecting the impact of COVID-19 and the work the Group has performed to reduce fleet AOG levels and improve the availability of spare engines, the Trent 1000 provision has been reduced. In the prior year, exceptional charges related to the Trent 1000 and Trent 900 Civil Aerospace programmes and restructuring costs were included within cost of sales and commercial and administrative costs. Further details can be found in notes 2, 12 and 22.

2 Cost of sales includes a charge for expected credit losses of £119m (2019: £54m) – see note 15.

3 North America Civil Nuclear business was disposed of on 31 January 2020, Knowledge Management System business was disposed of on 3 February 2020, Trigno Energy Srl was disposed of on 7 May 2020 and Exostar LLC was disposed of on 6 July 2020. Qinous GmbH was acquired on 15 January 2020, Kinolt Group S.A. was acquired on 1 July 2020 and Servowatch Systems Limited was acquired on 7 December 2020. Sales proceeds on a prior period disposal have been adjusted during the year. Commercial Marine was disposed of on 1 April 2019 and Rolls-Royce Power Development Limited was disposed of on 15 April 2019. Further details can be found in note 28.

4 Included within financing costs are fair value changes on derivative contracts. Further details can be found in notes 2, 4 and 21.

5 (Loss)/profit before taxation disclosed on a statutory and underlying basis. Further details can be found in note 2.

6 The comparative figures for earnings per share and payments to shareholders per share have been adjusted to reflect the bonus element of the rights issue – see note 6. As a result of the COVID-19 pandemic, the Directors cancelled the proposed final payment to shareholders of 2.4p (adjusted) per share.

Consolidated statement of comprehensive income

For the year ended 31 December 2020

	Notes	2020 £m	2019 £m
Loss for the year		(3,169)	(1,311)
Other comprehensive expense (OCI)			
Actuarial movements on post-retirement schemes [1]	23	(590)	(934)
Share of OCI of joint ventures and associates	13	(1)	(1)
Related tax movements	5	195	324
Items that will not be reclassified to profit or loss		(396)	(611)
Foreign exchange translation differences on foreign operations		121	(313)
Reclassified to income statement on disposal of businesses	28	6	(98)
Movement on fair values (debited)/credited to cash flow hedge reserve		(16)	12
Reclassified to income statement from cash flow hedge reserve		26	10
Share of OCI of joint ventures and associates	13	(4)	(7)
Related tax movements	5	(2)	(6)
Items that may be reclassified to profit or loss		131	(402)
Total other comprehensive expense		(265)	(1,013)
Total comprehensive expense for the year		(3,434)	(2,324)
Attributable to:			
Ordinary shareholders		(3,435)	(2,328)
Non-controlling interests		1	4
Total comprehensive expense for the year		(3,434)	(2,324)

[1] Included in actuarial movements in post-retirement schemes is an experience loss of £188m which includes the impact of updated membership data and members leaving on voluntary severance. Included in the prior period is an asset re-measurement net loss estimated at £600m following the agreement to transfer the future pension obligation of circa 33,000 pensioners in the UK scheme to Legal & General Assurance Society Limited. See note 23 for further information.

Consolidated balance sheet

At 31 December 2020

	Notes	31 December 2020 £m	31 December 2019 £m
ASSETS			
Intangible assets	9	5,145	5,442
Property, plant and equipment	10	4,515	4,803
Right-of-use assets	11	1,405	2,009
Investments – joint ventures and associates	13	394	402
Investments – other	13	19	14
Other financial assets	21	687	467
Deferred tax assets	5	1,826	1,887
Post-retirement scheme surpluses	23	907	1,170
Non-current assets		14,898	16,194
Inventories	14	3,690	4,320
Trade receivables and other assets	15	5,455	5,065
Contract assets	16	1,510	2,095
Taxation recoverable		117	39
Other financial assets	21	107	86
Short-term investments	21	–	6
Cash and cash equivalents	17	3,452	4,443
Current assets		14,331	16,054
Assets held for sale	28	288	18
TOTAL ASSETS		29,517	32,266
LIABILITIES			
Borrowings and lease liabilities	18	(1,272)	(775)
Other financial liabilities	21	(608)	(493)
Trade payables and other liabilities	20	(6,653)	(8,450)
Contract liabilities	16	(4,187)	(4,228)
Current tax liabilities		(154)	(172)
Provisions for liabilities and charges	22	(826)	(858)
Current liabilities		(13,700)	(14,976)
Borrowings and lease liabilities	18	(6,058)	(4,910)
Other financial liabilities	21	(3,046)	(3,094)
Trade payables and other liabilities	20	(1,922)	(2,071)
Contract liabilities	16	(6,245)	(6,612)
Deferred tax liabilities	5	(494)	(618)
Provisions for liabilities and charges	22	(1,119)	(1,946)
Post-retirement scheme deficits	23	(1,580)	(1,378)
Non-current liabilities		(20,464)	(20,629)
Liabilities associated with assets held for sale	28	(228)	(15)
TOTAL LIABILITIES		(34,392)	(35,620)
NET LIABILITIES		(4,875)	(3,354)
EQUITY			
Called-up share capital	24	1,674	386
Share premium		1,012	319
Capital redemption reserve		162	159
Cash flow hedging reserve		(94)	(96)
Merger reserve		650	650
Translation reserve		524	397
Accumulated losses		(8,825)	(5,191)
Equity attributable to ordinary shareholders		(4,897)	(3,376)
Non-controlling interests		22	22
TOTAL EQUITY		(4,875)	(3,354)

The Financial Statements on pages 106 to 176 were approved by the Board on 11 March 2021 and signed on its behalf by:

Warren East
Chief Executive

Stephen Daintith
Chief Financial Officer

Consolidated cash flow statement

For the year ended 31 December 2020

	Notes	31 December 2020 £m	31 December 2019 £m
Reconciliation of cash flows from operating activities			
Operating loss [1]		(2,081)	(852)
Loss/(profit) on disposal of property, plant and equipment		37	(13)
Share of results of joint ventures and associates	13	(191)	(104)
Dividends received from joint ventures and associates	13	60	92
Amortisation and impairment of intangible assets	9	902	372
Depreciation and impairment of property, plant and equipment	10	821	532
Depreciation and impairment of right-of-use assets	11	732	411
Adjustment of amounts payable under residual value guarantees within lease liabilities [2]		(102)	–
Impairment of and other movements on investments	13	24	1
(Decrease)/increase in provisions		(801)	1,108
Decrease/(increase) in inventories		588	(43)
Movement in trade receivables/payables and other assets/liabilities		(2,655)	73
Movement in contract assets/liabilities		259	1,737
Financial penalties paid [3]		(135)	(102)
Cash flows on other financial assets and liabilities held for operating purposes		(126)	(757)
Interest received		13	31
Net defined benefit post-retirement (credit)/cost recognised in loss before financing	23	(68)	222
Cash funding of defined benefit post-retirement schemes	23	(80)	(266)
Share-based payments	25	25	30
Net cash (outflow)/inflow from operating activities before taxation		(2,778)	2,472
Taxation paid		(231)	(175)
Net cash (outflow)/inflow from operating activities		(3,009)	2,297
Cash flows from investing activities			
Net movement in unlisted investments	13	(5)	3
Additions of intangible assets	9	(365)	(640)
Disposals of intangible assets	9	18	13
Purchases of property, plant and equipment		(585)	(747)
Disposals of property, plant and equipment		23	50
Acquisition of businesses	28	(106)	(43)
Disposal of businesses [4]	28	23	453
Movement in investments in joint ventures and associates and other movements on investments	13	(19)	(7)
Decrease in short-term investments		6	–
Net cash outflow from investing activities		(1,010)	(918)
Cash flows from financing activities			
Repayment of loans [5]		(2,884)	(1,136)
Proceeds from increase in loans [5]		4,774	22
Capital element of lease payments		(284)	(271)
Net cash flow from increase/(decrease) in borrowings and leases		1,606	(1,385)
Interest paid		(88)	(104)
Interest element of lease payments		(74)	(88)
Fees paid on undrawn facilities		(97)	–
Cash flows on settlement of excess derivative contracts [6]	4	(202)	–
Issue of ordinary shares – rights issue (net of expenses and rights taken by share trust) [7]		1,972	–
Issue of ordinary shares – other (net of expenses)		–	24
Purchase of ordinary shares		(1)	(15)
Dividends to NCI		(1)	(4)
Redemption of C Shares		(91)	(220)
Net cash inflow/(outflow) from financing activities		3,024	(1,792)
Change in cash and cash equivalents		(995)	(413)
Cash and cash equivalents at 1 January		4,435	4,952
Exchange gains/(losses) on cash and cash equivalents		56	(104)
Cash and cash equivalents at 31 December [8]		3,496	4,435

Consolidated cash flow statement

For the year ended 31 December 2020

[1] During the year, the Group has received £47m from the British Government as part of the UK furlough scheme. This has been recognised within operating 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. Where the value of this remeasurement exceeds the value of the right-of use asset, the reduction in the lease liability is credited to cost of sales.
[3] Relates to penalties paid on agreements with investigating bodies.
[4] Includes £5m adjustment of cash consideration on prior period disposal paid during the year. Further detail is provided in note 28.
[5] Repayment of loans includes repayment of the £2.5bn revolving credit facility. Proceeds from increase in loans includes the drawdown of £2.5bn revolving credit facility, proceeds of £2.0bn from new unsecured loan notes and £0.3bn cash received from the Covid Corporate Financing Facility (CCFF). Further detail is provided in note 18.
[6] The impact of COVID-19 on the aerospace industry resulted in a deterioration in net US Dollar receipts across the Group leading to a net US Dollar outflow in the period. During the year, the Group incurred a cash outflow of £186m as a result of needing to buy US Dollars to settle $1,211m of foreign exchange contracts that were originally in place to sell US Dollar receipts. The Group also incurred a cash outflow of £16m to settle excess jet fuel hedges. Further detail is provided in notes 2 and 4.
[7] Expenses of £79m, of which £1m was unpaid at 31 December, and the cost of the Employee Share Trust subscribing for the new shares of £10m have been deducted from the gross proceeds of £2,060m.
[8] 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.

The cash flow in the year includes the sale of goods and services to joint ventures and associates – see note 27.

	31 December 2020 £m	31 December 2019 £m
Reconciliation of movements in cash and cash equivalents to movements in net funds/(debt)		
Change in cash and cash equivalents	(995)	(413)
Cash flow from (increase)/decrease in borrowings and leases	(1,606)	1,385
Less: settlement of related derivatives included in fair value of swaps below	50	–
Cash flow from decrease in short-term investments	(6)	–
Change in net (debt)/funds resulting from cash flows	(2,557)	972
New leases and other non-cash adjustments on lease liabilities and borrowings	(38)	(217)
Net (debt) (excluding cash and cash equivalents) of previously unconsolidated subsidiary	–	(1)
Exchange gains/(losses) on net funds/(debt)	143	(32)
Fair value adjustments	(126)	48
Debt assumed on acquisition of business	(24)	–
Transferred to liabilities associated with assets held for sale	11	3
Movement in net (debt)/funds	(2,591)	773
Net (debt)/funds at 1 January excluding the fair value of swaps (as previously reported)	(1,236)	318
Reclassifications [1]	–	(79)
Adoption of IFRS 16	–	(2,248)
Net debt at 1 January	(1,236)	(2,009)
Net debt at 31 December excluding the fair value of swaps	(3,827)	(1,236)
Fair value of swaps hedging fixed rate borrowings	251	243
Net debt at 31 December	(3,576)	(993)

[1] In 2019, the Group reclassified £79m as borrowings previously included in other financial liabilities. These borrowings mature during periods up to 2029.

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 £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 the fair value of swaps	(1,236)	(2,557)	(24)	143	(126)	11	(38)	(3,827)
Fair value of swaps hedging fixed rate borrowings [1]	243	(50)	–	(42)	114	(14)	–	251
Net debt	(993)	(2,607)	(24)	101	(12)	(3)	(38)	(3,576)
Net funds/(debt) (excluding lease liabilities)	*1,361*							*(1,533)*

Consolidated cash flow statement continued

For the year ended 31 December 2020

	At 1 January [2] £m	Funds flow [3] £m	Net funds on acquisition/ disposal £m	Exchange differences £m	Fair value adjustments £m	Reclassi-fications £m	Other movements in lease liabilities £m	At 31 December £m
2019								
Cash at bank and in hand	1,023	(179)	–	(19)	–	–	–	825
Money market funds	1,222	(124)	–	(3)	–	–	–	1,095
Short-term deposits	2,729	(124)	–	(82)	–	–	–	2,523
Cash and cash equivalents (per balance sheet)	4,974	(427)	–	(104)	–	–	–	4,443
Overdrafts	(22)	14	–	–	–	–	–	(8)
Cash and cash equivalents (per cash flow statement)	4,952	(413)		(104)	–	–	–	4,435
Short-term investments	6	–	–	–	–	–	–	6
Other current borrowings	(816)	799	–	2	5	(417)	–	(427)
Non-current borrowings	(3,674)	315	(1)	4	43	417	–	(2,896)
Lease liabilities	(2,477)	271	–	66	–	3	(217)	(2,354)
Financial liabilities	(6,967)	1,385	(1)	72	48	3	(217)	(5,677)
Net debt excluding fair value swaps	(2,009)	972	(1)	(32)	48	3	(217)	(1,236)
Fair value of swaps hedging fixed rate borrowings	293	–	–	–	(50)	–	–	243
Net debt	(1,716)	972	(1)	(32)	(2)	3	(217)	(993)
Net funds (excluding lease liabilities)	*761*							*1,361*

[1] Fair value of swaps hedging fixed rate borrowings reflect 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 (2020 £293m, 2019 £229m) and the element of fair value relating to exchange differences on the underlying principal of derivatives in cash flow hedges (2020 £(42)m and 2019 £nil). During the year, the Group reclassified £14m relating to the fair value of derivatives for which hedge accounting was not applied as these relate to the future payments of interest only.

[2] In 2019, the Group reclassified £79m as borrowings previously included in other financial liabilities. These borrowings mature during periods up to 2029.

[3] Includes Trent 1000 insurance receipts of £173m.

Consolidated statement of changes in equity

For the year ended 31 December 2020

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 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	28	–	–	–	–	–	6	–	6	–	6
Movement on post-retirement schemes	23	–	–	–	–	–	–	(590)	(590)	–	(590)
Fair value movement on cash flow hedges		–	–	–	(16)	–	–	–	(16)	–	(16)
Reclassified to income statement from cash flow hedge reserve		–	–	–	26	–	–	–	26	–	26
OCI of joint ventures and associates	13	–	–	–	(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 [2]		1,288	693	–	–	–	–	(10)	1,971	–	1,971
Issue of C Shares	21	–	–	(89)	–	–	–	1	(88)	–	(88)
Redemption of C Shares	21	–	–	92	–	–	–	(92)	–	–	–
Ordinary shares purchased		–	–	–	–	–	–	(1)	(1)	–	(1)
Share-based payments – direct to equity [3]		–	–	–	–	–	–	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 2020, **39,866,717** ordinary shares with a net book value of **£89m** (2019: 12,476,576 ordinary shares with a net book value of £108m) were held for the purpose of share-based payment plans and included in accumulated losses. During the year:
- **3,458,865** ordinary shares with a net book value of **£29m** (2019: 8,984,219 ordinary shares with a net book value of £82m) vested in share-based payment plans;
- the Company acquired **85,724** (2019: 118,831) of its ordinary shares via reinvestment of dividends received on its own shares and purchased **30,763,282** (2019: 1,673,143) of its ordinary shares through purchases on the London Stock Exchange; and
- the Company issued **no** new ordinary shares (2019: 7,803,043) to the Group's share trust for its employee share-based payment plans with a net book value of **nil** (2019: £66m) in respect of the rights issue.

[2] During the year, the Company issued 6,436,601,676 new ordinary shares with a net book value of £1,288m and 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.

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

Consolidated statement of changes in equity continued

For the year ended 31 December 2020

		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	Accum-ulated losses [1] £m	Total £m	Non-controlling interests (NCI) £m	Total equity £m
At 1 January 2019 including the impact of IFRS 16		379	268	161	(106)	406	809	(3,031)	(1,114)	22	(1,092)
Loss for the year		–	–	–	–	–	–	(1,315)	(1,315)	4	(1,311)
Foreign exchange translation differences on foreign operations		–	–	–	–	–	(313)	–	(313)	–	(313)
Reclassified to income statement on disposal of Commercial Marine	28	–	–	–	–	–	(98)	–	(98)	–	(98)
Movement on post-retirement schemes	23	–	–	–	–	–	–	(934)	(934)	–	(934)
Fair value movement on cash flow hedges		–	–	–	12	–	–	–	12	–	12
Reclassified to income statement from cash flow hedge reserve		–	–	–	10	–	–	–	10	–	10
OCI of joint ventures and associates	13	–	–	–	(7)	–	–	(1)	(8)	–	(8)
Related tax movements	5	–	–	–	(5)	–	(1)	324	318	–	318
Total comprehensive expense for the year		**–**	**–**	**–**	**10**	**–**	**(412)**	**(1,926)**	**(2,328)**	**4**	**(2,324)**
Arising on issues of ordinary shares		1	51	–	–	–	–	–	52	–	52
Shares issued in respect of acquisition of ITP Aero [4]		6	–	–	–	244	–	–	250	–	250
Issue of C Shares	21	–	–	(222)	–	–	–	1	(221)	–	(221)
Redemption of C Shares	21	–	–	220	–	–	–	(220)	–	–	–
Ordinary shares purchased		–	–	–	–	–	–	(15)	(15)	–	(15)
Shares issued to employee share trust		–	–	–	–	–	–	(51)	(51)	–	(51)
Share-based payments – direct to equity [3]		–	–	–	–	–	–	50	50	–	50
Transactions with NCI		–	–	–	–	–	–	–	–	(4)	(4)
Related tax movements		–	–	–	–	–	–	1	1	–	1
Other changes in equity in the year		**7**	**51**	**(2)**	**–**	**244**	**–**	**(234)**	**66**	**(4)**	**62**
At 31 December 2019		**386**	**319**	**159**	**(96)**	**650**	**397**	**(5,191)**	**(3,376)**	**22**	**(3,354)**

[4] During 2019, the Company issued 28,973,262 new ordinary shares relating to the final three (of eight) instalments for the acquisition of ITP Aero.

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 2020 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 177 to 182 with the associated accounting policies from page 179.

In accordance with the Companies Act 2006 and European Union (EU) regulations, the Consolidated Financial Statements have been prepared in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006 and international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the EU.

The Consolidated Financial Statements have been prepared on a going concern basis as described on page 52. 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

Given the economic uncertainty of the COVID-19 pandemic, the Directors have undertaken a comprehensive going concern review over an eighteen-month period to September 2022, considering the forecast cash flows of the Group and the liquidity headroom available over that eighteen-month period. The Group has modelled two scenarios in its assessment of going concern which have been considered by the Directors, along with a likelihood assessment of these scenarios, being:

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

Further details are given in the Going Concern Statement on pages 52 to 54. After due consideration the Directors consider that the Group has sufficient liquidity headroom to continue in operational existence for a period of at least eighteen 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 Consolidated and Company Financial Statements.

Climate change

In preparing the Consolidated Financial Statements management has considered the impact of climate change, particularly in the context of the disclosures included in the Strategic Report this year and the stated net zero targets. These considerations did not have a material impact on the financial reporting judgements and estimates, consistent with the assessment that climate change is not expected to have a significant impact on the Group's going concern assessment to September 2022 nor the viability of the Group over the next five years. The following specific points were considered:

- The Group continues to invest in new technologies including hybrid electric solutions in Power Systems, continued development of the more efficient UltraFan aero engine, testing of sustainable aviation fuels, SMRs and hybrid and fully electric propulsion.
- The Group continues to invest in onsite renewable energy generation solutions for our facilities and investment is included in our five year forecasts to enable us to meet our 2030 target for zero greenhouse gas emissions (scope 1 and 2) from our operations and facilities.
- Management has considered the impact of climate change on a number of key estimates within the financial statements, including:
  - the estimates of future cash flows used in impairment assessments of the carrying value of non-current assets (such as programme intangible assets and goodwill) (see note 9);
  - the estimates of future profitability used in our assessment of the recoverability of deferred tax assets in the UK (see note 5); and
  - the long-term contract accounting assumptions, such as the level of EFHs assumed, which consider our future expectations of consumer and airline customer behaviour (see note 16).

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 other items which are market driven and outside of the control of management. Further details are given in note 2.

Revisions to IFRS applicable in 2020

No new standards and interpretations issued by the IASB had a significant impact on the Consolidated Financial Statements.

1 Accounting policies continued

Key areas of judgement and sources of estimation uncertainty

The determination of the Group's accounting policies requires judgement. The subsequent application of these policies requires estimates and the actual outcome may differ from that calculated. The key judgements and key sources of estimation uncertainty at the balance sheet date, that were assessed as having 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
Revenue recognition and contract assets and liabilities	– Whether Civil Aerospace Original Equipment (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	– Estimates of future revenue and costs of long-term contractual arrangements – Determination of the time period and profile over which the aerospace industry will recover	116
Risk and revenue sharing arrangements	– Determination of the nature of entry fees received		118
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	118
Business combinations and goodwill	– Identification of acquired assets and liabilities		120
Research and development	– Determination of the point in time where costs incurred on an internal programme development meet the criteria for capitalisation – Determination of the basis for amortising capitalised development costs		121
Leases	– Determination of lease term	– Estimates of the payments required to meet residual value guarantees at the end of engine leases	122
Impairment of non-current assets	– Determination of cash-generating units for assessing impairment of goodwill	– Estimates of cash flow forecasts and discount rates to support the carrying value of intangible assets (including programme-related intangible assets)	122
Provisions	– Whether any costs should be treated as wastage	– Estimates of the time to resolve the technical issues on the Trent 1000, including the development of the modified 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	124
Post-retirement benefits		– Estimates of the assumptions for valuing the defined benefit obligation	124

1 Accounting policies continued

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 28.

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.

1 Accounting policies continued

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 (average of three 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 performed.

Key judgement – Whether any costs should be treated as wastage
In rare circumstances, the Group may incur costs of wasted material, labour or other resources to fulfil a contract where the level of cost was not reflected in the contract price. The identification of such costs is a matter of judgement and would only be expected to arise where there has been a series of abnormal events which give rise to a significant level of cost of a nature that the Group would not expect to incur and hence is not reflected in the contract price. Examples include technical issues that: require resolution to meet regulatory requirements; have a wide-ranging impact across a product type; and cause significant operational disruption to customers. Similarly, in these rare circumstances, significant disruption costs to support customers resulting from the actual performance of a delivered good or service may be treated as a wastage cost. Provision is made for any costs identified as wastage when the obligation to incur them arises – see note 22.

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.

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. 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 estimates take account of the inherent uncertainties, constraining the expected level of revenue as appropriate. In addition, 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 resulted in catch-up adjustments to revenue of £1.0bn.

Key estimate – Determination of the time period and profile over which the aerospace industry will recover
The COVID-19 pandemic has resulted in significant uncertainty across the aerospace industry. Airline customers have grounded a significant number of their aircraft in response to COVID-19 which has resulted in a reduction to EFHs in Civil Aerospace during 2020. Further details have been included in the going concern disclosure on page 52. Estimates of future LTSA revenue within Civil Aerospace are based upon future EFH forecasts, influenced by assumptions over the recovery of the aerospace industry.

Based upon the stage of completion of all widebody LTSA contracts within Civil Aerospace as at 31 December 2020, the following changes in estimates would result in catch-up adjustments being recognised in the period in which the estimates change (at underlying rates):

- A further reduction in forecast EFHs of 15% over the remaining term of the contracts would decrease LTSA income and to a lesser extent costs, resulting in a catch-up adjustment of £100m – £130m. An estimated 90% of this would be expected to be a reduction in revenue with the remainder relating to onerous contracts which would be an increase in cost of sales.
- A 2% increase or decrease in revenue over the life of the contracts would lead to a catch-up adjustment of £200m.
- A 5% increase or decrease in shop visit costs over the life of the contracts would lead to a catch-up adjustment of £150m.

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 Aerospace 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 121.

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 will be available against which the assets can be utilised. Further details on the Group's tax position can be found on page 206.

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, based on management's assumptions relating to the quantum of future taxable profits. Future taxable profits require significant estimates to be made, including 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 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. Further details can be found in note 5.

A 5% change in margin in the main Civil Aerospace widebody programmes or a 5% change in the number of shop visits (driven by EFHs which are influenced by a number of factors including climate change) over the remaining life of the programmes, would result in an increase/decrease in the deferred tax asset by around £100m.

1 Accounting policies continued

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.

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.

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.

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 expected future 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 OCI 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.

1 Accounting policies continued

Financial instruments – Replacement of benchmark interest rates

Following the financial crisis, the reform and replacement of benchmark interest rates such as GBP LIBOR and other interbank offered rates (IBORs) has become a priority for global regulators. There is currently uncertainty around the timing and precise nature of these changes. The Group's risk exposure that is directly affected by the interest rate benchmark reform is its portfolio of long-term borrowings of £4.1bn. These 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. However, as part of the reforms noted above, the UK Financial Conduct Authority has decided to no longer compel panel banks to participate in the IBOR submission process after the end of 2021 and to cease oversight of these benchmark interest rates. Regulatory authorities and private sector working groups have been discussing alternative benchmark rates for IBOR. It is currently anticipated that IBOR rates will be replaced with a backward-looking risk-free rate based on actual transactions.

Management is continuing to monitor developments. When the future position is clearer, a transition project to assess and implement changes to systems, processes, risk and valuation models, as well as managing related tax and accounting implications will be initiated. The Group currently anticipates that the areas of greatest change will be amendments to the contractual terms of IBOR-referenced floating-rate debt and swaps, and updating hedge designations.

Due to the uncertainty around these changes the Group elected to early adopt in 2019 the Amendments to IFRS 9, IAS 39 and IFRS 7 *Interest Rate Benchmark Reform* issued in September 2019. In accordance with the transition provisions, the amendments were adopted retrospectively to hedging relationships that existed at the start of 2019 or were designated thereafter. The amendments provide temporary relief from applying specific hedge accounting requirements to hedging relationships directly affected by IBOR reform.

The reliefs have the effect that IBOR reform should not generally cause hedge accounting to terminate. However, any hedge ineffectiveness should continue to be recorded in the income statement. Furthermore, the amendments set out triggers for when the reliefs will end, which include the uncertainty arising from interest rate benchmark reform no longer being present.

In summary, the reliefs provided by the amendments that apply to the Group are:

- In assessing whether the hedge is expected to be highly effective on a forward-looking basis, the Group has assumed that the relevant IBOR interest rate on which the cash flows of the interest rate swap that hedges fixed-rate borrowings is not altered by IBOR reform.
- The Group has assessed whether the hedged IBOR risk component is a separately identifiable risk only when it first designates a borrowing as included in a hedging relationship and not on an ongoing basis. Any hedge ineffectiveness relating to fair value hedges is recognised immediately in the income statement.

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 IFRS 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.

Key judgement – Identification and valuation of acquired assets and liabilities

In allocating the purchase price to the acquired assets and liabilities, such as technology, patents and licences, customer relationships, trademarks and in-process development, judgement is required. The allocations are based on the Group's industry experience and the advice of third party valuers, if required. During the year the Group acquired intangible assets arising on acquisition of Kinolt Group S.A. of £61m including £37m of customer relationships and £22m of technology intangible assets. See note 28 for details.

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.

1 Accounting policies continued

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. £232m of development expenditure was capitalised during the year.

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.

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.

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 24 years); and
  - no depreciation is provided on freehold land.
- Plant and equipment – four to 25 years (average 11 years).
- Aircraft and engines – five to 20 years (average 16 years).

1 Accounting policies continued

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 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 useable 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 £102m to the income statement. The lease liability at 31 December 2020 included £347m relating to the cost of meeting these residual value guarantees in the Civil Aerospace business. Up to £19m is payable in the next 12 months, £133m is due over the following four years and the remaining balance after five years.

Impairment of non-current assets

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

If the recoverable amount of an asset (or CGU) is estimated to be below the carrying value, the carrying value is reduced to the recoverable amount and the impairment loss is recognised as an expense. The recoverable amount is the higher of value in use or fair value less costs to dispose, 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.

1 Accounting policies continued

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 of Assets*, 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, Kinolt Group S.A. and at an aggregated Rolls-Royce Power Systems AG level.

Key estimate – Estimates of cash flow forecasts and discount rates to support the carrying value of intangible assets (including programme-related intangible assets)
In accordance with IAS 36, COVID-19 is considered to be a trigger event to reassess whether an asset is impaired. The carrying value of intangible assets (including programme-related intangible assets) is dependent on the estimates of future cash flows which are influenced by assumptions over the recovery of the industries in which the Group operate and the discount rates applied. Details of the reviews performed are set out in note 12.

The carrying value of intangible assets on the balance sheet is dependent on the estimates of future cash flows arising from the Group's operations, in particular:

- The assessment of the recoverable value of certification costs, development expenditure and customer relationships recognised as intangible assets (31 December 2020: £3,220m, 2019: £3,612m) 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.
- In addition, in relation to programme intangible assets, estimates comprise: product performance related estimates (including EFHs and time-on-wing); and estimates for future market share, pricing and cost for uncontracted business.

It remains possible that a weaker than expected recovery could result in a deterioration in the future cash flow forecasts that support Civil Aerospace programme intangible assets:

- For intangible assets that have been impaired, a 5% deterioration in EFHs (and hence future cash flows) across the life of the programmes would result in these intangible assets incurring an additional impairment of £50m. An increase in the discount rate of 1% would reduce the recoverable amount of the programme assets (£108m) to nil.
- For intangible assets where there is existing headroom in the impairment test (and thus no impairment) but where deteriorations in key assumptions over the next 12 months could lead to an impairment, any of the following individual changes in assumptions would cause the recoverable amount of the programme assets to equal the carrying value:
  - A reduction in engine sales that are forecast but not contracted by 14%
  - An increase in costs of 2%
  - An increase in discount rates of 1%

Joint ventures and associates
Where the Group makes sales to joint venture companies (most significantly the sale of spare engines to leasing joint ventures), the share of the profit relating to the Group's share of the investment in the joint venture is deferred and subsequently released to match the depreciation of the engines in the share of the joint ventures' retained profit. These adjustments are included in share of the results of joint ventures and associates in the income statement and investments – joint ventures and associates in the balance sheet.

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.

On a periodic basis the Group undertakes the sale of certain trade receivables to banks. These trade receivables are factored on a non-recourse basis (invoice discounting) and therefore are derecognised from the Group's balance sheet at the point of sale to the bank. Further details are disclosed in note 15.

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. As the Group continues to have a contractual obligation to pay its suppliers 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 20.

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 117;
- 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 117, 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 LTSA agreements with the Group, 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 2020 of £321m (2019: £1,382m). 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 2020 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 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 2020 of £791m (2019: £773m). A reduction in Civil Aerospace widebody flying hours of 15% over the remaining term of the contracts and the associated decrease in revenues and costs could lead to a £10m–£15m increase in the provision for contract losses across all programmes. Further details have been included in the going concern disclosure on page 52.

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.

In 2018 and 2020, following clarification provided by the UK High Court judgements on the Lloyds Banking Group on 26 October 2018 and 23 November 2020, the Group recognised the estimated impact of the obligation to equalise defined benefit pensions and transfer values respectively for men and women as a past-service cost – see note 23.

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 *Employee Benefits*. The valuation, which is based on assumptions determined with independent actuarial advice, resulted in a net deficit of £686m before deferred taxation being recognised on the balance sheet at 31 December 2020 (31 December 2019: deficit of £208m). 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 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 newly implemented Bridging Pension Option. Following consultation, the UK scheme closed to future accrual on 31 December 2020. The Group is in discussions with the employees' representatives and the Trustee regarding possible additional transitional protections that could be granted from the scheme. Based on the progress of the talks up to 31 December 2020, the Group has allowed for some reductions in the change to the obligation recognised at 31 December. The final details are expected to be agreed in 2021 when any differences will be recognised.

A reduction in the discount rate from 1.45% by 0.25% could lead to an increase in the defined benefit obligations of the RR UK Pension Fund of approximately £530m. 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 £455m.

It is assumed that 40% (31 December 2019: 45%) of members of the RR UK Pension Fund will transfer out of the fund on retirement. The reduction in this assumption is a result of the introduction of the Bridging Pension Option. An increase of 5% in this assumption would increase the defined benefit obligation by £45m.

Further details and sensitivities are included in note 23.

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 25 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. In accordance with the requirements of IFRS 9 *Financial Instruments* and IFRS 4 I*nsurance Contracts*, credit-based guarantees are treated as insurance contracts. The Group considers asset-value guarantees to be non-financial liabilities and accordingly these are also treated as insurance contracts. As described on page 164, 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.

Revisions to IFRS not applicable in 2020
Standards and interpretations issued by the IASB are only applicable if endorsed by the UK. Other than IFRS 17 *Insurance 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 2021, 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 2020.

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 is in the process of assessing whether the new standard will impact on the Consolidated Financial Statements.

Post balance sheet events
The Group has taken the latest legal position in relation to ongoing legal proceedings and reflected these in the 2020 results as appropriate. In addition, the Group entered into an agreement to sell Bergen Engines on 1 February 2021. Further details are included in note 28. The Spring Budget 2021 announced that the UK corporation tax rate will increase to 25% from 1 April 2023. Further details are included in note 5.

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 act as the Chief Operating Decision Maker as defined by IFRS 8). Our four divisions are set out below and referred to collectively as the core businesses.

Civil Aerospace	development, manufacture, marketing and sales of commercial aero engines and aftermarket services
Power Systems	development, manufacture, marketing and sales of reciprocating engines and power systems
Defence	development, manufacture, marketing and sales of military aero engines, naval engines, submarine nuclear power plants and aftermarket services
ITP Aero	design, research and development, manufacture and casting, assembly and test of aeronautical engines and gas turbines, and maintenance, repair and overhaul (MRO) services

Non-core businesses include the trading results of the Bergen Engines AS business (the Group signed a sales agreement on 1 February 2021), the results of the Civil Nuclear Instrumentation & Control business (the Group signed a sales agreement on 7 December 2020), the results of the North America Civil Nuclear business until the date of disposal on 31 January 2020, the results of the Knowledge Management System business until the date of disposal on 3 February 2020, the Commercial Marine business until the date of disposal on 1 April 2019, Rolls-Royce Power Development Limited (RRPD) until the date of disposal on 15 April 2019 and other smaller businesses including former Energy businesses not included in the disposal to Siemens in 2014 (Retained Energy). The segmental analysis for 2019 has been restated to reflect the 2020 definition of non-core.

From 1 January 2021, all non-core businesses will be referred to as other businesses, and the reporting of core and non-core will cease.

Underlying results

The Group present the financial performance of our 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 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 hedge book is recorded in 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 and losses on foreign exchange contracts, which are recognised as they arise in the reported 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 reported basis to interest receivable/(payable) on an underlying basis, as if they were in an effective hedge relationship.

As a result of the reduction in Civil Aerospace US Dollar (USD) receipts, 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 1.24 on settled contracts was similar to the average spot rate in the period. In the second half of 2020, the Group remained a net purchaser of USD with the consequence that the achieved exchange rate of GBP:USD of 1.33 on settled contracts was similar to the average spot rate in the period.

Estimates of future USD cash flows have been determined using the Group's base-case forecast, significantly influenced by the estimate of future EFH forecasts. These USD cash flows have been used to establish the extent of future USD hedge requirements and determine the need to close-out any over-hedged positions. In response to the deterioration in the medium-term outlook caused by COVID-19 and the related reduction in anticipated net USD cash inflows, the Group took action to reduce the size of the USD hedge book by $11.8bn across 2020–2026. An underlying charge of £1,689m relating to the total $11.8bn reduction in the size of the USD hedge book is included within underlying financing costs at 31 December 2020. Further detail on this is included within note 4.

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
- other items which are market driven and outside of the control of management.

Acquisition accounting, business disposals and impairment

The Group excludes these from underlying results so that the current year and comparative results are directly comparable.

Exceptional items

The Group classifies items as exceptional where the Directors believe that presentation of our results in this way is more relevant to an understanding of our financial performance, as exceptional items are identified by virtue of their size, nature or incidence.

In determining whether an event or transaction is exceptional, management 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 our post-retirement schemes.

A risk-free discount rate is applied to exceptional onerous contract provisions. The risk-free rate is subject to movements in US bonds. Changes in the risk-free rate are market-driven and the impact of any increase or decrease in the rate is included as a reconciling difference between underlying and reported performance.

2 Segmental analysis continued

Subsequent changes in exceptional items recognised in a prior period will also be recognised as exceptional. All other changes will be recognised within underlying performance.

Exceptional items are not allocated to segments and may not be comparable to similarly titled measures used by other companies.

Other items
The financing component of the defined benefit pension scheme cost is determined by market conditions and has therefore been included as a reconciling difference between underlying performance and reported 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 advance corporation tax recognised are also excluded.

See page 131 for the reconciliation between underlying and reported performance.

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

	Civil Aerospace £m	Power Systems [1] £m	Defence £m	ITP Aero £m	Corporate and inter-segment £m	Core businesses £m
Year ended 31 December 2020						
Underlying revenue from sale of original equipment	2,298	1,794	1,436	537	(293)	5,772
Underlying revenue from aftermarket services	2,791	951	1,930	168	(96)	5,744
Total underlying revenue	5,089	2,745	3,366	705	(389)	11,516
Gross (loss)/profit	(2,005)	681	686	133	(18)	(523)
Commercial and administrative costs	(302)	(337)	(151)	(38)	(52)	(880)
Research and development costs	(436)	(167)	(96)	(27)	–	(726)
Share of results of joint ventures and associates	169	1	9	–	–	179
Underlying operating (loss)/profit	(2,574)	178	448	68	(70)	(1,950)
Year ended 31 December 2020						
Segment assets	16,723	3,497	3,127	1,988	(3,102)	22,233
Interests in joint ventures and associates	363	11	19	1	–	394
Segment liabilities	(22,331)	(1,358)	(3,085)	(1,036)	3,251	(24,559)
Net (liabilities)/assets	(5,245)	2,150	61	953	149	(1,932)
Investment in intangible assets, property, plant and equipment, right-of-use assets and joint ventures and associates	774	181	122	28	–	1,105
Depreciation, amortisation and impairment	1,915	267	128	139	12	2,461
Year ended 31 December 2019						
Underlying revenue from sale of original equipment	3,246	2,183	1,461	782	(502)	7,170
Underlying revenue from aftermarket services	4,861	1,001	1,789	154	(75)	7,730
Total underlying revenue	8,107	3,184	3,250	936	(577)	14,900
Gross profit/(loss)	622	878	669	206	(64)	2,311
Commercial and administrative costs	(306)	(343)	(158)	(62)	(53)	(922)
Research and development costs	(374)	(166)	(105)	(33)	–	(678)
Share of results of joint ventures and associates	102	(2)	9	–	–	109
Underlying operating profit/(loss)	44	367	415	111	(117)	820
Year ended 31 December 2019						
Segment assets	17,954	3,312	2,743	2,160	(2,476)	23,693
Interests in joint ventures and associates	365	18	19	–	–	402
Segment liabilities	(24,819)	(1,089)	(2,950)	(1,129)	2,645	(27,342)
Net (liabilities)/assets	(6,500)	2,241	(188)	1,031	169	(3,247)
Investment in intangible assets, property, plant and equipment, right-of-use assets and joint ventures and associates	1,274	181	110	53	–	1,618
Depreciation, amortisation and impairment	807	201	109	88	–	1,205

[1] The underlying results for Power Systems for 31 December 2019 have been restated to reflect the 2020 non-core businesses as described above.

2 Segmental analysis continued

Reconciliation to reported results

	Core businesses £m	Non-core businesses[1] £m	Total underlying £m	Underlying adjustments and adjustments to foreign exchange £m	Group at actual exchange rates £m
For the year ended 31 December 2020					
Revenue from sale of original equipment	5,772	115	5,887	(68)	5,819
Revenue from aftermarket services	5,744	132	5,876	129	6,005
Total revenue	11,516	247	11,763	61	11,824
Gross (loss)/profit	(523)	11	(512)	302	(210)
Commercial and administrative costs	(880)	(24)	(904)	96	(808)
Research and development costs	(726)	(9)	(735)	(519)	(1,254)
Share of results of joint ventures and associates	179	–	179	12	191
Operating loss	(1,950)	(22)	(1,972)	(109)	(2,081)
Loss arising on the acquisition and disposal of businesses	–	–	–	(14)	(14)
Loss before financing and taxation	(1,950)	(22)	(1,972)	(123)	(2,095)
Net financing	(1,982)	(4)	(1,986)	1,171	(815)
Loss before taxation	(3,932)	(26)	(3,958)	1,048	(2,910)
Taxation	(37)	(2)	(39)	(220)	(259)
Loss for the year	(3,969)	(28)	(3,997)	828	(3,169)
Attributable to:					
Ordinary shareholders			(3,998)	828	(3,170)
Non-controlling interests			1	–	1

Year ended 31 December 2019					
Revenue from sale of original equipment	7,170	286	7,456	596	8,052
Revenue from aftermarket services	7,730	264	7,994	541	8,535
Total revenue	14,900	550	15,450	1,137	16,587
Gross profit/(loss)	2,311	76	2,387	(1,445)	942
Commercial and administrative costs	(922)	(71)	(993)	(135)	(1,128)
Research and development costs	(678)	(18)	(696)	(74)	(770)
Share of results of joint ventures and associates	109	1	110	(6)	104
Operating profit/(loss)	820	(12)	808	(1,660)	(852)
Gain arising on the disposal of businesses	–	–	–	139	139
Profit/(loss) before financing and taxation	820	(12)	808	(1,521)	(713)
Net financing	(221)	(4)	(225)	47	(178)
Profit/(loss) before taxation	599	(16)	583	(1,474)	(891)
Taxation	(280)	3	(277)	(143)	(420)
Profit/(loss) for the year	319	(13)	306	(1,617)	(1,311)
Attributable to:					
Ordinary shareholders			302	(1,617)	(1,315)
Non-controlling interests			4	–	4

[1] Non-core businesses are set out above. The underlying results for 31 December 2019 have been restated to reflect the 2020 non-core businesses.

2 Segmental analysis continued

Disaggregation of revenue from contracts with customers

Analysis by type and basis of recognition

	Civil Aerospace £m	Power Systems[1] £m	Defence £m	ITP Aero £m	Corporate and inter-segment £m	Core businesses £m
Year ended 31 December 2020						
Original equipment recognised at a point in time	2,293	1,771	523	471	(262)	4,796
Original equipment recognised over time	4	23	912	66	(32)	973
Aftermarket services recognised at a point in time	1,170	827	797	85	(58)	2,821
Aftermarket services recognised over time	1,398	123	1,132	83	(37)	2,699
Total underlying customer contract revenue[2]	4,865	2,744	3,364	705	(389)	11,289
Other underlying revenue	224	1	2	–	–	227
Total underlying revenue	5,089	2,745	3,366	705	(389)	11,516
Year ended 31 December 2019						
Original equipment recognised at a point in time	3,246	2,108	567	702	(478)	6,145
Original equipment recognised over time	–	75	894	80	(24)	1,025
Aftermarket services recognised at a point in time	1,599	874	696	48	(32)	3,185
Aftermarket services recognised over time	3,138	127	1,093	106	(43)	4,421
Total underlying customer contract revenue[2]	7,983	3,184	3,250	936	(577)	14,776
Other underlying revenue	124	–	–	–	–	124
Total underlying revenue	8,107	3,184	3,250	936	(577)	14,900

1 The underlying results for Power Systems for 31 December 2019 have been restated to reflect the 2020 non-core businesses as described above.
2 Includes **£(1,012)m** (2019: £(93)m) of revenue recognised in the year relating to performance obligations satisfied in previous years.

	Core businesses £m	Non-core businesses[1] £m	Total underlying £m	Underlying adjustments and adjustments to foreign exchange[2] £m	Group at actual exchange rates £m
Year ended 31 December 2020					
Original equipment recognised at a point in time	4,796	114	4,910	(63)	4,847
Original equipment recognised over time	973	–	973	(6)	967
Aftermarket services recognised at a point in time	2,821	133	2,954	53	3,007
Aftermarket services recognised over time	2,699	–	2,699	110	2,809
Total customer contract revenue	11,289	247	11,536	94	11,630
Other revenue	227	–	227	(33)	194
Total revenue	11,516	247	11,763	61	11,824
Year ended 31 December 2019					
Original equipment recognised at a point in time	6,145	217	6,362	596	6,958
Original equipment recognised over time	1,025	69	1,094	–	1,094
Aftermarket services recognised at a point in time	3,185	246	3,431	313	3,744
Aftermarket services recognised over time	4,421	18	4,439	228	4,667
Total customer contract revenue	14,776	550	15,326	1,137	16,463
Other revenue	124	–	124	–	124
Total revenue	14,900	550	15,450	1,137	16,587

1 Non-core businesses are set out above. The underlying results for 31 December 2019 have been restated to reflect the 2020 non-core businesses.
2 Includes **£nil** (2019: £(187)m) of revenue recognised in the year relating to performance obligations satisfied in previous years over and above that in underlying revenue.

2 Segmental analysis continued

Analysis by geographical destination

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

	2020 £m	2019 £m
United Kingdom	1,234	1,805
Germany	832	961
Switzerland	259	520
Spain	321	375
France	234	284
Italy	211	235
Russia	102	106
Norway	113	87
Rest of Europe	723	979
Europe	4,029	5,352
United States	3,805	4,720
Canada	322	298
North America	4,127	5,018
South America	133	377
Central America	63	78
United Arab Emirates	191	438
Rest of Middle East	719	714
Middle East	910	1,152
China	1,082	1,698
Singapore	341	702
Japan	327	607
South Korea	139	252
India	78	82
Rest of Asia	130	622
Asia	2,097	3,963
Africa	238	246
Australasia	225	361
Other	2	40
	11,824	16,587

Order backlog

Contracted consideration, translated at 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:

	2020			2019		
	Within five years £bn	After five years £bn	Total £bn	Within five years £bn	After five years £bn	Total £bn
Civil Aerospace	17.6	24.8	42.4	22.9	25.6	48.5
Power Systems	2.2	0.2	2.4	2.1	0.3	2.4
Defence	7.1	0.4	7.5	7.7	0.9	8.6
ITP Aero	0.6	0.2	0.8	0.7	0.2	0.9
Non-core businesses	0.6	–	0.6	0.5	–	0.5
	28.1	25.6	53.7	33.9	27.0	60.9

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 customers have placed where they retain a right to cancel. The Group's expectation is 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; Power Systems will be recognised over the next two years as it is a short cycle business; and ITP Aero (where internal Group revenues have been eliminated) evenly spread over the next five years.

2 Segmental analysis continued

Underlying adjustments

		2020				2019			
		Revenue £m	Loss before financing £m	Net financing £m	Tax [14]	Revenue £m	Profit/(loss) before financing £m	Net financing £m	Tax [14]
Underlying performance		11,763	(1,972)	(1,986)	(39)	15,450	808	(225)	(277)
Impact of settled derivative contracts on trading transactions [1]	A	61	998	(324)	(40)	1,137	145	80	(100)
Unrealised fair value changes on derivative contracts held for trading [2]	A	–	8	(85)	(182)	–	(1)	(6)	(88)
Unrealised net losses on closing future over-hedged position [3]	A	–	–	1,503	(106)	–	–	–	–
Realised net losses on closing over-hedged position [4]	A	–	–	202	(38)	–	–	–	–
Unrealised fair value change to derivative contracts held for financing [5]	A	–	–	(86)	–	–	–	1	–
Exceptional programme credits/(charges) [6]	B	–	620	(36)	–	–	(1,409)	–	–
Impact of discount rate changes [7]	B	–	–	3	–	–	–	(40)	–
Exceptional restructuring charge [8]	B	–	(489)	–	37	–	(136)	–	17
Impairments [9]	C	–	(1,293)	–	273	–	(84)	–	7
Other write-offs [10]	C	–	(124)	–	30	–	–	–	–
Effect of acquisition accounting [11]	C	–	(133)	–	34	–	(163)	(8)	41
Pension past-service credit [12]	D	–	308	–	(108)	–	–	–	–
Other	D	–	(4)	(6)	(7)	–	(12)	20	(20)
(Loss)/gains arising on the acquisitions and disposals of businesses [13]	C	–	(14)	–	3	–	139	–	–
Impact of tax rate change		–	–	–	160	–	–	–	–
De-recognition of UK losses		–	–	–	(276)	–	–	–	–
Total underlying adjustments		61	(123)	1,171	(220)	1,137	(1,521)	47	(143)
Reported performance per consolidated income statement		11,824	(2,095)	(815)	(259)	16,587	(713)	(178)	(420)

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 **£61m** (2019: £1,137m) and reduced loss before financing and taxation by **£998m** (2019: increased profit by £145m). 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 response to the deterioration in the medium-term outlook caused by COVID-19 and the related reduction in anticipated net USD cash inflows, the Group has taken action to reduce the size of the USD hedge book by $11.8bn predominately by transacting offsetting foreign exchange forward contracts across 2020–2026, resulting in a £1,689m charge to underlying results. The **£1,503m** included in unrealised loss (shown above) is the net cost of closing out the over-hedged position in future years. The cost related to future years has been included within the underlying performance. It is reversed in arriving at reported performance on the basis that, the cumulative fair value changes on these derivative contracts are recognised as they arise. Further detail is provided in note 4.

[4] In 2020, the Group incurred cash outflows of £186m as a result of closing out $1.2bn of the $11.8bn hedge book reduction and £16m to settle an over-hedged jet fuel position. The realised loss of **£202m** is included in underlying financing costs.

[5] Includes the losses on hedge ineffectiveness in the year of **£11m** (2019: losses £13m) and net fair value losses of **£75m** (2019: profit £14m) on any interest rate swaps not designated into hedging relationships for accounting purposes.

[6] In 2019, abnormal wastage costs were recorded in respect of the Trent 1000, related to remediation shop visit costs, customer disruption costs and contract losses. During the year ended 31 December 2020, the total estimated Trent 1000 abnormal wastage costs have reduced by **£620m** as a result of COVID-19 and the work the Group have performed to reduce fleet AOG levels and improve the availability of spare engines, made up of £390m (a gross provision release of £560m, offset by the impact of expected actual exchange rates and the share of the costs borne by RRSAs) related to remediation shop visit costs and customer disruption costs, and an improvement of £230m in the position on contract losses.

[7] Discount rates have increased on exceptional contract loss provisions in relation to the Trent 900 and Trent 1000.

[8] At 31 December 2020, the Group recorded an exceptional charge of **£489m** following the announcement in May 2020 of a fundamental restructuring to reshape and resize the Group due to the financial and operational impact of COVID-19 (see note 22 for more detail).

[9] The Group has assessed the carrying value of its assets given the financial and operational impact of COVID-19 on the Group's future cash flow forecasts. Consequently, a number of impairments and write-offs have been recorded at 31 December 2020. Impairments comprise: intangible assets £567m, mainly related to programme intangibles; property, plant and equipment £318m (including £219m related to site rationalisation); right-of-use assets £384m, comprising engines of £311m, £69m of site rationalisation and £4m of other impairments; and £24m impairment on the carrying value of investments held. Further details are provided in notes 9, 10, 11, 12 and 13.

[10] Other write-offs include £149m of participation fees in contract assets, £2m in provisions for site rationalisation, offset by £(27)m for RRSA deferred cost contributions in payables. These write-offs are primarily a result of the impact of COVID-19.

[11] The effect of acquisition accounting includes the amortisation of intangible assets arising on previous acquisitions.

[12] The Group recorded a past service gain of **£308m** (of which £248m was recorded at 30 June 2020) following changes to the pension benefits under the terms of the Rolls-Royce UK Pension Fund (RRUKPF), a defined benefit scheme. Of the £308m gain, £79m related to the restructuring described in footnote 8 above. The gain also comprises £134m on introduction of the Bridging Pension Option, £67m as a result of the scheme closure and £35m as a result of manager consultation offset by a £7m past-service cost. In respect of the £248m gain recorded at 30 June 2020, £127m was subsequently recognised as actuarial losses through other comprehensive income at 31 December 2020 – see note 23.

[13] (Losses)/gains arising on the acquisitions and disposals of businesses includes the acquisition of Qinous GmbH (increasing the Group's shareholding from 24% to 100%), the sale of the North America Civil Nuclear business, the sale of the Knowledge Management Systems business and the sale of Trigno Energy Srl. During the year, sales proceeds received on the disposal of the L'Orange business in a prior period has been adjusted. See note 28 for further details.

[14] Appropriate rates of tax have been applied to adjustments made to (loss)/profit before tax in the table above. Adjustments in 2020 which impact the UK tax loss have an effective tax rate of zero. See note 5 for more details. The total underlying adjustments to loss before tax in 2020 are a charge of **£220m** (2019: £143m). The overall charge in 2020 includes a tax credit of £160m in respect of the change in the UK tax rate and 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

Reconciliation to the balance sheet

	2020 £m	2019 £m
Reportable segment assets	22,233	23,693
Interests in joint ventures and associates	394	402
Non-core businesses	7	359
Assets held for sale	288	18
Cash and cash equivalents and short-term investments	3,452	4,449
Fair value of swaps hedging fixed rate borrowings	293	249
Deferred and income tax assets	1,943	1,926
Post-retirement scheme surpluses	907	1,170
Total assets	29,517	32,266
Reportable segment liabilities	(24,559)	(27,342)
Non-core businesses	(5)	(404)
Liabilities associated with assets held for sale	(228)	(15)
Borrowings and lease liabilities	(7,330)	(5,685)
Fair value of swaps hedging fixed rate borrowings	(42)	(6)
Deferred and income tax liabilities	(648)	(790)
Post-retirement scheme deficits	(1,580)	(1,378)
Total liabilities	(34,392)	(35,620)
Net liabilities	(4,875)	(3,354)

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:

	2020 £m	2019 £m
United Kingdom	5,823	6,446
Germany	2,269	2,568
Spain	1,267	1,506
United States	1,380	1,324
Other	739	826
	11,478	12,670

3 Research and development

	2020 £m	2019 £m
Gross research and development costs	(1,252)	(1,459)
Contributions and fees [1]	353	341
Expenditure in the year	(899)	(1,118)
Capitalised as intangible assets	232	481
Amortisation and impairment of capitalised costs [2]	(587)	(133)
Net cost recognised in the income statement	(1,254)	(770)
Underlying adjustments relating to effects of acquisition accounting, impairment and foreign exchange [3]	519	74
Net underlying cost recognised in the income statement	(735)	(696)

[1] Includes funding from local governments.
[2] See note 9 for analysis of amortisation and impairment.
[3] During the year, impairment of research and development of **£481m** was recorded. Of this, £1m was charged to underlying results and £480m was charged as exceptional. See note 2 and note 9 for more information.

4 Net financing

	2020		2019	
	Per consolidated income statement £m	Underlying financing [1] £m	Per consolidated income statement £m	Underlying financing [1] £m
Interest receivable	22	22	31	31
Net fair value gains on non-hedge accounted interest rate swaps [2]	–	–	14	–
Financial RRSAs – foreign exchange differences and changes in forecast payments	17	–	11	–
Net fair value gains on commodity contracts	–	–	36	–
Financing on post-retirement scheme surpluses	28	–	60	–
Net foreign exchange gains	–	–	100	–
Financing income	67	22	252	31
Interest payable	(180)	(175)	(182)	(163)
Net fair value losses on foreign currency contracts	(23)	–	(43)	–
Net fair value losses on non-hedge accounted interest rate swaps [2]	(75)	–	–	–
Unrealised net losses on closing future over-hedged position [3]	–	(1,503)	–	–
Realised net losses on closing over-hedged position [3, 4]	–	(202)	–	–
Financial RRSAs – foreign exchange differences and changes in forecast payments	(20)	–	(10)	–
Financial charge relating to financial RRSAs	(3)	(3)	(3)	(3)
Net fair value losses on commodity contracts	(62)	–	–	–
Financing on post-retirement scheme deficits	(29)	–	(37)	–
Net foreign exchange losses	(324)	–	–	–
Other financing charges	(166)	(125)	(155)	(90)
Financing costs	(882)	(2,008)	(430)	(256)
Net financing costs	(815)	(1,986)	(178)	(225)
Analysed as:				
Net interest payable	(158)	(153)	(151)	(132)
Net fair value (losses)/gains on derivative contracts	(160)	(1,705)	7	–
Net post-retirement scheme financing	(1)	–	23	–
Net foreign exchange (losses)/gains	(324)	–	100	–
Net other financing	(172)	(128)	(157)	(93)
Net financing costs	(815)	(1,986)	(178)	(225)

[1] See note 2 for definition of underlying results.

[2] The consolidated income statement shows the net fair value loss on any interest rate swaps not designated into hedging relationships for accounting purposes. Underlying financing reclassifies the interest payable (2019: receivable) on these interest rates swaps from fair value movement to interest payable.

[3] In response to the deterioration in the medium-term outlook caused by COVID-19 and the related reduction in anticipated net US Dollar cash inflows, the Group took action during the year to reduce the size of the US Dollar hedge book by $11bn by transacting offsetting foreign exchange contracts across 2020–2026. A further $0.8bn of hedges have also been closed out in early 2021. An underlying charge of **£1,689m** relating to the total $11.8bn reduction in the size of the US Dollar hedge book is included within underlying financing costs. These costs are already recognised in the reported results as fair value losses on foreign currency contacts.

[4] In 2020, the Group incurred a cash outflow of £186m as a result of closing out an over-hedged position of $1,211m and a cash outflow of £16m to settle an over-hedged jet fuel position. The realised loss of **£202m** is included in underlying financing costs.

In response to the deterioration in the medium-term outlook caused by COVID-19 and the related reduction in anticipated net US Dollar cash inflows, the Group took action during the year to reduce the size of the US Dollar hedge book by $11.0bn by transacting offsetting foreign exchange contracts across 2020-2026. A further $0.8bn of hedges have also been closed out in early 2021. An underlying charge of **£1,689m** relating to the total $11.8bn reduction in the size of the US Dollar hedge book is included within underlying financing costs. These costs are already recognised in the reported results as fair value losses on foreign currency contacts. The cash settlement costs of the £1,689m will occur over the period 2020–2026, including £186m of cash costs incurred in 2020. The Group estimates that future cash outflows of £460m will occur in 2021, £327m in 2022, and £716m spread over 2023 to 2026. Subsequent to year-end, the Group took action to align the contractual settlement of derivatives in future periods with the forecast of net US Dollar cash inflows by extending $2bn of £/US Dollar hedging contracts from 2024–26 into 2027.

After taking into account the actions described above the Group is forecast to be 100% hedged from 2021 to 2026 and approximately 90% hedged in 2027, based on Board approved forecasts. In the severe but plausible downside scenario forecast, the Group has modelled a further reduction in net US Dollar cash inflows. This would lead to an additional charge to underlying finance costs of £222m, with the associated cash cost unwinding across 2021–2027.

5 Taxation

	UK		Overseas		Total	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Current tax charge for the year	12	15	167	228	179	243
Adjustments in respect of prior years	–	(4)	(27)	(3)	(27)	(7)
Current tax	12	11	140	225	152	236
Deferred tax charge/(credit) for the year	177	117	(373)	(24)	(196)	93
Adjustments in respect of prior years	(12)	20	42	(15)	30	5
Derecognition of deferred tax	433	86	–	–	433	86
Deferred tax credit resulting from increase in UK tax rate	(160)	–	–	–	(160)	–
Deferred tax	438	223	(331)	(39)	107	184
Charged/(credited) in the income statement	450	234	(191)	186	259	420

Other tax (charges)/credits

	OCI				Equity	
	Items that will not be reclassified		Items that may be reclassified			
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Deferred tax:						
Movement in post-retirement schemes	195	324	–	–	–	–
Share-based payments – direct to equity	–	–	–	–	5	1
Cash flow hedge	–	–	(4)	(5)	–	–
Net investment hedge	–	–	2	(1)	–	–
Other tax credits/(charges)	195	324	(2)	(6)	5	1

Tax reconciliation

	2020 £m	2019 £m
Loss before taxation	(2,910)	(891)
Less share of results of joint ventures and associates (note 13)	(133)	(141)
Loss before taxation excluding joint ventures and associates	(3,043)	(1,032)
Nominal tax credit at UK corporation tax rate **19%** (2019: 19%)	(578)	(196)
UK tax rate differential [1]	33	56
Overseas rate differences [2]	(67)	58
Impairments	21	1
Exempt gain on the disposal of Commercial Marine	–	(20)
R&D credits	(22)	(34)
Other permanent differences	10	8
Benefit to deferred tax from previously unrecognised tax losses and temporary differences	(2)	–
Tax losses in year not recognised in deferred tax [3]	588	463
Derecognition of deferred tax [4]	433	86
Adjustments in respect of prior years	3	(2)
Increase in closing deferred taxes resulting from a change in the UK tax rate [5]	(160)	–
	259	420
Underlying items (note 2)	39	277
Non-underlying items	220	143
	259	420

1 The UK tax rate differential arises on the difference between the deferred tax rate and the UK statutory tax rate.
2 Overseas rate differences mainly relate to tax on profits or losses in countries such as the US and Germany which have higher tax rates than the UK. In 2020 the impact is negative because of the loss in Germany relating to the impairment of the Business Aviation programme intangible assets.
3 Tax losses not recognised mainly relate to the UK – see page 136.
4 Derecognition of deferred tax assets relating to foreign exchange and commodity financial assets and liabilities and UK losses – see page 136.
5 UK deferred tax was previously measured at 17%. The Spring Budget 2020 announced that the UK corporate tax rate would remain at 19% rather than reducing to 17%. The UK deferred tax balances have therefore been re-measured at 19%.

5 Taxation continued

Deferred taxation assets and liabilities

	2020 £m	2019 £m
At 1 January	1,269	1,130
Impact of adopting IFRS 16	–	8
Amount charged to income statement	(107)	(184)
Amount credited to other comprehensive income	197	323
Amount charged to cash flow hedge reserve	(4)	(5)
Amount credited to equity	5	1
On disposal/acquisition of businesses [1]	(20)	(3)
Transferred to assets held for sale [2]	(4)	(2)
Exchange differences	(4)	1
At 31 December	1,332	1,269
Deferred tax assets	1,826	1,887
Deferred tax liabilities	(494)	(618)
	1,332	1,269

[1] The 2020 deferred tax relates to the acquisition of businesses detailed in note 28. The 2019 deferred tax on disposal of businesses relates to Commercial Marine.
[2] The 2020 deferred tax transferred to assets held for sale relates to the Bergen Engines AS and Civil Nuclear Instrumentation & Control business. The 2019 deferred tax transferred to assets held for sale relates to the North America Civil Nuclear business.

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	Merger and acquisition related activity £m	Transferred to held for sale	Exchange differences £m	At 31 December £m
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

	At 1 January £m	Impact of adopting IFRS 16 £m	At 1 January restated £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Merger and acquisition related activity £m	Transferred to held for sale £m	Exchange differences £m	At 31 December £m
2019										
Intangible assets	(620)	–	(620)	(135)	–	–	(2)	–	31	(726)
Property, plant and equipment	(85)	(74)	(159)	10	–	–	(1)	–	12	(138)
Other temporary differences	164	82	246	147	(6)	1	2	–	(16)	374
Net contract liabilities	57	–	57	(2)	–	–	–	–	–	55
Pensions and other post-retirement scheme benefits	(461)	–	(461)	(1)	324	–	(3)	–	(13)	(154)
Foreign exchange and commodity financial assets and liabilities	625	–	625	(200)	–	–	–	–	–	425
Losses	1,010	–	1,010	9	–	–	(1)	–	(1)	1,017
R&D credit	277	–	277	(12)	–	–	–	–	(12)	253
Advance corporation tax	163	–	163	–	–	–	–	–	–	163
	1,130	8	1,138	(184)	318	1	(5)	–	1	1,269

5 Taxation continued

Unrecognised deferred tax assets

	2020 £m	2019 £m
Advance corporation tax	19	19
UK losses	1,181	438
Foreign exchange and commodity financial assets and liabilities	369	86
Losses and other unrecognised deferred tax assets	68	68
Deferred tax not recognised on unused tax losses and other items on the basis that future economic benefit is uncertain	1,637	611

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

	2020					2019				
	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	26	–	–	26	–	–	–	–	–	–
Expiry within 6 to 30 years	281	–	–	281	–	273	–	–	273	–
No expiry	8,381	6,214	1,940	44	183	3,314	2,575	503	234	2
	8,688	6,214	1,940	351	183	3,587	2,575	503	507	2

In addition to the gross balances shown above, advance corporation tax of **£19m** (2019: £19m) has not been recognised. Advance corporation tax has no expiry.

Deferred tax assets of **£1,826m** include **£801m** (2019: £1,010m) relating to UK tax losses and **£163m** (2019: £163m) relating to Advance Corporation Tax (ACT). 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 typically range between 30 and 55 years with more of the widebody engine programmes forecast at the upper end of that range. In the past few years there have been four new engines that have entered into service (Trent 1000-TEN, Trent 7000 and 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 2020 on the following basis:
- Using the most recent UK profit forecasts prepared by management, 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 between 30 and 55 years from initial investment to retirement of the fleet, including the aftermarket revenues earned from airline customers; 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. Based on this assessment, the Group has recognised a deferred tax asset of £801m relating to losses and £163m 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 2020 UK losses and de-recognised £327m of the deferred tax asset on the balance sheet at 31 December 2019. Of the total charge, £51m is underlying with the balance of £276m non-underlying
- This is based on management's assumptions relating to the amounts and timing of future taxable profits and takes into account the impact of COVID-19 and climate change on existing widebody engine programmes.

Changes in future profits will impact the recoverability of the deferred tax assets and as explained in note 1, the key assumptions impact contract margins. A 5% change in such margins over the remaining life of the programmes, against which the recovery of the tax losses and ACT is assessed, would result in a variance of around £100m in the related deferred tax balances recorded on the balance sheet, assuming a 19% tax rate and the 50% loss offset restriction mentioned above.

The assessment also considered the potential impact of climate change on profit forecasts, including additional taxes and levies that could arise and changes in consumer behaviour which could result in a reduction in shop visits (driven by EFHs, which are influenced by a number of factors including climate change). A 5% reduction in shop visits over the remaining life of the programmes would result in a variance of around £100m in the related deferred tax balances.

The Group has also reassessed the recovery of other deferred tax assets, including those arising on unrealised losses on derivative contracts. Any future changes in tax law or the structure of the Group could have a significant effect on the use of losses and ACT, including the period over which they can be used. In view of this and the significant judgement involved the Board continuously reassess this area.

5 Taxation continued

In 2020 a net DTA also arises for the first time in respect of tax losses and other deductible temporary differences arising in Rolls-Royce Deutschland Ltd & Co KG, where the main business is Business Aviation. The total net DTA is £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 2020 announced that the UK corporation tax rate would remain at 19% rather than reducing to 17% from 1 April 2020. The new law was substantively enacted on 17 March 2020. The prior year UK deferred tax assets and liabilities were calculated at 17%, as this was the enacted rate at the 2019 balance sheet date. As the 19% rate has been substantively enacted before 31 December 2020, the UK deferred tax assets and liabilities have been re-measured at 19%.

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 2020, £160m has been credited to the income statement and £6m has been credited directly to equity.

The Spring Budget 2021 announced that the UK corporation tax rate will increase to 25% from 1 April 2023. The deferred tax assets and liabilities of UK companies within the Group have been calculated at 19% as this rate has been substantively enacted at the balance sheet date. Had the 25% rate been substantively enacted on or before 31 December 2020 it would have had the effect of increasing the net deferred tax asset by £342m.

The unrecognised deferred tax assets on UK losses, foreign exchange financial assets and liabilities and other deductible temporary differences would increase by £373m, £116m, and £11m respectively if the 25% had been substantively enacted at the balance sheet date.

The temporary differences associated with investments in subsidiaries, joint ventures and associates, for which a deferred tax liability has not been recognised, aggregate to £907m (2019 restated: £770m). 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 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. As there is a loss, the effect of potentially dilutive ordinary shares is anti-dilutive.

	2020			2019 (restated)		
	Basic	Potentially dilutive share options	Diluted	Basic	Potentially dilutive share options	Diluted
Loss attributable to ordinary shareholders (£m)	(3,170)		(3,170)	(1,315)		(1,315)
Weighted average number of ordinary shares (millions)	5,987	–	5,987	5,548	–	5,548
EPS (pence)	(52.95)	–	(52.95)	(23.70)	–	(23.70)

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

	2020		2019 (restated)	
	Pence	£m	Pence	£m
Underlying EPS/Underlying (loss)/profit attributable to ordinary shareholders	(66.78)	(3,998)	5.44	302
Total underlying adjustments to (loss)/profit before tax (note 2)	17.50	1,048	(26.56)	(1,474)
Related tax effects	(3.67)	(220)	(2.58)	(143)
EPS/Loss attributable to ordinary shareholders	(52.95)	(3,170)	(23.70)	(1,315)
Diluted underlying EPS	(66.78)		5.44	

Basic and diluted earnings per share figures for the comparative period have been restated and adjusted for the bonus factor of 2.91 to reflect the bonus element of the November 2020 rights issue, in accordance with IAS 33 *Earnings per Share*. Amounts as originally stated at 31 December 2019 were (69.07)p basic and diluted earnings per share and 15.86p basic and diluted underlying earnings per share.

7 Auditors' remuneration

	2020 £m	2019 £m
Fees payable to the Company's auditor for the audit of the Company's annual Financial Statements	2.7	2.8
Fees payable to the Company's auditor and its associates for the audit of the Company's subsidiaries pursuant to legislation	7.6	7.0
Total fees payable for audit services	**10.3**	9.8
Fees payable to the Company's auditor and its associates for other services:		
Audit related assurance services [1]	1.6	1.0
Taxation compliance services [2]	0.1	–
Other assurance services [3]	1.0	0.1
Total fees payable to the Company's auditor and its associates [4]	**13.0**	10.9
Fees payable in respect of the Group's pension schemes:		
Audit	0.1	0.1

[1] This includes **£1.0m** (2019: £0.5m) for the review of the half-year report and **£0.6m** (2019: £0.5m) in respect of the reporting on grant claims.
[2] This includes **£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 **£0.5m** (2019: £nil) 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

	2020 Number	2019 Number
United Kingdom	22,000	23,300
Germany	9,800	9,800
United States	5,400	6,000
Spain	3,000	3,200
Nordics	700	1,300
Singapore	1,100	1,300
Canada	800	1,000
India	1,000	1,000
Italy	800	900
France	700	700
Rest of world	2,900	3,200
Monthly average number of employees	48,200	51,700
Civil Aerospace	23,300	26,100
Power Systems [1]	8,900	8,700
Defence	10,600	9,900
ITP Aero	3,800	3,900
Corporate [2]	100	100
Core businesses	46,700	48,700
Non-core businesses [3]	1,500	3,000
Monthly average number of employees	48,200	51,700

	£m	£m
Wages, salaries and benefits	2,568	3,075
Social security costs	433	473
Share-based payments (note 25)	25	30
Pensions and other post-retirement scheme benefits (note 23)	97	356
Group employment costs [4]	3,123	3,934

[1] Power Systems for 2019 has been restated to reflect the 2020 non-core businesses.
[2] Corporate consists of employees who do not provide a shared service to the segments. Where corporate functions provide such a service, employees have been allocated to the segments on an appropriate basis.
[3] Non-core businesses are set out in note 2 on page 126. The employee analysis for 2019 has been restated to reflect the 2020 definition of non-core.
[4] Remuneration of key management personnel is shown in note 27.

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 2019	1,087	948	2,883	1,384	964	811	8,077
Additions	–	15	481	–	101	43	640
Acquisition of businesses	11	–	–	–	4	23	38
Transferred to assets held for sale [1]	(34)	–	(11)	(16)	(3)	(11)	(75)
Disposals	–	–	(8)	(1)	(111)	(19)	(139)
Reclassifications from PPE	–	–	17	–	19	(18)	18
Exchange differences	(40)	(1)	(68)	(64)	(7)	(26)	(206)
At 31 December 2019	1,024	962	3,294	1,303	967	803	8,353
Additions	–	3	232	–	89	40	364
Acquisition of businesses (see note 28)	57	–	3	41	–	36	137
Transferred to assets held for sale [1]	(3)	–	(33)	–	(12)	(4)	(52)
Disposals	–	(1)	–	–	(93)	(2)	(96)
Reclassifications	4	(4)	(8)	–	10	(6)	(4)
Reclassifications from PPE	–	–	–	–	5	–	5
Exchange differences	30	3	76	59	2	26	196
At 31 December 2020	**1,112**	**963**	**3,564**	**1,403**	**968**	**893**	**8,903**

	Goodwill £m	Certification costs £m	Development expenditure £m	Customer relationships £m	Software [4] £m	Other £m	Total £m
Accumulated amortisation and impairment							
At 1 January 2019	42	373	1,111	304	607	345	2,782
Charge for the year [2]	–	19	113	72	88	26	318
Impairment	18	–	20	9	7	–	54
Transferred to assets held for sale [1]	(34)	–	(11)	(16)	(3)	(11)	(75)
Disposals	–	–	(7)	(1)	(99)	(19)	(126)
Reclassifications from PPE	–	–	–	–	10	(1)	9
Exchange differences	4	–	(25)	(14)	(5)	(11)	(51)
At 31 December 2019	30	392	1,201	354	605	329	2,911
Charge for the year [2]	–	21	106	82	81	33	323
Impairment [3]	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	–	–
Exchange differences	–	–	37	11	1	10	59
At 31 December 2020	**38**	**429**	**1,803**	**478**	**607**	**403**	**3,758**

	Goodwill £m	Certification costs £m	Development expenditure £m	Customer relationships £m	Software [4] £m	Other £m	Total £m
Net book value							
At 31 December 2020	**1,074**	**534**	**1,761**	**925**	**361**	**490**	**5,145**
At 31 December 2019	994	570	2,093	949	362	474	5,442

[1] Bergen Engines AS and the Civil Nuclear Instrumentation & Control business have been classified as disposal groups held for sale at 31 December 2020. The North America Civil Nuclear business was classified as a disposal group held for sale on 26 September 2019, prior to this an impairment of goodwill of £15m was recognised – see note 28.

[2] Charged to cost of sales and commercial and administrative costs except development costs, which are charged to research and development costs.

[3] As a result of the financial and operational impact of COVID-19 the Group has assessed the carrying value of its intangible assets. Consequently, impairments have been recorded at 31 December 2020. The impairment of development expenditure has arisen as a result of the anticipated reduction in OE volumes and future engine flying hours, and the consequential recoverability of these assets. The impairment charge of **£579m** includes £12m charged to the income statement through underlying and £567m charged to non-underlying. See note 12 for further details.

[4] Includes **£110m** (2019: £129m) of software under course of construction which is not amortised.

9 Intangible assets continued

Goodwill

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

Cash-generating unit (CGU) or group of CGUs

	Primary reporting segment	2020 £m	2019 £m
Rolls-Royce Power Systems AG [1]	Power Systems	792	718
Rolls-Royce Deutschland Ltd & Co KG	Civil Aerospace	245	234
Other	Various	37	42
		1,074	994

[1] Power Systems CGU contains goodwill of Kinolt Group S.A. of £46m which has been tested for impairment separately in 2020 but is expected to be tested within Power Systems in 2021 when the integration activities have been completed.

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

	Residual life	Net book value 2020 £m	Net book value 2019 £m
Trent programme intangible assets [1]	7–15 years	1,770	1,720
Business Aviation programme intangible assets [2]	15 years	256	587
Customer relationship assets on acquisition of ITP Aero	typically 13–35 years	651	676
Intangible assets from acquisition of Power Systems [3]		531	489
		3,208	3,472

[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] Includes **£115m** (2019: £109m) in respect of a brand intangible asset which is not amortised. Remaining assets are amortised over a range of 2–10 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.

At 31 December, the Group had expenditure commitments for software of **£34m** (2019: £35m). In 2019, committed spend for software was presented in note 10.

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 2019	1,904	5,285	762	693	8,644
Additions	27	286	126	328	767
Acquisition of businesses	–	3	–	–	3
Transferred to assets held for sale [1]	(5)	(9)	–	(2)	(16)
Disposal of businesses	(4)	(168)	–	–	(172)
Disposals/write-offs	(54)	(187)	(17)	(4)	(262)
Reclassifications [2]	186	390	11	(605)	(18)
Reclassifications of joint ventures to joint operations	5	3	–	–	8
Exchange differences	(39)	(106)	(6)	(9)	(160)
At 31 December 2019	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	122	3	(150)	–
Reclassifications to intangible assets [2]	–	(5)	–	–	(5)
Exchange differences	10	36	3	–	49
At 31 December 2020	1,994	5,442	1,025	451	8,912

10 Property, plant and equipment continued

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	In course of construction £m	Total £m
Accumulated depreciation					
At 1 January 2019	572	3,129	204	7	3,912
Charge for the year [3]	67	381	43	–	491
Impairment	1	29	–	11	41
Transferred to assets held for sale [1]	(5)	(9)	–	(1)	(15)
Disposal of businesses	–	(165)	–	–	(165)
Disposals/write-offs	(45)	(150)	(5)	(1)	(201)
Reclassifications [2]	9	6	(19)	(5)	(9)
Reclassification of joint venture to joint operations	1	3	–	–	4
Exchange differences	(10)	(57)	–	–	(67)
At 31 December 2019	590	3,167	223	11	3,991
Charge for the year [3]	**71**	**362**	**56**	**–**	**489**
Impairment [4]	**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**

Net book value					
At 31 December 2020	**1,315**	**2,106**	**651**	**443**	**4,515**
At 31 December 2019	1,430	2,330	653	390	4,803

1 Bergen Engines AS and the Civil Nuclear Instrumentation & Control business have been classified as disposal groups held for sale at 31 December 2020. In 2019, the North America Civil Nuclear business was classified as a disposal group held for sale on 26 September 2019.
2 Includes reclassifications of assets under construction to the relevant classification in property, plant and equipment or intangible assets when available for use.
3 Depreciation is charged to cost of sales or included in the cost of inventory as appropriate.
4 As a result of the financial and operational impact of COVID-19 the Group has assessed the carrying value of its property, plant and equipment. In addition, following the announcement on 20 May 2020 to reshape and resize the Group due to the financial and operational impact of COVID-19, certain assets have been impaired to their recoverable amount where the Group expects to exit the site. The impairment of **£332m** includes £14m charged to the income statement through underlying and £318m charged to non-underlying. See note 12 for further details.

Property, plant and equipment includes:

	2020 £m	2019 £m
Assets held for use in leases where the Group is the lessor:		
Cost	**824**	720
Depreciation	**(277)**	(214)
Net book value	**547**	506
Capital expenditure commitments [1]	**145**	282
Cost of fully depreciated assets	**1,853**	1,666

1 Total committed spend in 2019 was £317m comprising £282m for property, plant and equipment and £35m for software. In 2020, expenditure commitment for software has been presented in note 9.

The Group's share of equity accounted entities' capital commitments is **£8m** (2019: £30m).

11 Right-of-use assets

	Land and buildings £m	Plant and equipment £m	Aircraft and engines £m	Total £m
Cost				
At 1 January 2019	453	106	1,654	2,213
Additions/modification of leases	70	28	129	227
Transferred to assets held for sale [1]	(4)	–	–	(4)
Disposals	(2)	(4)	(13)	(19)
Exchange differences	(13)	(2)	(3)	(18)
At 31 December 2019	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**
Accumulated depreciation and impairment				
At 1 January 2019	–	–	–	–
Charge for the year	58	32	309	399
Impairment	1	1	10	12
Transferred to assets held for sale [1]	(1)	–	–	(1)
Disposals	(2)	(4)	(13)	(19)
Exchange differences	(1)	–	–	(1)
At 31 December 2019	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**

Net book value				
At 31 December 2020	**288**	**90**	**1,027**	**1,405**
At 31 December 2019	449	99	1,461	2,009

Right-of-use assets held for use in operating leases where the Group is the lessor				
Cost	**2**	**1**	**1,833**	**1,836**
Depreciation	**(1)**	**(1)**	**(806)**	**(808)**
Net book value at 31 December 2020	**1**	**–**	**1,027**	**1,028**
Cost	4	2	1,767	1,773
Depreciation	(2)	(1)	(306)	(309)
Net book value at 31 December 2019	2	1	1,461	1,464

[1] Bergen Engines AS and the Civil Nuclear Instrumentation & Control business have been classified as disposal groups held for sale at 31 December 2020. In 2019, the North America Civil Nuclear business was classified as a disposal group held for sale on 26 September 2019 – see note 28.

[2] The impairment of **£386m** includes £2m charged to the income statement through underlying and £384m charged to non-underlying and is a result of the impact of COVID-19. See note 12 for further details.

12 Impairment of intangible assets, property, plant and equipment, right-of-use assets and investments

a) Summary

An impairment charge of **£1,321m** (2019: £108m) was recognised in the year. This was due to the impact of COVID-19, other market driven events and adverse foreign exchange movements reducing the recoverable amount of certain assets, as a result of reductions in the estimated OE volumes and aftermarket volumes (e.g. from lower EFHs) within the forecasts of future cash flows of each programme or CGU. These cash flow forecasts are discounted to generate the value in use of the programme intangible assets, lease engines (within property, plant and equipment), right-of-use assets and investments. The recoverable amount of other property, plant and equipment has been measured on a fair value less cost of disposal basis.

The impairment charges recognised in the year are as follows:

	Impairment charge in the year							
	Goodwill £m	Other intangible assets £m	Property, plant and equipment £m	Right-of-use assets £m	Investments	Total [3] £m	Recoverable amount £m	Discount rate at 31 December 2020 (31 December 2019) [1] £m
Civil Aerospace – Trent programme assets (where impairment recognised)	–	39	86	311	–	436	–	11.0% (12%)
Civil Aerospace – Business Aviation programme assets (where impairment recognised)	–	437	–	–	–	437	108	11.9% (11%)
Civil Aerospace – specific assets	–	–	219	69	15	303	397	n/a [2] (n/a)
Power Systems – specific assets	–	35	7	1	9	52	96	11.7% (n/a)
ITP Aero – specific assets	–	49	11	–	–	60	229	10.6% (11%)
Other	8	11	9	5	–	33	–	Various
Total	8	571	332	386	24	1,321		

1 Discount rate for 31 December 2019 disclosed where an impairment test was performed.
2 The impairment charge for Civil Aerospace specific assets, other than investments (10.5% discount rate), has been calculated on a fair value less cost of disposal basis.
3 The impairment charge of £1,321m includes £28m charged to the income statement through underlying and £1,293m charged to non-underlying.

b) Intangible assets (see note 9)

Goodwill

Goodwill of **£1,074m** (31 December 2019: £994m) has been tested for impairment during 2020 on the following basis:

- The carrying values of goodwill have been assessed by reference to value in use, estimated using the expected cash flow approach allowable under IAS 36 *Impairment of Assets*. Cash flow forecasts used to derive value in use have been prepared by management using the most recent forecasts, which are consistent with external sources of information on market conditions. These forecasts generally cover the next five years, with cash flows beyond this period based on a growth rate of 2.0% that reflects the products, industries and countries in which the relevant CGU or group of CGUs operate. Whilst these forecasts represent management's best estimate, in addition, the impact on the cash flows of (i) a severe but plausible downside scenario and (ii) various sensitivities have also been considered.
- The key assumptions for the impairment tests are the discount rate and, in the cash flow projections, the programme assumptions, the growth rates and the impact of foreign exchange rates on the relationship between selling prices and costs. Impairment tests are performed using prevailing exchange rates.

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 included with a 15% weighting;
- Cash flows beyond the five-year forecasts that are assumed to grow at **2.0%** (2019: 1.0%); and
- Pre-tax discount rate of **11.7%** (2019: 12.0%).

The Directors do not consider that any reasonably possible changes in the key assumptions 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 aerospace industry, and cost escalation) that are based on current and known future programmes, estimates of market share and long-term economic forecasts;
- Plausible downside scenario included with a 25% weighting;
- Cash flows beyond the five-year forecasts that are assumed to grow at **2.0%** (2019: 1.0%); and
- Pre-tax discount rate of **11.9%** (2019: 12.0%).

The Directors do not consider that any reasonably possible changes in the key assumptions would cause the value in use of the goodwill to fall below its carrying value.

Other cash generating units

Goodwill balances across the Group that are not considered to be individually significant were also tested for impairment, resulting in an impairment charge of **£8m** being recognised at 31 December 2020 (2019: £18m).

12 Impairment of intangible assets, property, plant and equipment, right-of-use assets and investments continued

Other intangible assets (including programme-related intangible assets)

As a result of the impact of COVID-19 on expected OE and aftermarket volumes and adverse foreign exchange movements, other intangible assets have been reviewed for impairment in accordance with the requirements of IAS 36. Where there is a triggering event, and for indefinite life brand assets, impairment tests have been performed on the following basis:

- The carrying values have been assessed by reference to value in use as this represents the highest value to the Group in terms of the future cash flows that it can generate. Values in use have been estimated using the expected cash flow approach allowable under IAS 36. Cash flow forecast scenarios have been prepared by management using the most recent forecasts, which are consistent with external sources of information on market conditions over the lives of the respective programmes and incorporate management's best estimate of key assumptions utilising a stochastic analysis to allow for variation in the actual outcome where appropriate. A severe but plausible scenario was also modelled and, in order to risk adjust the cash flows, a weighting (25%/15% downside for Civil Aerospace/Power Systems respectively) was taken between the two scenarios based on management judgement.
- These forecasts include contracted business and management's expectation of speculative business over the life of the programme, together with the cash outflows that are necessary to maintain the current level of economic benefit expected to arise from the asset in its current condition.
- The key programme assumptions underlying the cash flow projections are forecast market share and pricing, programme timings, unit cost assumptions, EFHs, number of shop visits, cost of each shop visit, R&D, capital investment, discount rates and foreign exchange rates.
- The pre-tax cash flow projections have been discounted at **9.6%–11.9%** (31 December 2019: 7.0%–15.0%), based on the weighted average cost of capital of the relevant business.

It remains possible that a weaker than expected recovery could result in a deterioration in the future cash flow forecasts that support Civil Aerospace programme intangible assets:

- For intangible assets that have been impaired, a 5% deterioration in EFHs (and hence future cash flows) across the life of the programmes would result in these intangible assets incurring an additional impairment of £50m. An increase in the discount rate of 1% would reduce the recoverable amount of the programme assets (£108m) to nil.

- For intangible assets where there is existing headroom in the impairment test (and thus no impairment) but where deteriorations in key assumptions over the next 12 months could lead to an impairment, any of the following individual changes in assumptions would cause the recoverable amount of the programme assets to equal the carrying value:

  - A reduction in engines sales that are forecast but not contracted by 14%;
  - An increase in costs of 2%; or
  - An increase in discount rates of 1%.

c) Property, plant and equipment (see note 10)

Property, plant and equipment has been reviewed for impairment in accordance with the requirements of IAS 36. Following the announcement on the 20 May 2020 to reshape and resize the Group given the financial and operational impact of COVID-19, a strategic review of the Group's sites has been performed. Where the Group expects to exit a Civil Aerospace site, the carrying value of the land and buildings and related plant and equipment have been impaired to their recoverable amount by reference to their fair value (based on professional advice – Level 3 in the IFRS 13 heirarchy) less cost of disposal. The Group has also reviewed whether plant and equipment and assets under construction relating to these locations can be relocated to other parts of the Group for future use. Where no alternative use has been identified, the carrying value of these assets have been impaired to their recoverable amount by reference to their scrap values. An impairment charge of £219m has been recognised.

Impairment tests were also considered necessary for Civil Aerospace and ITP Aero engines. An impairment charge of £97m was recognised. The impairment tests were performed on the following basis:

- The carrying value of assets have been assessed by reference to their value in use, together with other assets as part of a larger CGU. These have been estimated using the expected cash flow approach allowable under IAS 36 as set out in note 12b above.
- The key assumptions underlying cash flow projections in relation to engines are utilisation of the asset, lease rate, condition of the engine and cost of maintaining, discount rates and foreign exchange rates.
- The pre-tax cash flow projections have been discounted at **10.6%–11.0%** based on the weighted average cost of capital of the relevant business.

Other smaller impairments totalling £16m were also recognised.

d) Right-of-use assets (see note 11)

Right-of-use (RoU) assets have been reviewed for impairment in accordance with the requirements of IAS 36. RoU assets have typically been assessed together with other assets as part of a larger CGU. Other than the items referred to below there have been no impairments of RoU assets.

Impairment tests were considered necessary for lease engines as a result of the impact of COVID-19 on expected future EFHs, operators' fleet plans and the resultant requirement for fewer lease engines to support the aircraft fleets. An impairment charge of £311m was recognised against lease engine RoU assets.

12 Impairment of intangible assets, property, plant and equipment, right-of-use assets and investments continued

Impairment tests were performed on the following basis:
- The carrying values of assets have been assessed by reference to their value in use as set out in note 12b above.
- The key assumptions underlying cash flow projections in relation to the lease engines are utilisation of the asset, lease rate, condition of the engine and cost of maintaining, discount rates and foreign exchange rates.
- The pre-tax cash flow projections have been discounted at **11.0%** based on the weighted average cost of capital of the relevant business.

The Civil Aerospace specific asset impairments in the period of £69m primarily relate to land and buildings and are a consequence of the strategic review of the Group's sites described above. Assets have been written down to reflect the higher of their revised value in use (11.0% discount rate) or fair value less cost of disposal.

Other smaller impairments totalling £6m were also recognised.

e) Investments (see note 13)

As a result of reduced EFHs caused by COVID-19, joint venture investments in Civil Aerospace repair and overhaul facilities were tested for impairment. The value in use was estimated by discounting expected future dividends at 10.5% (cost of equity for the Civil Aerospace business). An impairment of £15m was recognised.

As a result of changes in the local market due to climate regulations impacting the offered product, and the impact of COVID-19 on market demand and the liquidity of the business, a Power Systems joint venture was tested for impairment. The value in use of the investment was estimated using the expected cash flow approach. The pre-tax cash flow projections were discounted at 11.7%. An impairment of £9m was recognised.

13 Investments

Composition of the Group

The entities contributing to the Group's financial results are listed on pages 183 to 189.

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.

Non-controlling interests

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

Equity accounted and other investments

	Equity accounted			Other
	Joint ventures £m	Associates £m	Total £m	Unlisted £m
At 1 January 2019	412	–	412	22
Additions	8	–	8	2
Disposals	(4)	–	(4)	(6)
Transfer from joint venture to joint operation	(3)	–	(3)	–
Impairment	–	–	–	(1)
Consolidation of previously non-consolidated subsidiary	–	–	–	(4)
Share of retained profit [1]	12	–	12	–
Reclassification of deferred profit to deferred income [2]	4	–	4	–
Exchange differences	(19)	–	(19)	1
Share of OCI	(8)	–	(8)	–
At 1 January 2020	**402**	**–**	**402**	**14**
Additions [3]	**19**	**–**	**19**	**5**
Disposals [4]	**(6)**	**–**	**(6)**	**–**
Impairment [5]	**(24)**	**–**	**(24)**	**–**
Share of retained profit [1]	**130**	**1**	**131**	**–**
Reclassification of deferred profit from deferred income [2]	**(96)**	**–**	**(96)**	**–**
Transfer to subsidiary [4]	**(4)**	**–**	**(4)**	**–**
Exchange differences	**(23)**	**–**	**(23)**	**–**
Share of OCI	**(5)**	**–**	**(5)**	**–**
At 31 December 2020	**393**	**1**	**394**	**19**

[1] See table below.
[2] 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.
[3] On 18 May 2020, the Group increased its shareholding in Reaction Engines Limited from 2% to 10.1%.
[4] On 15 January 2020, the Group completed the acquisition of Qinous GmbH (increasing its shareholding from 24% to 100%) and was transferred to a subsidiary. On 6 July 2020, the Group completed the disposal of its 18% shareholding in Exostar LLC. See note 28.
[5] During the year, the Group recognised an impairment of **£24m** charged to the income statement through non-underlying. See note 12.

13 Investments continued

Reconciliation of share of retained profit/(loss) to the income statement and cash flow statement:

	2020 £m	2019 £m
Share of results of joint ventures and associates	133	141
Adjustments for intercompany trading [1]	58	(37)
Share of results of joint ventures and associates to the Group (income statement)	191	104
Dividends paid by joint ventures and associates to the Group (cash flow statement)	(60)	(92)
Share of retained profit	131	12

[1] During the year, the Group sold spare engines to Rolls-Royce & Partners Finance, a joint venture company. 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 2020, profit deferred on the sale of engines was lower than the release of that deferred in prior years.

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	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Revenue	330	322	1,995	1,907	1,178	1,529
Profit and total comprehensive income for the year	44	107	71	81	32	47
Dividends paid during the year	–	(29)	(62)	(76)	(14)	(42)
Profit for the year included the following:						
Depreciation and amortisation	(165)	(146)	(15)	(15)	(21)	(16)
Interest income	–	4	–	–	–	–
Interest expense	(83)	(89)	(2)	(3)	(5)	(6)
Income tax expense	(35)	(22)	(13)	(16)	(4)	(3)
Current assets	172	119	461	453	256	433
Non-current assets	3,191	3,319	102	113	164	172
Current liabilities	(201)	(230)	(287)	(269)	(156)	(264)
Non-current liabilities	(2,551)	(2,617)	(78)	(103)	(74)	(163)
Net assets	611	591	198	194	190	178
Included in the above:						
Cash and cash equivalents	64	25	29	4	47	14
Current financial liabilities [1]	(143)	(182)	(22)	–	–	–
Non-current financial liabilities [1]	(2,245)	(2,364)	(66)	(89)	(73)	(163)
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	306	296	99	97	95	89
Goodwill	–	–	34	35	77	94
Adjustments for intercompany trading	(306)	(296)	(3)	(7)	–	(1)
Included in the balance sheet	–	–	130	125	172	182

[1] Excluding trade payables and other liabilities.

13 Investments continued

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

	Individually material joint ventures (above)		Other joint ventures		Associates		Total	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Assets:								
Non-current assets	1,729	1,802	734	745	–	–	2,463	2,547
Current assets	444	503	514	456	1	–	959	959
Liabilities: [1]								
Current liabilities	(322)	(382)	(303)	(322)	–	–	(625)	(704)
Non-current liabilities	(1,351)	(1,441)	(758)	(703)	–	–	(2,109)	(2,144)
Group adjustment for goodwill	111	129	17	–	–	–	128	129
Adjustment for intercompany trading	(309)	(304)	(113)	(81)	–	–	(422)	(385)
	302	307	91	95	1	–	394	402
[1] Liabilities include borrowings of:	(1,263)	(1,399)	(548)	(627)	–	–	(1,811)	(2,026)

14 Inventories

	2020 £m	2019 £m
Raw materials	417	522
Work in progress	1,139	1,652
Finished goods	2,111	2,119
Payments on account	23	27
	3,690	4,320
Inventories stated at net realisable value	305	227
Amount of inventory write-down	95	69
Reversal of inventory write-down	16	12

15 Trade receivables and other assets

	Current		Non-current		Total	
	2020 £m	2019 [4] £m	2020 £m	2019 [4] £m	2020 £m	2019 [4] £m
Trade receivables [1]	2,479	2,354	–	–	2,479	2,354
Receivables due on RRSAs	603	719	82	150	685	869
Amounts owed by joint ventures and associates [1]	486	197	16	12	502	209
Costs to obtain contracts with customers [2]	12	12	50	33	62	45
Other taxation and social security receivable	225	187	6	29	231	216
Other receivables [3]	639	766	20	2	659	768
Prepayments	412	356	425	248	837	604
	4,856	4,591	599	474	5,455	5,065

	2020 £m	2019 £m
Trade receivables and other assets are analysed as follows:		
Financial instruments (note 21):		
Trade receivables and similar items [4]	3,584	3,386
Other non-derivative financial assets [4]	740	815
Non-financial instruments [4]	1,131	864
	5,455	5,065

[1] Includes **£577m** (2019: £267m) of trade receivables held to collect or sell and **£361m** (2019: £76m) of receivables from joint ventures and associates held to collect or sell.

[2] These are amortised over the term of the related contract, resulting in amortisation of **£10m** (2019: £8m) in the year. There were no impairment losses.

[3] Includes **£2m** of amounts owed by the UK Government at 31 December 2020 for amounts claimed by the Group under furlough arrangements. In addition, other receivables includes unbilled recoveries relating to overhaul activity.

[4] During the year the presentation of trade receivables and other assets has been analysed in greater detail, without changing the total amount previously reported. As a consequence some comparative balances and currency movements have been represented in additional and more appropriate line items. Trade receivables has decreased by £184m, costs to obtain contracts with customers has increased by £2m and other receivables has decreased by £903m. Receivables due on RRSAs and other taxation & social security receivable totalling £1,085m are now presented as separate lines. This has also resulted in an associated re-presentation between financial and non-financial assets, with an increase of non-financial instruments of £2m and a decrease in financial instruments of £2m (trade receivables and similar items £(91)m and other non-derivative financial assets £89m). The total amount of trade receivables and other assets from 2019 remains unchanged.

15 Trade receivables and other assets continued

The Group has historically undertaken the sale of trade receivables, without recourse, to banks (commonly known as invoice discounting or factoring). This activity has previously been used to normalise customer receipts as certain aerospace customers have extended their payment terms. This in turn has helped normalise Group cash flows in line with physical delivery volumes. During the year to 31 December 2020, invoice discounting has substantially reduced. At 31 December 2020, **£54m** was drawn under factoring facilities, a decrease of £1,063m compared to 2019, representing cash collected before it was contractually due from the customer. Trade receivables factored are generally due within the following quarter.

The expected credit losses for trade receivables and other assets has increased by £114m to **£252m** (2019: £138m). This increase is mainly driven by the impact of COVID-19 on the Civil Aerospace business of £97m, of which £46m relates to the deterioration of the market credit ratings of customers and £51m relates to updates to the recoverability of other receivables.

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

	2020			2019		
	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	1,611	(33)	2%	1,230	(40)	3%
Non-investment grade	149	(7)	5%	271	(2)	1%
Without credit rating	2,816	(212)	8%	2,636	(96)	4%
	4,576	(252)	5%	4,137	(138)	3%

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

	2020 £m	2019 £m
At 1 January	(138)	(126)
Increases in loss allowance recognised in the income statement during the year	(119)	(54)
Loss allowance utilised	5	12
Releases of loss allowance previously provided	13	19
Other net movements	(13)	11
At 31 December	(252)	(138)

16 Contract assets and liabilities

	Current		Non-current [1]		Total [2]	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Contract assets						
Contract assets with customers	416	404	660	1,092	1,076	1,496
Participation fee contract assets	48	57	386	542	434	599
	464	461	1,046	1,634	1,510	2,095

[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 is 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.

16 Contract assets and liabilities continued

Contract assets with customers includes **£726m** (2019: £1,086m) of Civil Aerospace LTSA assets, with most of the remainder relating to Defence. The main driver of the decrease in the Group balance is a result of revenue relating to performance obligations satisfied in previous years being adjusted by £599m in Civil Aerospace, primarily as a result of COVID-19 reducing engine flying hours (resulting in a reduction in total contract price) below the levels previously estimated over the term of the contracts with a corresponding reduction in the contract asset.

Participation fee contract assets have reduced by **£(165)m** (2019: reduced by £(55)m) due to the impairment of engine programme participation fees of £(149)m, amortisation exceeding additions by £(36)m and foreign exchange on consolidation of overseas entities of £20m.

The absolute value of expected credit losses for contract assets has increased by £1m to **£14m** (2019: £13m).

No impairment losses of contract assets (2019: none) have arisen during the year to 31 December 2020.

	Current		Non-current		Total	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Contract liabilities	4,187	4,228	6,245	6,612	10,432	10,840

	2020 £m	2019 £m
Contract liabilities are analysed as follows:		
Financial instruments (note 21)	186	131
Non-financial instruments	10,246	10,709
	10,432	10,840

During the year **£2,792m** (2019: £3,491m) of the opening contract liability was recognised as revenue. Contract liabilities have decreased by £408m. The main driver of the change in the Group balance is as a result of a reduction in deposits held, reflecting utilisation of amounts received in previous years as engines and aftermarket services were delivered in 2020. As a result of COVID-19 the level of new deposits received were at lower than normal levels.

The Civil Aerospace LTSA liabilities increased by £58m to **£6,841m** (2019: £6,783m). LTSA revenue recognised as the performance obligations have been completed has exceeded cash receipts in the year due to the lower level of flying hours that drive cash receipts, decreasing the contract liability. This has been offset due to the 54% decrease in current year Civil Aerospace EFHs, together with a phased recovery, resulting in revenue relating to performance obligations satisfied in previous years being adjusted downwards by £462m which increases the contract liability.

17 Cash and cash equivalents

	2020 £m	2019 £m
Cash at bank and in hand	940	825
Money-market funds	669	1,095
Short-term deposits	1,843	2,523
Cash and cash equivalents per the balance sheet	3,452	4,443
Cash and cash equivalents included within assets held for sale	51	–
Cash and cash equivalents per note 21	3,503	4,443
Overdrafts (note 18)	(7)	(8)
Cash and cash equivalents per cash flow statement (page 109)	3,496	4,435

Cash and cash equivalents at 31 December 2020 includes **£143m** (2019: £34m) that is not available for general use by the Group. This balance includes £103m 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.

18 Borrowings and lease liabilities

	Current		Non-current		Total	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
Unsecured						
Overdrafts	7	8	–	–	7	8
Bank loans	9	27	10	16	19	43
Commercial paper [1]	300	–	–	–	300	–
2.375% Notes 2020 US$500m [2]	–	378	–	–	–	378
2.125% Notes 2021 €750m [2]	680	–	–	655	680	655
0.875% Notes 2024 €550m [3]	–	–	511	481	511	481
3.625% Notes 2025 US$1,000m [3]	–	–	800	781	800	781
3.375% Notes 2026 £375m [4]	–	–	420	410	420	410
4.625% Notes 2026 €750m [5]	–	–	667	–	667	–
5.75% Notes 2027 $1,000m [5]	–	–	724	–	724	–
5.75% Notes 2027 £545m	–	–	539	–	539	–
1.625% Notes 2028 €550m [3]	–	–	545	501	545	501
Other loans	17	22	58	52	75	74
Total unsecured	1,013	435	4,274	2,896	5,287	3,331
Lease liability – Land and buildings	44	50	392	473	436	523
Lease liability – Plant and equipment	30	29	72	78	102	107
Lease liability – Aircraft and engines	185	261	1,320	1,463	1,505	1,724
Total lease liabilities	259	340	1,784	2,014	2,043	2,354
Total borrowings and lease liabilities	1,272	775	6,058	4,910	7,330	5,685

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

[1] On 27 April 2020, the Group issued Commercial paper of £300m to the Covid Corporate Financing Facility (CCFF), a fund operated by the Bank of England on behalf of HM Treasury. The borrowings are repayable on 17 March 2021 and are held on the balance sheet at amortised cost.
[2] These notes are the subject of cross-currency interest rate swap agreements under which the Group has undertaken to pay floating rates of GBP interest, which form a fair value hedge.
[3] 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.
[4] 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.
[5] These notes are the subject of cross-currency interest rate swap agreements under which the Group has undertaken to pay fixed rates of GBP interest, which form a cash flow hedge.

During the year, the Group issued $1,000m, €750m and £545m of bond notes, €750m of which matures in 2026 and $1,000m and £545m in 2027. The Group also repaid a $500m bond during the year. The Group issued £300m of commercial paper under the Covid Corporate Financing Facility made available by the Bank of England in response to COVID-19.

The Group also entered into a new £1,000m bank loan maturing in 2022 and a new committed £2,000m loan maturing in 2025 (supported by an 80% guarantee from UK Export Finance and available to draw until June 2021). Also during 2020 the Group extended the maturity of the £2,500m committed revolving credit facility from 2024 to 2025. These facilities were undrawn at the year end. None of these facilities are subject to any financial covenant.

Under the terms of certain of its 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 prior to that.

19 Leases

Leases as lessee

The net book value of right-of-use assets at 31 December 2020 was **£1,405m** (2019: £2,009m), with a lease liability of **£2,043m** (2019: £2,354m), see notes 11 and 18 respectively. Leases that have not yet commenced to which the Group is committed have a future liability of £2m and consist of mainly properties and cars. The consolidated income statement shows the following amounts relating to leases:

	2020 £m	2019 £m
Land and buildings depreciation and impairment [1]	(122)	(59)
Plant and equipment depreciation [2]	(44)	(33)
Aircraft and engines depreciation and impairment [3]	(566)	(319)
Total depreciation and impairment charge for right-of-use assets	(732)	(411)
Adjustment of amounts payable under residual value guarantees within lease liabilities [3, 4]	102	–
Expense relating to short-term leases of 12 months or less recognised as an expense on a straight line basis [2]	(18)	(23)
Expense relating to variable lease payments not included in lease liabilities [3, 5]	(1)	(1)
Total operating costs	(649)	(435)
Interest expense [6]	(74)	(88)
Total lease expense	(723)	(523)
Income from sub-leasing right-of-use assets	97	79
Total amount recognised in the income statement	(626)	(444)

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

The total cash outflow for leases in 2020 was **£377m** (2019: £383m). Of this, £358m related to leases reflected in the lease liability, £18m to short-term leases where lease payments are expensed on a straight-line basis and £1m 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.

The Group's leasing activities as a lessee and how they are accounted for

The Group leases aero engines that are used to support customers' aircraft fleets; land and buildings used for production, administration or training purposes; and equipment used in the manufacturing process and to support commercial and administrative activities. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease arrangements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

Right-of-use assets and lease liabilities arising over the lease term are initially measured on a present value basis. The lease term represented is the non-cancellable period of the lease together with periods covered by an option to extend the lease where the Group is reasonably certain to extend. Lease liabilities include the net present value of the following lease payments where such flows exist:

- fixed payments less any lease incentive;
- 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 terminating the lease, if the lease term reflects the Group exercising that option.

Leases for engines typically contain no specific contractual right to renew. 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. Such judgements on lease terms are made each period end and consider the specific terms of the lease and the operational significance of the site, especially where utilised for manufacturing activities. Lease obligations beyond the renewal dates are included in the lease liability where the Group is reasonably certain to extend the lease.

Engine leases in the Civil Aerospace business often include clauses that require the engines to be returned to the lessor with specific levels of useable life remaining. The cost of meeting these requirements are included in the estimate of the lease payments set out above. The amount payable is dependent upon 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 payment of amounts specified in the contract and any new contractual arrangements arising when the current lease contracts end. Where estimates of payments change, an adjustment is made to the lease liability and the right-of-use asset. If the adjustment exceeds the value of the right-of use asset, the balance is credited to the income statement. Liabilities in USD and other non-functional currencies are reported at the closing spot rates with changes arising from a change in exchange rates reported within financing.

On transition to IFRS 16 *Leases* on 1 January 2019, finance leases continued to be recognised at their 2018 closing value and operating leases were measured at the present value of the remaining lease payments discounted using an incremental borrowing rate appropriate to the lease. For new leases, the lease payments are discounted using the interest rate implicit in the lease or if that rate cannot be readily determined, which is generally the case for leases in the Group, the incremental borrowing rate, being the rate required to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions.

19 Leases continued

To determine the incremental borrowing rate, the Group uses a build-up approach that starts with the risk-free interest rate which is then adjusted for credit risk to reflect the nature of the borrowing based on empirical evidence of similar external borrowings undertaken by the Group. The rate used reflects the term and currency of the lease.

The Group is exposed to potential future increases in lease payments where the amount paid is based on an index (such as LIBOR) or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is remeasured and an equivalent adjustment is made to the right-of-use asset except where the change results from a change in the floating interest rates when a revised discount rate is used that reflects changes in those rates.

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

- the amount of the initial measurement of the lease liability or 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 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.

Income from sub-leasing right-of-use assets is primarily generated from the use of engines by our Civil Aerospace customers. In a small number of circumstances current excess property capacity is sub-let at market rates.

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 lessee 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 the Group confirms 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.

	2020 £m	2019 £m
Operating lease income – credited within revenue from aftermarket services [1, 2]	194	127

[1] Includes variable lease payments received of **£179m** (2019: £97m) 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.

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

	2020 £m	2019 £m
Within one year	13	13
Between one and two years	12	14
Between two and three years	10	12
Between three and four years	6	8
Between four and five years	6	5
After five years	21	17
	68	69

In a limited number of circumstances the Group sublets properties that are treated as finance leases when the arrangement transfers substantially all the risks and rewards of ownership of the asset. At 31 December 2020, the total undiscounted lease payments receivable is £22m on annual lease income of £3m. The discounted finance lease receivable at 31 December 2020 is £19m (2019: nil). There was no (2019: nil) finance income recognised during the year.

20 Trade payables and other liabilities

	Current		Non-current		Total	
	2020 £m	2019 [3] £m	2020 £m	2019 [3] £m	2020 £m	2019 [3] £m
Trade payables	1,418	1,906	–	62	1,418	1,968
Payables due on RRSAs	697	1,029	–	–	697	1,029
Amounts owed to joint ventures and associates	583	916	–	36	583	952
Customer concession credits	1,536	1,463	514	495	2,050	1,958
Warranty credits	173	185	196	218	369	403
Accruals	1,322	1,712	117	89	1,439	1,801
Deferred receipts from RRSA workshare partners	17	17	507	516	524	533
Government grants [1]	16	12	66	71	82	83
Other taxation and social security	127	128	7	–	134	128
Other payables [2]	764	1,082	515	584	1,279	1,666
	6,653	8,450	1,922	2,071	8,575	10,521

Trade payables and other liabilities are analysed as follows:		
Financial instruments (note 21):		
Trade payables and similar items [3]	4,128	5,766
Other non-derivative financial liabilities [3]	3,021	3,279
Non-financial instruments [3]	1,426	1,476
	8,575	10,521

[1] During the year, **£10m** (2019: £12m) of government grants were released to the income statement.

[2] Other payables includes financial penalties from agreements with investigating bodies, parts purchase obligations, payroll liabilities, HMG levies and deferred consideration for recent acquisitions.

[3] During the year the presentation of trade payables and other liabilities has been analysed in greater detail, without changing the total amount previously reported. As a consequence some comparative balances and currency movements have been represented in additional and more appropriate line items. Trade payables has decreased by £332m, amounts owed to joint ventures and associates increased by £118m, accruals has decreased by £39m and other payables has decreased by £3,137m. Payables due on RRSAs, customer concession credits and warranty credits totalling £3,390m are now presented as separate lines. This has also resulted in an associated representation between financial and non-financial liabilities, with an increase of financial instruments of £1,655m (trade payables and similar items £(83)m and other non-derivative financial liabilities £1,738m) and a decrease in non-financial instruments of £1,655m. The total amount of trade payables and other liabilities from 2019 remains unchanged.

Our payment terms with suppliers vary on the products and services being sourced, the competitive global markets the Group operates in and other commercial aspects of suppliers' relationships. Industry average payment terms vary between 90–120 days. The Group offers reduced payment terms for smaller suppliers, including joint ventures, so that they are paid in 30 days. In line with aerospace industry practice, we offer a supply chain financing (SCF) programme in partnership with banks to enable suppliers, including joint ventures, who are on our standard 75-day payment terms to receive their payments sooner. The SCF programme is available to suppliers at their discretion and does not change our rights and obligations with suppliers nor the timing of our payment of suppliers. At 31 December 2020 suppliers had drawn **£582m** under the SCF scheme (2019: £859m).

21 Financial instruments

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
2020								
Unlisted non-current asset investments	13	A	19	–	–	–	–	19
Trade receivables and similar items	15	B/C	–	938	2,646	–	–	3,584
Other non-derivative financial assets	15	B	–	–	740	–	–	740
Other assets		D	28	–	–	–	–	28
Derivative financial assets [1]		C	766	–	–	–	–	766
Short-term investments		B	–	–	–	–	–	–
Cash and cash equivalents including cash held for sale	17	B	669	–	2,834	–	–	3,503
Borrowings	18	E/F	–	–	–	–	(5,287)	(5,287)
Lease liabilities	18	G	–	–	–	–	(2,043)	(2,043)
Derivative financial liabilities [1]		C	–	–	–	(3,472)	–	(3,472)
Financial RRSAs		H	–	–	–	–	(81)	(81)
Other liabilities		H	–	–	–	–	(73)	(73)
C Shares		B	–	–	–	–	(28)	(28)
Trade payables and similar items	20	B	–	–	–	–	(4,128)	(4,128)
Other non-derivative financial liabilities	20	B	–	–	–	–	(3,021)	(3,021)
Contract liabilities	16	B	–	–	–	–	(186)	(186)
			1,482	938	6,220	(3,472)	(14,847)	(9,679)
2019								
Unlisted non-current asset investments	13	A	14	–	–	–	–	14
Trade receivables and similar items [2]	15	B/C	–	344	3,042	–	–	3,386
Other non-derivative financial assets [2]	15	B	–	–	815	–	–	815
Other assets		D	28	–	–	–	–	28
Derivative financial assets [1]		C	525	–	–	–	–	525
Short-term investments		B	–	–	6	–	–	6
Cash and cash equivalents	17	B	1,095	–	3,348	–	–	4,443
Borrowings	18	E/F	–	–	–	–	(3,331)	(3,331)
Lease liabilities	18	G	–	–	–	–	(2,354)	(2,354)
Derivative financial liabilities [1]		C	–	–	–	(3,374)	–	(3,374)
Financial RRSAs		H	–	–	–	–	(110)	(110)
Other		H	–	–	–	–	(72)	(72)
C Shares		B	–	–	–	–	(31)	(31)
Trade payables and similar items [2]	20	B	–	–	–	–	(5,766)	(5,766)
Other non-derivative financial liabilities [2]	20	B	–	–	–	–	(3,279)	(3,279)
Contract liabilities	16	B	–	–	–	–	(131)	(131)
			1,662	344	7,211	(3,374)	(15,074)	(9,231)

[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 **£43m** (2019: £13m) and liabilities **£2,749m** (2019: £2,862m).
[2] Balances as at 31 December 2019 have been re-presented. See note 15 and 20.

Fair values equate to book values for both 2020 and 2019, with the following exceptions:

	Basis for determining fair value	2020 Book value £m	2020 Fair value £m	2019 Book value £m	2019 Fair value £m
Borrowings	E	(4,886)	(4,814)	(3,206)	(3,147)
Borrowings	F	(401)	(403)	(125)	(130)
Financial RRSAs	H	(81)	(89)	(110)	(112)

The fair value of a financial instrument is the price at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arms-length transaction. Fair values have been determined with reference to available market information at the balance sheet date, using the methodologies described on page 155.

21 Financial instruments continued

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 2020, Level 3 assets totalled **£15m** (2019: £16m).
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
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
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)**
2019								
Non-current assets	234	14	203	451	–	16	–	467
Current assets	16	9	49	74	–	12	–	86
Assets	250	23	252	525	–	28	–	553
Current liabilities	(394)	(5)	–	(399)	(31)	(32)	(31)	(493)
Non-current liabilities	(2,960)	(6)	(9)	(2,975)	(79)	(40)	–	(3,094)
Liabilities	(3,354)	(11)	(9)	(3,374)	(110)	(72)	(31)	(3,587)
	(3,104)	12	243	(2,849)	(110)	(44)	(31)	(3,034)

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

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	
	2020 £m	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m	**2020 £m**	2019 £m
At 1 January	**(3,104)**	(3,764)	**12**	(34)	**229**	292	**14**	–	**(2,849)**	(3,506)
Movements in fair value hedges	**–**	–	**–**	–	**139**	(27)	**–**	–	**139**	(27)
Movements in cash flow hedges	**18**	(4)	**6**	13	**(60)**	–	**–**	–	**(36)**	9
Movements in other derivative contracts[1]	**(23)**	(43)	**(62)**	36	**–**	–	**(75)**	14	**(160)**	7
Contracts settled	**238**	707	**33**	(3)	**(75)**	(36)	**4**	–	**200**	668
At 31 December	**(2,871)**	(3,104)	**(11)**	12	**233**	229	**(57)**	14	**(2,706)**	(2,849)

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

21 Financial instruments continued

Financial risk and revenue sharing arrangements (RRSAs) and other financial 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	
	2020 £m	2019 £m	2020 £m	2019 £m	2020 £m	2019 £m
At 1 January as previously reported	(110)	(227)	16	–	(72)	(62)
Reclassification to borrowings [1]	–	79	–	–	–	–
At 1 January restated	(110)	(148)	16	–	(72)	(62)
Exchange adjustments included in OCI	(6)	10	–	–	(2)	1
Additions	–	(4)	–	–	(17)	(37)
Financing charge [2]	(3)	(3)	–	–	(13)	(3)
Excluded from underlying profit:						
Changes in forecast payments [2]	(3)	1	–	–	–	–
Exchange adjustments [2]	–	6	–	–	–	–
Cash paid	39	28	(1)	–	18	29
Other	–	–	–	–	13	–
Reclassification from trade receivables	–	–	–	16	–	–
Reclassification to held for sale	2	–	–	–	–	–
At 31 December	(81)	(110)	15	16	(73)	(72)

[1] In 2019, the Group reclassified £79m as borrowings previously included in other financial liabilities.
[2] Included in financing.

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 movement 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 ineffectiveness in the period [3] £m	Weighted average FX rate	Weighted average interest rate
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
At 31 December 2019											
Sterling	(375)	(3)	(36)	(410)	375	36	–	3	–	1.00	GBP LIBOR + 0.893
US Dollar	(987)	(10)	(175)	(1,159)	987	172	–	2	(8)	1.52	GBP LIBOR + 1.2575
Euro	(1,607)	63	(34)	(1,637)	1,607	27	(6)	(69)	(6)	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.

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 [1,2]					Cash flow hedge reserve		
	Nominal	FV movement in the period	Nominal	Carrying amount liability	FV movement in the period	Weighted average FX rate	Weighted average interest rate	Amount recognised in OCI	Recycled to net financing	Closing cash flow hedge reserve
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.
[2] No ineffectiveness during the period.

21 Financial instruments continued

The Group has adopted the 'Amendments to IFRS 9, IAS 39 and IFRS 7 Interest Rate Benchmark Reform' issued in September 2019. In calculating the change in fair value attributable to the hedged risk for the fixed-rate borrowings, the Group has made the following assumptions that reflect its current expectations:

- the Group has assumed that pre-existing fallback provisions in the borrowings do not apply to IBOR reform;
- borrowings move to a risk-free rate during 2022, and the spread will be similar to the spread included in the interest rate swaps used as hedging instruments; and
- no other changes to the terms of the hedged borrowings are anticipated.

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 denominated in currencies other than the functional currency of the relevant trading entity (most significantly USD, followed by the euro). 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 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

21 Financial instruments continued

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.

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 2020							
Foreign exchange contracts:							
Cash flow hedges	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	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)
At 31 December 2019							
Foreign exchange contracts:							
Cash flow hedges	646	266	206	174	–	13	(17)
Non-hedge accounted	29,878	5,151	4,704	13,300	6,723	237	(3,337)
Interest rate contracts:							
Fair value hedges	2,969	329	639	484	1,517	235	(6)
Cash flow hedges	15	4	4	7	–	–	–
Non-hedge accounted	2,001	–	–	484	1,517	17	(3)
Commodity contracts:							
Cash flow hedges	54	11	9	21	13	8	(1)
Non-hedge accounted	342	125	101	116	–	15	(10)
	35,905	5,886	5,663	14,586	9,770	525	(3,374)

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

Currency analysis

Foreign exchange contracts are denominated in the following currencies:

	Nominal amount of currencies purchased forward				
	Sterling £m	US dollar [1] £m	Euro £m	Other £m	Total £m
At 31 December 2020					
Currencies sold forward:					
Sterling [1]	–	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

21 Financial instruments continued

	Nominal amount of currencies purchased forward				
	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
At 31 December 2019					
Currencies sold forward:					
Sterling	–	4	–	221	225
US dollar	24,411	–	4,468	581	29,460
Euro	21	297	–	264	582
Other	8	91	152	6	257

[1] The amount of USD purchased forward has increased at 31 December 2020 due to offsetting foreign exchange contracts taken out to reduce the size of the USD hedge book. See note 4.

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

	2020 £m	2019 £m
Sterling	2,376	2,376
US dollar	1,676	1,370
Euro	2,308	1,635

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

	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
At 31 December 2020					
Unlisted 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	1,439	560	1,416	88	3,503
Assets	1,674	4,135	1,903	162	7,874
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)
	(862)	(4,440)	(1,418)	(253)	(6,973)
At 31 December 2019					
Unlisted non-current investments	4	8	2	–	14
Trade receivables and similar items [1]	139	2,644	541	62	3,386
Other non-derivative financial assets [1]	33	738	23	21	815
Other assets	–	28	–	–	28
Short-term investments	–	–	6	–	6
Cash and cash equivalents	2,269	853	1,224	97	4,443
Assets	2,445	4,271	1,796	180	8,692
Borrowings	(416)	(1,172)	(1,739)	(4)	(3,331)
Lease liabilities	(225)	(1,784)	(76)	(269)	(2,354)
Financial RRSAs	–	(25)	(85)	–	(110)
Other liabilities	(29)	(43)	–	–	(72)
C Shares	(31)	–	–	–	(31)
Trade payables and similar items [1]	(2,008)	(2,955)	(730)	(73)	(5,766)
Other non-derivative financial liabilities [1]	(526)	(2,546)	(136)	(71)	(3,279)
Contract liabilities	–	(131)	–	–	(131)
Liabilities	(3,235)	(8,656)	(2,766)	(417)	(15,074)
	(790)	(4,385)	(970)	(237)	(6,382)

[1] Balances as at 31 December 2019 have been re-presented. See note 15 and 20.

21 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 2020					
Sterling	–	–	–	(4)	(4)
US dollar	(11)	–	(2)	2	(11)
Euro	1	3	–	(17)	(13)
Other	78	9	59	–	146
At 31 December 2019					
Sterling	–	2	2	(4)	–
US dollar	–	–	(1)	–	(1)
Euro	1	(3)	–	(1)	(3)
Other	70	12	69	4	155

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 2020					
Unlisted non-current asset investments	19	–	–	–	19
Trade receivables and similar items [1]	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
Short-term investments	–	–	–	–	–
Cash and cash equivalents	3,503	–	–	–	3,503
	7,727	468	373	72	8,640
At 31 December 2019					
Unlisted non-current asset investments	14	–	–	–	14
Trade receivables and similar items [2]	3,011	210	92	73	3,386
Other non-derivative financial assets [2]	811	2	1	1	815
Other assets	28	–	–	–	28
Derivative financial assets	525	–	–	–	525
Short-term investments	6	–	–	–	6
Cash and cash equivalents	4,443	–	–	–	4,443
	8,838	212	93	74	9,217

[1] Ageing on trade receivables and similar items beyond the contractual due date has increased as at 31 December 2020 due to the impact of COVID-19. See note 15.
[2] Balances as at 31 December 2019 have been re-presented. See note 15 and 20.

21 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 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)
At 31 December 2019					
Borrowings	(511)	(722)	(662)	(1,704)	(3,331)
Lease liabilities	(425)	(306)	(872)	(1,258)	(2,354)
Financial RRSAs	(35)	(7)	(14)	(63)	(110)
Other liabilities	(34)	(23)	(10)	(5)	(72)
C Shares	(31)	–	–	–	(31)
Trade payables and similar items [1]	(5,532)	(124)	(20)	(90)	(5,766)
Other non-derivative financial liabilities [1]	(2,465)	(381)	(160)	(273)	(3,279)
Contract liabilities	(131)	–	–	–	(131)
	(9,164)	(1,563)	(1,738)	(3,393)	(15,074)

[1] Balances as at 31 December 2019 have been re-presented. See note 15 and 20.

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 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)
At 31 December 2019					
Derivative financial assets:					
Cash inflows	1,475	1,487	2,072	3,202	
Cash outflows	(1,376)	(1,448)	(2,035)	(3,085)	
Other net cash flows [1]	17	12	34	24	
	116	51	71	141	525
Derivative financial liabilities:					
Cash inflows	4,383	4,113	11,987	4,804	
Cash outflows	(4,960)	(4,737)	(13,872)	(6,186)	
Other net cash flows [1]	(5)	(5)	(4)	–	
	(582)	(629)	(1,889)	(1,382)	(3,374)

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

21 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.

	2020			2019		
	Fixed rate £m	Floating rate £m	Total £m	Fixed rate £m	Floating rate £m	Total £m
Short-term investments	–	–	–	–	6	6
Cash and cash equivalents [1]	–	3,503	3,503	–	4,443	4,443
Borrowings	(4,576)	(711)	(5,287)	(2,252)	(1,079)	(3,331)
Lease liabilities	(1,224)	(819)	(2,043)	(1,578)	(776)	(2,354)
	(5,800)	1,973	(3,827)	(3,830)	2,594	(1,236)
Weighted average interest rates						
Borrowings	3.1%	1.3%		1.9%	1.6%	
Lease liabilities [2]	3.8%	2.4%		3.6%	3.1%	

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

£15m of the Group's borrowings 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 2020 none of these were in breach (2019: 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.

£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 2020 the Group had not breached its contractual obligations under the covenant on any lease (2019: none).

Sensitivity analysis

Sensitivities at 31 December (all other variables held constant) – impact on profit after tax and equity	2020 £m	2019 £m
Sterling 10% weaker against the US dollar	(1,992)	(2,557)
Sterling 10% stronger against the US dollar	1,642	2,105
Euro 10% weaker against the US dollar	(315)	(376)
Euro 10% stronger against the US dollar	258	307
Sterling 10% weaker against the Euro	(14)	(32)
Sterling 10% stronger against the Euro	12	26
Commodity prices 10% lower	(20)	(32)
Commodity prices 10% higher	20	32
Interest rates 50 basis points lower	(77)	(82)
Interest rates 50 basis points higher	82	85

21 Financial instruments continued

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 75% of LIBOR on the 0.1p nominal value of each share, paid on a twice-yearly basis, and have limited voting rights. The Company has the option to compulsorily redeem the C Shares, at any time, if the aggregate number of C Shares in issue is less than 10% of the aggregate number of C Shares issued, or on the acquisition or capital restructuring of the Company.

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

	2020		2019	
	Millions	Nominal value £m	Millions	Nominal value £m
At 1 January	30,608	31	29,071	29
Issued	88,825	89	221,954	222
Redeemed	(91,893)	(92)	(220,417)	(220)
At 31 December	27,540	28	30,608	31

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. Issues of C Shares were declared as follows.

	2020		2019 (restated)	
	Pence per share	£m	Pence per share	£m
Interim	–	–	1.58	87
Final [1]	–	–	–	–
	–	–	1.58	87

[1] On the 6 April 2020, the Group announced that the final shareholder payment of 7.1 pence per share in respect of 2019 that was declared on 28 February 2020 would not be paid. This decision was in response to the macro-economic situation and uncertainty caused by COVID-19, preserving £137m of cash. The 2019 interim payment above has been adjusted for the bonus element of the rights issue – see note 6.

22 Provisions for liabilities and charges

	At 1 January 2020 £m	Business acquisition	Charged to income statement [1] £m	Reversed £m	Utilised £m	Transfers to held for sale £m	Exchange differences £m	At 31 December 2020 £m
Trent 1000 exceptional costs	1,382	–	40	(560)	(541)	–	–	321
Contract losses	773	–	438	(345)	(58)	(4)	4	808
Restructuring	68	–	411	(38)	(206)	–	1	236
Warranty and guarantees	345	3	95	(9)	(104)	(14)	11	327
Customer financing	22	–	–	(5)	–	–	–	17
Insurance	70	–	10	(12)	(8)	–	–	60
Tax related interest and penalties	55	–	16	(24)	(15)	–	1	33
Employer liability claims	49	–	4	(1)	(2)	–	–	50
Other	40	1	97	(15)	(29)	–	(1)	93
	2,804	4	1,111	(1,009)	(963)	(18)	16	1,945
Current liabilities	858							826
Non-current liabilities	1,946							1,119

[1] The charge to the income statement includes £48m as a result of the unwinding of the discounting of provisions previously recognised of which £15m has been charged to underlying and £33m charged to non-underlying.

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. An exceptional charge of £1,361m (at underlying exchange rates) was recorded in 2019, £1,531m at prevailing exchange rates and net of £203m reflecting insurance receipts and contract accounting adjustments. Of the charge, £1,275m was recorded in relation to Trent 1000 exceptional costs, and £459m in relation to contract losses (see below). During the year ended 31 December 2020, and reflecting the impact of COVID-19 and the work the Group has performed to reduce fleet AOG levels and improve the availability of spare engines, the total estimated Trent 1000 cash costs relating to remediation shop visits and customer disruption reduced the provision by **£560m**, taking into account the expected underlying exchange rates and a share of the costs borne by the RRSAs the income statement impact was £390m (see note 2). In the year the Group has utilised **£541m** of the Trent 1000 exceptional costs provision. This represents customer disruption costs settled in cash and credit notes, and remediation shop visit costs. The remaining provision is expected to be utilised over the period 2021 to 2023.

A 12-month delay in the availability of the modified HP turbine blade could lead to a £60m–£100m increase in the Trent 1000 provision.

22 Provisions for liabilities and charges continued

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. Provisions for contract losses are expected to be utilised over the term of the customer contracts, typically within 10–15 years.

During 2019, contract losses of £459m (at prevailing exchange rates) were recognised relating to the upfront recognition of future losses on a small number of contracts which became loss making as a result of the margin impact of the updated HP turbine durability expectations on the Trent 1000 TEN. During the year, these Trent 1000 TEN loss-making contracts have improved by **£230m** (see note 2). For these contracts, a reduction in EFHs resulting from COVID-19 has allowed for a reassessment of shop visits required and the cost savings identified have more than offset the reduction in future revenue leading to an improvement in the overall position of these contracts.

EFHs have reduced as a result of the impact of COVID-19. For certain Civil Aerospace contracts, the impact of this reduction across the contract term has been to significantly reduce revenue without an associated reduction in shop visit costs. Consequently, during the year there have been an increased number of contracts that have become loss-making. A reduction in Civil Aerospace widebody engine flying hours of 15% and the associated decrease in revenues and costs could lead to a £10m-£15m increase in the onerous contract provision.

Additional contract losses **for the Group** of **£406m** have been recognised in the year, together with **£36m** relating to changes in foreign exchange and the effect of discounting.

Warranties and guarantees

Provisions for warranties and guarantees primarily relate to products sold and generally cover 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. This activity will reshape and resize the Group with an anticipated headcount reduction of at least 9,000. As a consequence of this announcement, and based on the detailed plans communicated during 2020, a provision (net of reversals) of **£373m** has been recorded and recognised in cost of sales and commercial and administrative costs. During the year, **£206m** has been utilised as part of these plans. At 31 December 2020, the provision of **£236m** is expected to be utilised over the period 2021–2022. Included within the exceptional charge of **£489m** are costs of £116m associated with other initiatives to enable the restructuring which have been charged directly to the income statement.

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, where it is not probable that a payment will be made the Group has contingent liabilities for customer financing arrangements 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 **$1.9bn** (2019: $2.8bn) (on a discounted basis) to provide facilities to enable customers to purchase aircraft (of which approximately $630m could be called during 2021). 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 below. 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 USD. 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.

	2020		2019	
	£m	*$m*	£m	*$m*
Gross commitments	38	*52*	60	*79*
Value of security	(14)	*(19)*	(9)	*(11)*
Indemnities	(5)	*(6)*	(8)	*(11)*
Net commitments	19	*27*	43	*57*
Net commitments with security reduced by 20% [1]	22	*30*	43	*57*

[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.

22 Provisions for liabilities and charges continued

Insurance

The Group's captive insurance company retains a portion of the exposures it insures on behalf of the remainder of the Group. Significant delays 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. 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

Other provisions comprise a number of liabilities with varying expected utilisation rates.

23 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 2020. In the UK, although the 31 March 2020 valuation is not yet finalised; the initial results have been used.

Changes to the UK defined benefit scheme

The defined benefit schemes expose the Group to actuarial risks such as longevity, interest rate, inflation and investment risks. In the UK, and in the principal US and Canadian pension schemes, the Group has adopted investment policies to mitigate some of these risks. This involves investing a significant proportion of the schemes' assets in liability driven investment (LDI) portfolios, which hold investments designed to offset interest rate and inflation rate risks. In addition during 2019, the scheme completed a partial buy-in/buy-out of UK pensioner liabilities.

On 5 June 2019, the Group entered into a partial buy-in with Legal and General Assurance Society Limited covering the benefits of circa 33,000 in-payment pensioners. The buy-in was in anticipation of a buy-out, the final 10% of which concluded on 1 February 2020. Pension assets and liabilities of **£422m** were derecognised from the Group's balance sheet on this date and this had no impact on the income statement or OCI in the current period. In relation to this transaction, at 31 December 2019, an asset remeasurement net loss estimated at £600m was recognised within Actuarial gains/(losses) recognised in OCI.

A consultation with active managers in the UK scheme was concluded in January 2020. The consultation process agreed certain changes for the relevant manager group which would mitigate future funding cost increases. The changes gave rise to a past service gain of **£35m** which has been recognised as a non-underlying profit (see note 2).

On the 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 as at 30 June 2020 to reflect the number of members who were expected to leave the scheme. In addition, the Group agreed with the Trustee of the RRUKPF to offer a new Bridging Pension Option (BPO) to both active members and also those members leaving on severance. This option allows members to take a larger proportion of their pension prior to reaching the state retirement age and a lower amount thereafter. The accounting impact of these changes gave rise to a past service gain of **£213m** which was been recognised as a non-underlying profit in the period to 30 June 2020 (see note 2). The assumptions for members remaining employed have subsequently been updated to reflect actual experience, resulting in a demographic loss of **£80m**, which is included in Actuarial gains/(losses) recognised in OCI. In addition, for members leaving on severance, an experience loss of **£47m** is also included in Actuarial gains/(losses) recognised in OCI.

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. Following the conclusion of this consultation, the closure of the scheme was confirmed, which gave rise to a non-underlying past-service credit of **£67m**. This primarily arises from the breakage of the link between accrued pensions and salaries for non-manager members (this link had already been largely broken for manager members as a result of the January 2020 consultation described below). Following the confirmation of the scheme closure, the Group is in discussions with the employees' representatives regarding possible additional transitional protections that could be granted from the scheme. Based on the progress of the talks up to 31 December 2020, the Group has allowed for some reductions in the change to the obligation recognised at 31 December. The final details are expected to be agreed in 2021 when any differences will be recognised.

23 Post-retirement benefits continued

Amounts recognised in the income statement

	2020 UK schemes £m	2020 Overseas schemes £m	2020 Total £m	2019 UK schemes £m	2019 Overseas schemes £m	2019 Total £m
Defined benefit schemes:						
Current service cost and administrative expenses	153	67	220	164	52	216
Past-service (credit)/cost [1]	(308)	20	(288)	–	6	6
	(155)	87	(68)	164	58	222
Defined contribution schemes	80	84	164	66	91	157
Operating (credit)/cost	(75)	171	96	230	149	379
Net financing (credit)/charge in respect of defined benefit schemes	(26)	27	1	(59)	36	(23)
Total income statement charge	(101)	198	97	171	185	356

[1] The UK past-service credit of £308m comprises: £213m arising from the restructuring programme and the introduction of the BPO – see above; £67m as a result of the closure of the scheme to future accrual – see above; £35m as a result of the manager consultation – see above; offset by 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 2020 £m	Defined benefit 2019 £m	Defined contribution 2020 £m	Defined contribution 2019 £m	Total 2020 £m	Total 2019 £m
Cost of sales	170	158	115	113	285	271
Commercial and administrative costs	(271)	40	26	26	(245)	66
Research and development costs	33	24	23	18	56	42
	(68)	222	164	157	96	379

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 **£46m** (2019: £47m) in the year.

Net financing comprises:

	2020 UK schemes £m	2020 Overseas schemes £m	2020 Total £m	2019 UK schemes £m	2019 Overseas schemes £m	2019 Total £m
Financing on scheme obligations	148	54	202	303	66	369
Financing on scheme assets	(174)	(27)	(201)	(362)	(30)	(392)
Net financing (income)/charge in respect of defined benefit schemes	(26)	27	1	(59)	36	(23)
Financing income on scheme surpluses	(26)	(2)	(28)	(59)	(1)	(60)
Financing cost on scheme deficits	–	29	29	–	37	37

Amounts recognised in OCI in respect of defined benefit schemes

	2020 UK schemes £m	2020 Overseas schemes £m	2020 Total £m	2019 UK schemes £m	2019 Overseas schemes £m	2019 Total £m
Actuarial gains and losses arising from:						
Demographic assumptions [1]	(85)	34	(51)	309	38	347
Financial assumptions [2]	(1,387)	(246)	(1,633)	(1,723)	(228)	(1,951)
Experience adjustments [3]	(157)	(7)	(164)	79	29	108
Return on scheme assets excluding financing income [2]	1,166	92	1,258	456	106	562
	(463)	(127)	(590)	(879)	(55)	(934)

[1] For the UK Scheme, this includes the change in assumption on the take-up rate for the BPO (see above) and 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.

23 Post-retirement benefits continued

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

	2020			2019		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Present value of funded obligations	(8,879)	(895)	(9,774)	(8,499)	(842)	(9,341)
Fair value of scheme assets	9,762	894	10,656	9,640	845	10,485
Net asset/(liability) on funded schemes	883	(1)	882	1,141	3	1,144
Present value of unfunded obligations	–	(1,568)	(1,568)	–	(1,352)	(1,352)
Net asset/(liability) recognised in the balance sheet	883	(1,569)	(686)	1,141	(1,349)	(208)
Post-retirement scheme surpluses [1]	883	24	907	1,141	29	1,170
Post-retirement scheme deficits	–	(1,580)	(1,580)	–	(1,378)	(1,378)
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:

	2020			2019		
	Assets £m	Obligations £m	Net £m	Assets £m	Obligations £m	Net £m
Canada	243	(293)	(50)	227	(275)	(48)
Germany	2	(1,016)	(1,014)	2	(853)	(851)
US pension schemes	649	(669)	(20)	616	(635)	(19)
US healthcare schemes	–	(469)	(469)	–	(420)	(420)
Other	–	(16)	(16)	–	(11)	(11)
Net asset/(liability) recognised in the balance sheet	894	(2,463)	(1,569)	845	(2,194)	(1,349)

Defined benefit schemes

Assumptions

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

		2020	2019
Discount rate		1.45%	2.15%
Inflation assumption (RPI) [1]		3.10%	3.15%
Rate of increase in salaries [2]		2.55%	3.15%
Transfer assumption (active/deferred)		40%/40%	45%/35%
Bridging Pension Option assumption		30%	n/a
Life expectancy from age 65:	current male pensioner	21.8 years	21.8 years
	future male pensioner currently aged 45	23.2 years	23.1 years
	current female pensioner	23.6 years	23.1 years
	future female pensioner currently aged 45	25.4 years	25.0 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 (2019: 1.0% lower).
[2] Following the closure to future accrual, future salaries do not affect the defined benefit obligation. 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 2019 core projections updated to reflect use of an 'A' parameter of 0.25% for future improvements and long-term improvements of 1.25%. Where appropriate, these are adjusted to take account of the scheme's actual experience.

The assumption for transfers and the BPO is based on actual experience and actuarial advice. The reduction in the transfer assumption is a result of the introduction of the BPO, and assumes that 15% of retiring members opt for the BPO rather than transfer.

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.

23 Post-retirement benefits continued

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

	2020	2019
Discount rate	1.80%	2.40%
Inflation assumption	1.90%	1.90%
Long-term healthcare cost trend rate	4.73%	4.80%
Male life expectancy from age 65: current pensioner	20.8 years	21.4 years
future pensioner currently aged 45	22.4 years	21.7 years

Changes in present value of defined benefit obligations

	2020			2019		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	(8,499)	(2,194)	(10,693)	(10,847)	(2,047)	(12,894)
Exchange differences	–	(5)	(5)	–	71	71
Current service cost	(147)	(65)	(212)	(158)	(50)	(208)
Past-service credit/(cost)	308	(15)	293	–	–	–
Finance cost	(148)	(53)	(201)	(303)	(65)	(368)
Contributions by employees	(2)	(3)	(5)	(2)	(3)	(5)
Benefits paid out	816	100	916	571	79	650
Acquisition of businesses	–	–	–	–	(2)	(2)
Disposal of businesses	–	–	–	–	28	28
Actuarial losses	(1,629)	(225)	(1,854)	(1,335)	(168)	(1,503)
Transfers	–	(3)	(3)	–	(37)	(37)
Settlement	422	–	422	3,575	–	3,575
At 31 December	(8,879)	(2,463)	(11,342)	(8,499)	(2,194)	(10,693)
Funded schemes	(8,879)	(895)	(9,774)	(8,499)	(842)	(9,341)
Unfunded schemes	–	(1,568)	(1,568)	–	(1,352)	(1,352)
The defined benefit obligations are in respect of:						
Active plan participants [1]	(4,369)	(1,362)	(5,731)	(4,751)	(1,185)	(5,936)
Deferred plan participants	(2,750)	(197)	(2,947)	(2,154)	(171)	(2,325)
Pensioners	(1,760)	(904)	(2,664)	(1,594)	(838)	(2,432)
Weighted average duration of obligations (years)	23	16	22	23	16	22

[1] Although the UK scheme closed to future accrual on 31 December 2020, members who became deferred as a result of the closure and remain employed by the Group retain some additional benefits compared to other deferred members. The obligations for these members are shown as active plan participants.

Changes in fair value of scheme assets

	2020			2019		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	9,640	845	10,485	12,773	735	13,508
Exchange differences	–	(27)	(27)	–	(17)	(17)
Administrative expenses	(6)	(2)	(8)	(6)	(2)	(8)
Financing	174	27	201	362	30	392
Return on plan assets excluding financing	1,166	92	1,258	456	106	562
Contributions by employer	24	56	80	199	67	266
Contributions by employees	2	3	5	2	3	5
Benefits paid out	(816)	(100)	(916)	(571)	(79)	(650)
Acquisition of businesses	–	–	–	–	2	2
Settlement	(422)	–	(422)	(3,575)	–	(3,575)
At 31 December	9,762	894	10,656	9,640	845	10,485
Total return on scheme assets	1,340	119	1,459	818	136	954

23 Post-retirement benefits continued

Fair value of scheme assets at 31 December

	2020			2019		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Sovereign debt	7,220	276	7,496	5,799	277	6,076
Corporate debt instruments	2,878	521	3,399	3,135	467	3,602
Interest rate swaps	52	–	52	14	–	14
Inflation swaps	(55)	–	(55)	(18)	–	(18)
Cash and similar instruments [1]	(1,156)	10	(1,146)	(784)	13	(771)
Liability driven investment (LDI) portfolios [2]	8,939	807	9,746	8,146	757	8,903
Listed equities	–	71	71	323	76	399
Unlisted equities	64	–	64	95	–	95
Synthetic equities [3]	41	12	53	3	5	8
Corporate debt instruments	709	–	709	662	4	666
Cash	–	6	6	–	4	4
Partial buy-in insurance policy	–	–	–	408	–	408
Other	9	(2)	7	3	(1)	2
At 31 December	9,762	894	10,656	9,640	845	10,485

1 Cash and similar instruments include repurchase agreements on UK Government bonds amounting to **£(1,539)m** (2019: £(1,308)m). The latest maturity date for these short-term borrowings is September 2022.
2 A portfolio of gilt and swap contracts, backed by investment-grade credit instruments and LIBOR-generating assets, 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 **£727m** (2019: £328m).

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 2020, there was no indirect holding of the Group's financial instruments (2019: £0.1m).

Future contributions

The Group expects to contribute approximately £160m to its defined benefit schemes in 2021 (2020: £170m): UK: £100m, Overseas: £60m (2019: UK: £100m, Overseas: £70m).

In the UK, the funding is based on a statutory triennial funding valuation process. This includes a negotiation between the Group and the Trustee on actuarial assumptions used to value obligations (Technical Provisions) which may differ from those used for accounting set out above. The assumptions used to value Technical Provisions must be prudent rather than a best estimate of the liability. Most notably, the Technical Provision discount rate is currently based upon UK Government yields plus a margin (0.5% at the 31 March 2017 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 2017, agreed by the Trustee in December 2017, showed that the UK scheme was estimated to be 112% funded on the Technical Provisions basis. Following the closure of the scheme to future accrual on 31 December 2020, no contributions will be made in respect of future accrual and there are no deficit reduction contributions. The 2021 contributions included above are in respect of 2020 accrual, payment of some of which was deferred in agreement with the Trustee as a result of the COVID-19 pandemic. The current SoC (amended in 2020) includes an arrangement for potential contributions during 2024 to 2027 (capped at £48.3m a year) if the Technical Provisions funding position is below 107% at 31 March 2023. As at 31 December 2020 discussions on the 31 March 2020 triennial valuation were ongoing and the Technical Provisions funding position cannot be estimated until these discussions are concluded in the first half of 2021.

23 Post-retirement benefits continued

Sensitivities

The calculations of the defined benefit obligations are sensitive to the assumptions set out above. The following table summarises how the estimated impact of a change in a significant assumption would affect the UK defined benefit obligation at 31 December 2020, 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.

		2020 £m	2019 £m
Reduction in the discount rate of 0.25% [1]	Obligation	**(530)**	(495)
	Plan assets (LDI portfolio)	**602**	502
Increase in inflation of 0.25% [1]	Obligation	**(290)**	(290)
	Plan assets (LDI portfolio)	**267**	235
Increase in real increase in salaries of 0.25%	Obligations	**n/a**	(80)
Increase of 1% in transfer value assumption	Obligations	**(67)**	(64)
Increase of 5% of transfers instead of BPO	Obligations	**(45)**	n/a
One year increase in life expectancy	Obligations	**(455)**	(408)

[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.

24 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 2019	1	–	1,896	379
Shares issued to employee share trust	–	–	6	1
Shares issued in relation to the acquisition of ITP Aero	–	–	29	6
At 31 December 2019	1	–	1,931	386
Shares issued on rights issue	**–**	**–**	**6,437**	**1,288**
At 31 December 2020	**1**	**–**	**8,368**	**1,674**

The rights attaching to each class of share are set out on page 208.

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 21.

Issue of new shares

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 directly attributable to the rights issue of £79m were incurred and have been accounted for as a deduction from share premium.

25 Share-based payments

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

	2020 £m	2019 £m
Total expense recognised for equity-settled share-based payments transactions	**27**	30
Total expense recognised for cash-settled share-based payments transactions	**(2)**	–
Share-based payments recognised in the consolidated income statement	**25**	30
Liability for cash-settled share-based payment	**–**	1

A description of the share-based payment plans is included in the Directors' Remuneration Report on pages 81 to 100.

25 Share-based payments continued

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

	ShareSave		LTIP	APRA
	Number Millions	Weighted average exercise price [1] Pence	Number Millions	Number Millions
Outstanding at 1 January 2019	26.1	713	13.9	0.4
Granted	16.6	677	5.3	0.2
Forfeited	(5.1)	814	(0.9)	–
Exercised	(5.7)	627	(5.1)	(0.2)
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 31 December 2020	**49.6**	**239**	**67.6**	**1.4**
Exercisable at 31 December 2020	–	–	–	–
Exercisable at 31 December 2019	–	–	–	–

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

The weighted average share price at the date share options were exercised was **203p** (2019 adjusted: 311p). The closing price at 31 December 2020 was **111p** (2019 adjusted: 234p). The number of shares and, where relevant, the exercise prices have been adjusted to reflect the impact of the rights issue which completed on 12 November 2020.

The weighted average remaining contractual life for the share options as at 31 December 2020 was **two years** (2019: one year).

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:

	2020	2019
LTIP	**388p**	851p
LTIP (ELT & Board)	**354p**	774p
ShareSave – three year grant	**n/a**	165p
ShareSave – five year grant	**n/a**	176p
APRA	**490p**	892p

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.

APRA

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

26 Contingent liabilities

Contingent liabilities in respect of customer financing commitments are described in note 22.

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. Following the expiry of its term the DPA with the DoJ was dismissed by the US District Court on 19 May 2020. 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.

26 Contingent liabilities continued

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 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.

The Group's share of equity accounted entities' contingent liabilities is **nil** (2019: nil).

27 Related party transactions

	2020 £m	2019 £m
Sales of goods and services to joint ventures and associates [1]	3,760	3,776
Purchases of goods and services from joint ventures and associates [1]	(4,288)	(3,685)
Lease payments to joint ventures and associates	(226)	(210)
Guarantees of joint arrangements' and associates' borrowings	3	1
Guarantees of non-wholly owned subsidiaries' borrowings	3	3
Dividends received from joint ventures and associates	60	92
Other income received from joint ventures and associates	3	1

[1] Included at the exchange rate achieved on settled derivative contracts, consistent with note 2. At the average exchange rate, sales were £3,768m (2019: £4,485m) and purchases were £4,292m (2019: £4,442m).

Included in sales of goods and services to joint ventures and associates are sales of spare engines amounting to **£102m** (2019: £277m). Profit recognised in the year on such sales amounted to **£91m** (2019: £93m), including profit on current year sales and recognition of profit deferred on sales in previous years. On an underlying basis (at actual achieved rates on settled derivative transactions), the amounts were **£90m** (2019: £78m). Cash receipts relating to the sale of spare engines amounted to **£193m** (2019: £414m).

The aggregated balances with joint ventures are shown in notes 15 and 20. Transactions with Group pension schemes are shown in note 23.

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

Key management personnel are deemed to be the Directors (pages 64 to 66) and the members of the Executive Team (described on page 62). Remuneration for key management personnel is shown below:

	2020 £m	2019 £m
Salaries and short-term benefits	7	9
Post-retirement schemes	–	–
Share-based payments	1	5
	8	14

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 81 to 100. 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.

28 Acquisitions and disposals

Acquisitions

On 15 January 2020, the Group completed the acquisition of Qinous GmbH (increasing its shareholding from 24% to 100%) for a cash consideration of €15m, of which €10m was paid on completion. A further €2m is payable in September 2021 and €3m in September 2023. Under the sale agreement, the cash consideration may be adjusted up by €3m to €18m based on a revenue target being achieved by 31 December 2023. In accordance with IFRS 3 *Business Combinations* the pre-acquisition shareholding of 24% has been re-measured to fair value of €5m and a revaluation gain of €2m has been recognised in the income statement.

On the 7 March 2020, the Group signed an agreement to acquire 100% of the shares of Kinolt Group S.A., a Belgian company which designs and manufactures uninterruptible power supply systems. The transaction was completed on 1 July 2020 for net proceeds of €115m. The acquisition of Kinolt Group S.A. completes the Group's power supply product offering, accelerates its strategy of offering integrated solutions and enables the Group to strengthen its market position in safety critical applications with a leader in dynamic uninterruptible power supply. Fair values are determined on the basis of an assessment performed by an independent professional expert, using measurement techniques and estimation of future cash flows to assess the values of identifiable assets and liabilities at the date of acquisition. The total fair value of acquired identifiable assets and liabilities was €65m, primarily related to technology and customer relationships. Goodwill of €50m was recognised on acquisition in relation to workforce, future products, synergies and access to new customers and markets.

On 18 May 2020, the Group entered into an agreement to increase its shareholding in Reaction Engines Ltd from 2.0% to 10.1% for a cash consideration of £20m. The consideration is payable (and the associated shares acquired) in four instalments that will be made between July 2020 and January 2022. Reaction Engines is accounted for as an investment.

28 Acquisitions and disposals continued

On the 7 December 2020, the Group completed the acquisition of Servowatch Systems Limited (SSL) for a cash consideration of £5m. The acquisition will provide key technology within Power Systems for the Naval and Commercial Marine markets. The Group has performed a final assessment to determine the fair values of the identifiable assets and liabilities acquired in accordance with IFRS 3 and has identified intangible assets amounting to £5m and £(4)m of other assets and liabilities. Goodwill of £4m was recognised on acquisition in relation to workforce and synergies.

Recognised amounts of assets acquired and liabilities assumed

	Qinous £m	Kinolt £m	Servowatch £m	Total £m
Intangible assets	14	61	5	80
Property, plant and equipment	–	17	–	17
Right-of-use assets	–	1	–	1
Inventory	3	42	1	46
Trade receivables and other assets	1	17	1	19
Cash and cash equivalents	–	11	–	11
Trade and other payables	(5)	(47)	(5)	(57)
Provisions	–	(4)	–	(4)
Borrowings and lease liabilities	–	(24)	–	(24)
Deferred tax	(3)	(16)	(1)	(20)
Total identifiable assets and liabilities	10	58	1	69
Goodwill arising	7	46	4	57
Total consideration	17	104	5	126
Consideration satisfied by:				
Existing shareholding	4	–	–	4
Cash	8	104	5	117
Deferred consideration	5	–	–	5
	17	104	5	126
Net cash outflow arising on acquisition:				
Cash and cash equivalents	8	104	5	117
Less: Cash and cash equivalents acquired	–	(11)	–	(11)
	8	93	5	106
Identifiable intangible assets comprise:				
Customer relationships	–	37	4	41
Technology assets	14	22	–	36
Development expenditure	–	2	1	3
	14	61	5	80

The gross contractual value of trade receivables acquired was £15m. At the acquisition dates, it was estimated that contractual cash flows of £1m would not be collected.

The acquisitions of Qinous and Kinolt contributed £5m and £50m to revenue respectively and Qinous contributed £(10)m to loss before tax (including amortisation of the acquisition accounting adjustments) for the period between the date of acquisition and the 31 December 2020. If the acquisitions had been completed on 1 January 2020, the contribution to the Group's revenues and loss before tax due to Qinous would have been £5m and £(10)m respectively and due to Kinolt would have been £68m and £(4)m respectively.

Transaction costs of £3m have been expensed during the year relating to the acquisitions of Qinous, Kinolt and Servowatch.

Disposals

On the 31 January 2020, the Group completed the sale of its North America Civil Nuclear (NACN) business to Westinghouse Electric Company LLC. for $25m. The business was disclosed as a disposal group held for sale at 31 December 2019. In the 2019 financial statements, the Group reported an impairment charge of £25m as a result of the decision to classify NACN as a business held for sale. Upon the disposal of NACN on 31 January 2020, and 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 2020. This has resulted in a cumulative currency translation loss of £7m.

On the 3 February 2020, the Group sold its Knowledge Management Systems (KMS) business to Valsoft Corp. for a cash consideration of $3m. Upon the disposal of KMS, and in accordance with IAS 21 the Group has recycled the cumulative currency translation reserve through the income statement in 2020. This has resulted in a cumulative currency translation gain of £3m.

On the 7 May 2020, the Group sold Trigno Energy Srl (Trigno) to Pilkington Italia S.p.A. for a cash consideration of €6m. Upon the disposal of Trigno, and in accordance with IAS 21 the Group has recycled the cumulative currency translation reserve through the income statement in 2020. This has resulted in a cumulative currency translation gain of £1m.

28 Acquisitions and disposals continued

On the 17 May 2020, the Group signed an agreement to sell its 18% shareholding in Exostar LLC for an initial cash consideration of $23m. The transaction was completed on 6 July 2020. Upon the disposal of Exostar, and in accordance with IAS 21 the Group has recycled the cumulative currency translation reserve through the income statement in 2020. This has resulted in a cumulative currency translation loss of £3m.

	NACN £m	KMS £m	Trigno £m	Total subsidiaries £m	Exostar (investment) £m	Total £m
Proceeds						
Cash consideration	19	2	4	25	18	**43**
Cash and cash equivalents disposed	(9)	(2)	(4)	(15)	–	**(15)**
Net cash consideration per cash flow statement	10	–	–	10	18	28
Less: Net (assets)/liabilities disposed	**(4)**	**1**	**(2)**	**(5)**	**(6)**	**(11)**
Profit/(loss) on disposal before disposal costs and continuing obligations	**6**	**1**	**(2)**	**5**	**12**	**17**
Cumulative currency translation (loss)/gain	**(7)**	**3**	**1**	**(3)**	**(3)**	**(6)**
Disposal costs	**(1)**	**–**	**–**	**(1)**	**–**	**(1)**
(Loss)/Profit before tax	**(2)**	**4**	**(1)**	**1**	**9**	**10**

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. This is reviewed at each reporting date over the adjustment period, based on actual sales. During the year, a liability of €29m has been recognised for amounts that are now expected to be payable in relation to the years 2020–2023 as a result of a reduction in after-market sales as a consequence of the impact of COVID-19. This €29m liability has been reflected as an adjustment to sales proceeds. Cash consideration has been adjusted by £5m which has been paid during the year.

Reconciliation of loss on acquisition & disposal of businesses per the income statement	£m
Profit on disposal of businesses	10
Gain on revaluation of Qinous	1
Adjustment to L'Orange sales proceeds	(25)
Loss on acquisition & disposal of businesses (income statement – non-underlying)	(14)

Businesses held for sale

On 28 February 2020, the Group announced the decision to carry out a strategic review of Bergen, our medium-speed gas and diesel engine business. Bergen formed part of the Power Systems business and from 2020 it has been reclassified as non-core following the announcement of the strategic review. On 1 February 2021, the Group signed an agreement for the sale of Bergen to TMH Group for a cash consideration of approximately €150m (subject to closing adjustments) which is expected to complete in the second half of 2021. Consequently, in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations,* Bergen has been classified as held for sale at 31 December 2020. As at 31 December 2020, Bergen had an additional £25m of cash which, as part of bank pooling arrangements, was held by another Group company and consequently is not included in the disposal group as the resulting intra-group balances are eliminated on consolidation. On completion, such cash will be included in the disposal group.

On 7 December 2020, the Group signed an agreement for the sale of Civil Nuclear Instrumentation & Control business to Framatome. Consequently, in accordance with IFRS 5, the business has been classified as held for sale at 31 December 2020 and its carrying value assessed against the anticipated proceeds and disposal costs.

The table below summarises the categories of assets and liabilities classified as held for sale:

	Bergen £m	Civil Nuclear £m	Total £m
Intangible assets	–	16	16
Property, plant and equipment	3	4	7
Right-of-use assets	2	7	9
Deferred tax assets	2	4	6
Cash and cash equivalents	25	26	51
Inventory	97	14	111
Trade receivables and other assets	50	38	88
Assets held for sale	**179**	**109**	**288**
Trade payables and other liabilities	(100)	(84)	(184)
Provisions for liabilities and charges	(11)	(7)	(18)
Borrowings and lease liabilities	(4)	(7)	(11)
Deferred tax liabilities	(2)	–	(2)
Post-retirement scheme deficits	–	(13)	(13)
Liabilities associated with assets held for sale	**(117)**	**(111)**	**(228)**
Net assets held for sale	**62**	**(2)**	**60**

During the year, the Group announced its intention to sell ITP Aero. At 31 December 2020, ITP Aero was not available for immediate sale in its present condition and therefore, in line with IFRS 5 has not been classified as a disposal group. The assets of ITP Aero have been assessed for impairment in accordance with IAS 36 on a value in use basis which assumes the value will be realised over the long-term.

29 Derivation of summary funds flow statement

	2020		2019		
	£m	£m	£m	£m	Source
Underlying operating (loss)/profit (see note 2)		(1,972)		808	Note 2
Amortisation and impairment of intangible assets	902		372		Cash flow statement (CFS)
Depreciation and impairment of property, plant and equipment	821		532		CFS
Depreciation and impairment of right-of-use assets	732		411		CFS
Adjustment to residual value guarantees in lease liabilities	(102)		–		CFS
Impairment of joint ventures	24		–		Note 13
Reversal of non-underlying impairments of non-current assets	(1,293)		(84)		Reversal of underlying adjustment (note 2)
Acquisition accounting	(133)		(163)		Reversal of underlying adjustment (note 2)
Depreciation and amortisation		951		1,068	
Additions of intangible assets		(316)		(591)	CFS less exceptional restructuring (see below)
Purchases of property, plant and equipment		(579)		(747)	CFS
Lease payments (capital plus interest)		(379)		(319)	CFS (payments adjusted for foreign exchange (FX))
Decrease/(increase) in inventories		588		(43)	CFS
Movement in receivables/payables	(2,332)		(33)		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)	(276)		526		CFS adjusted for the impact of exceptional programme charges and FX and excluding Civil LTSAs (shown separately below)
Underlying movement in Civil LTSA contract balances	479		754		Movement in Civil Aerospace LTSA balances within movement of contract balances in CFS less impact of FX
Revaluation of trading assets (excluding exceptional items)	(299)		265		Adjustment to reflect the impact of the FX contracts held on receivables/payables
Realised derivatives in financing	700		(266)		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		(1,728)		1,246	
Movement on provisions		(195)		(506)	CFS adjusted for the impact of exceptional programme charges and anticipated recoveries, exceptional restructuring and FX contracts held
Net interest received and paid		(75)		(73)	CFS
Fees paid on undrawn facilities		(97)		–	CFS
Cash flows on settlement of excess derivative contracts		(202)		–	CFS
Cash flows on financial instruments net of realised losses included in operating profit		(8)		(15)	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
Trent 1000 insurance		–		173	Included in movements in payables and provisions in CFS
Other		(102)		56	Principally disposals of non-current assets, joint venture trading and the effect of share-based payments
Trading cash flow		(4,114)		1,057	
Underlying operating profit charge in excess of contributions to defined benefit schemes		160		(9)	CFS excluding additional contribution of £35m shown below
Tax		(231)		(175)	CFS
Free cash flow		(4,185)		873	
Shareholder payments		(92)		(224)	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)		(43)	CFS
Disposal of businesses		23		453	CFS
Exceptional restructuring costs		(323)		(216)	£268m related to severance costs and £55m capital expenditure (2019: £167m and £49m respectively)
DPA payments		(135)		(102)	CFS
Pension fund contribution		–		(35)	CFS
Difference in fair values of derivative contracts held for financing		(26)		(2)	CFS
Payments of lease principal less new leases and other non-cash adjustments to lease liabilities		311		123	CFS adjusted for the impact of FX
Foreign exchange		51		(98)	CFS less allocation to leases above
Other		(49)		(6)	Cash outflow on M&A spend and timing of cash flows on a prior period disposal. See below.
Change in net (debt)/funds		(2,583)		723	
Change in net (debt)/funds		(2,583)		723	
Non-cash lease impact		(311)		(123)	
Reclassification of other financial liabilities to borrowings		–		(79)	
Change in net (debt)/funds excluding lease liabilities		(2,894)		521	

29 Derivation of summary funds flow statement continued

The comparative information for the year ended 31 December 2019 has been re-presented to be on a comparable basis with the presentation adopted for the year ended 31 December 2020. There is no change to trading or group free cash flow. In summary: (i) cash flows on financial instruments net of realised losses included in operating profit previously included in other within trading cash flow, have been shown separately; (ii) differences in fair values of derivative contracts held for financing previously included in other below free cash flow have been shown separately; and (iii) 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 Group's cash flow to see what is available for distribution among those stakeholders funding the Group (including debt holders and shareholders). Free cash flow is the movement in net debt from cash flows excluding: transactions with ordinary shareholders; M&A activity; financial penalties paid; exceptional restructuring payments; and the capital element of lease payments. The Board considers that free cash flow reflects cash generated from the Group's underlying trading.

The table below shows a reconciliation of free cash flow to the change in cash and cash equivalents presented in the condensed consolidated cash flow statement on page 109.

	2020		2019		
	£m	£m	£m	£m	Source
Change in cash and cash equivalents	(995)		(413)		CFS
Net cash flow from changes in borrowings and lease liabilities	(1,630)		1,385		CFS excluding repayment of debt acquired. See below.
Decrease in short-term investments	(6)		–		CFS
Movement in net (debt)/funds from cash flows	(2,631)		972		
Exclude: Capital element of lease repayments	(284)		(271)		CFS
Movement in net (debt)/funds from cash flows (excluding lease liabilities)		(2,915)		701	
Rights issue		(1,972)		–	CFS
Returns to shareholders		92		224	CFS
Acquisition of businesses	130		43		CFS including repayment of debt acquired
Disposal of businesses	(23)		(453)		CFS
Other acquisitions and disposals	12		1		£12m related to costs incurred on central M&A activity
Changes in group structure		119		(409)	
Payments of financial penalties		135		102	CFS
Exceptional restructuring costs		323		216	£268m related to severance costs and £55m capital expenditure (2019: £167m and £49m respectively)
Pension fund contribution		–		35	Additional contribution in connection with the pensioner buy-out (note 23)
Other		33		4	Timing of cash flows on a prior period disposal where the Group retains the responsibility for collecting cash before passing it on to the acquirer
Free cash flow		(4,185)		873	

Company balance sheet

At 31 December 2020

	Notes	2020 £m	2019 £m
ASSETS			
Investments – subsidiary undertakings	2	**14,688**	12,801
Trade receivables and other assets	3	**–**	1,870
Cash and cash equivalents		**–**	9
Current assets		**–**	1,879
TOTAL ASSETS		**14,688**	14,680
LIABILITIES			
Trade payables and other liabilities	4	**(331)**	(2,228)
Other financial liabilities	5	**(28)**	(31)
Current liabilities		**(359)**	(2,259)
NET ASSETS		**14,329**	12,421
EQUITY			
Called-up share capital	6	**1,674**	386
Share premium		**1,012**	319
Merger reserve		**6,962**	7,051
Capital redemption reserve		**2,744**	2,652
Other reserve		**275**	248
Retained earnings		**1,662**	1,765
TOTAL EQUITY		**14,329**	12,421

The Company has elected to take the exemption under section 408 of the Companies Act 2006 from presenting the parent company income statement. The loss for the Company for the year was **£1m** (2019: profit £1,498m).

The Financial Statements on pages 177 to 182 were approved by the Board on 11 March 2021 and signed on its behalf by:

Warren East
Chief Executive

Stephen Daintith
Chief Financial Officer

Company's registered number: 7524813

Company statement of changes in equity

For the year ended 31 December 2020

	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] £m	Total equity £m
At 1 January 2019	379	268	7,029	2,432	218	529	10,855
Profit for the year	–	–	–	–	–	1,498	1,498
Arising on issues of ordinary shares [5]	7	51	244	–	–	–	302
Issue of C Shares	–	–	(222)	–	–	–	(222)
Redemption of C Shares	–	–	–	220	–	(220)	–
Share-based payments – direct to equity	–	–	–	–	30	(42)	(12)
At 1 January 2020	386	319	7,051	2,652	248	1,765	12,421
Loss for the year	–	–	–	–	–	(1)	(1)
Arising on issue of ordinary shares [5]							
– Rights issue [4]	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 31 December 2020	1,674	1,012	6,962	2,744	275	1,662	14,329

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. 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 2020, all the Company's retained earnings are distributable, however, the available amount may be different at the point any future distributions are made.
4 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 and deducted from share premium.
5 At 31 December 2020, 39,866,717 ordinary shares with a net book value of £89m (2019:12,476,576 ordinary shares with a net book value of £108m) were held for the purpose of share-based payment plans and included in accumulated losses. During the year, 3,458,865 ordinary shares with a net book value of £29m (2019: 8,984,219 ordinary shares with a net book value of £82m) vested in share-based payment plans. During the year, the Company acquired 85,724 (2019: 118,831) of its ordinary shares via reinvestment of dividends received on its own shares and purchased 30,763,282 (2019: 1,673,143) of its ordinary shares through purchases on the London Stock Exchange. During the year, the Company issued no new ordinary shares (2019: 7,803,043) to the Group's share trust for its employee share-based payment plans with a net book value of nil (2019: £66m).

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 52 to 54. After due consideration the Directors consider that the Group has sufficient liquidity headroom to continue in operational existence for a period of at least eighteen 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 and EU regulations, the Company Financial Statements have been prepared in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006 and international financial reporting standards adopted pursuant to Regulation (EC) No 1606/2002 as it applies in the EU.

In these Financial Statements the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

- a cash flow statement and related notes;
- comparative period reconciliations 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 carrying value of the investment in subsidiary undertakings is reviewed for impairment on an annual basis. The recoverable amount is determined based on value in use which requires the determination of appropriate assumptions (which are 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.

Estimation uncertainty arises due to changing economic and market factors, most particularly as a result of the COVID-19 pandemic. The recoverable amount of the investments in Rolls-Royce Group Limited and Rolls-Royce plc of £14.7bn has been assessed for impairment based on a value in use calculation using cash flow projections from the Group's latest forecasts which have regard to the current market and the Group's views on the future achievable growth. Discount rates used reflect current market assessments of the time value of money and the rate of return a market participant would require. The rate used to discount the forecast cash flows reflect the individual businesses in the Group and is 9% post-tax. The Directors have determined that no impairment charge is required. An increase in the rate from 9% to 10% would cause the carrying amount of the Company's investment to equal its recoverable amount. This sensitivity does not assign value to the new programmes that the Company expects to bring to market as part of its sustainability initiatives.

Significant accounting policies

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

Investments in subsidiary undertakings

Investments included in fixed assets are investments in subsidiary companies. These are held at historical cost and are considered for impairment 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.

Trade payables

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

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.

1 Accounting policies continued

Share-based payments

As described in the Directors' Remuneration Report on pages 81 to 100, the Company grants awards of its own shares to employees of its subsidiary undertakings (see note 25 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.

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.

Costs of share issues

The cost of issuing ordinary shares are charged to the share premium account.

2 Investments – subsidiary undertakings

	£m
Cost:	
At 1 January 2020	12,801
Additions [1]	1,860
Cost of share-based payments in respect of employees of subsidiary undertakings less receipts from subsidiaries in respect of those payments	27
At 31 December 2020	14,688

[1] During the year, the Company made a capital injection of £1,860m to its subsidiary undertaking, Rolls-Royce Group Limited.

Details of the Company's subsidiary undertakings and joint venture and associates undertakings are listed on pages 183 and 189.

Assessment of carrying value of investments in subsidiary undertakings

The carrying value of the Company's investments in subsidiary undertakings has been tested for impairment in accordance with IAS 36 *Impairment of Assets*. The carrying value is compared to the asset's recoverable amount and has been assessed by reference to value in use. The value in use has been calculated based upon a discounted cash flow methodology using the most recent forecasts prepared by management of the Rolls-Royce Holdings plc group. These forecasts:

- are consistent with past experience and external sources on market conditions;
- cover the next five years for the Power Systems, Defence and Central businesses together with a terminal value. Cash flows are assumed to grow at 2.0% which is based on inflation forecasts by recognised bodies;
- utilise long-term cash flow forecasts for the Civil and ITP Aero businesses to reflect the best estimate of the impact and subsequent recovery from the COVID-19 pandemic, together with the estimated cash flows from its significant growth programmes such as the Trent XWB and Trent 7000. These forecasts extend to 2035 after which a negative growth rate is applied to reflect the remaining flows to the end of our current product portfolio;
- reflect estimation uncertainty through the use of a probability weighted downside scenario for the Civil business where the uncertainty is most significant. The assumptions are consistent with those set out in the Going Concern Statement on pages 52 to 54. The weighting applied is 75% to a base case and 25% to a downside scenario;
- include ongoing capital expenditure required to maintain the current programmes but excludes any growth from the new programmes that the Company expects to bring to market as part of its sustainability initiatives.

The key assumptions for the value in use calculation are assumed market share, programme timings, unit cost assumptions, discount rates and foreign exchange. Management estimates discount rates that reflect current market assessments of the time value of money and the rate of return a market participant would require. The rate used to discount the forecast cash flows reflects the individual businesses in the Group and is c.9% post-tax. As a result of this analysis, the Directors have determined that no impairment charge is required.

An increase in the post-tax discount rate from 9% to 10% would cause the carrying amount of the Company's investment to equal its recoverable amount. This sensitivity does not assign value to the new programmes that the Company expects to bring to market as part of its sustainability initiatives. As a stress test, the potential impact of the full downside scenario (referred to above) occurring has also been evaluated. It is estimated that this would result in an impairment of the investment in subsidiary undertakings of around £0.5bn.

3 Trade and other receivables

	2020 £m	2019 £m
Amounts owed by subsidiary undertakings	–	1,870

In 2019, amounts owed by subsidiary undertakings related to dividends receivable from Rolls-Royce Group Limited. This balance was settled during the year.

4 Trade and other payables

	2020 £m	2019 £m
Amounts owed to subsidiary undertakings	331	2,228

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 2020	30,608	31
Issued	88,825	89
Redeemed	(91,893)	(92)
At 31 December 2020	27,540	28

The rights attaching to C Shares are set out on page 208.

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 2020	1	–	–	1,931	386
Rights issue	–	–	–	6,437	1,288
At 31 December 2020	1	–	–	8,368	1,674

The rights attaching to each class of share are set out on page 208.

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 a cash consideration of £2,060m. Transaction costs directly attributable to the rights issue of £79m were incurred and have been accounted for as a deduction from share premium.

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 2020, Rolls-Royce Holdings plc consolidated group had net liabilities of £4.9bn (2019: £3.4bn) compared to £14.3bn (2019: £12.4bn) of net assets of the Company. The Company is a holding company and does not trade in its own right. The Company was incorporated in 2011 and became the Rolls-Royce 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 the year. As set out in note 2, management has assessed the recoverable amount of the Company's investment in subsidiaries, which supports the carrying value of those investments. The Group's consolidated financial statements are prepared on a historical cost basis except where IFRS requires a valuation basis to be applied (see page 114 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 £8,922m as a result of adopting IFRS 15 in 2017; and financial liabilities of £2,871m arising from the recognition at fair value of foreign exchange derivatives held to manage exposure on the Group's future trading.

8 Contingent liabilities & commitments

Where the Company enters into financial guarantee contracts to guarantee the indebtedness of other companies within its group, the Company considers these to be insurance arrangements, and accounts for them as such. In this respect, the Company treats the guarantee contract as a contingent liability until such time as it becomes probable that the Company will be required to make a payment under the guarantee.

At 31 December 2020, these guarantees amounted to £10,522m (2019: £5,585m) of which total drawn amounted to **£5,022m** (2019: £3,085m).

9 Other information

Employees
The Company had no employees in 2020 (2019: 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 81 to 100.

	2020			2019		
	Highest paid director £000	**Other directors £000**	**Total £000**	Highest paid director £000	Other directors £000	Total £000
Remuneration	**1,110**	**1,946**	**3,056**	2,080	2,754	4,834
Gains made on share options	**530**	**318**	**848**	1,079	714	1,793
	1,640	**2,264**	**3,904**	3,159	3,468	6,627

No Director accrued any retirement benefits in the year (2019: none).

SUBSIDIARIES

As at 31 December 2020, 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 **	Adelheidstrasse 40, D-88046, Friedrichshafen, Germany	Capital Stock	50
Amalgamated Power Engineering Limited *	Derby [1]	Deferred Ordinary	100 100
Bergen Engines AS	Hordvikneset 125, N-5108, Hordvik, Bergen 1201, Norway	Ordinary	100
Bergen Engines Bangladesh Private Limited	Green Grandeur, 6th Floor, Plot no.58 E, Kamal Ataturk Avenue Banani, C/A Dhaka, 1213, Bangladesh	Ordinary	100
Bergen Engines BV	Werfdijk 2, 3195HV Pernis, Rotterdam, Netherlands	Ordinary	100
Bergen Engines Denmark A/S	Østre Havnepromenade 34 9000 Ålborg, Denmark	Ordinary	100
Bergen Engines India Private Limited [3]	52-b, 2nd Floor, Okhla Industrial Estate, Phase III, New Delhi 110020, India	Ordinary	100
Bergen Engines Limited	Derby [1]	Ordinary	100
Bergen Engines PropertyCo AS	Hordvikneset 125, N-5108, Hordvik, Bergen 1201, Norway	Ordinary	100
Bergen Engines S.L.	Calle Dinamarca s/n (esquina Calle Alemania), Poligono Industrial de Constanti, 43120 Constanti, Tarragona, Spain	Social Participation	100
Bergen Engines S.r.l.	Via Castel Morrone 13, 16161, Genoa, Italy	Social Capital	100
Bristol Siddeley Engines Limited *	Derby [1]	Ordinary	100
Brown Brothers & Company Limited *	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	Ordinary	100
C.A. Parsons & Company Limited *	Derby [1]	Ordinary	100
Derby Specialist Fabrications Limited *	Derby [1]	Ordinary	100
Europea Microfusioni Aerospaziali S.p.A.	Zona Industriale AS1, 83040 Morra de Sanctis, Avellino, Italy	Ordinary	100
Heaton Power Limited *	Derby [1]	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.	Parque Technológico Edificio 300, 48170 Zamudio, Vizcaya, Spain	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 *	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	6% Cumulative Preference Ordinary	100 100

* Dormant entity.
** 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.
[1] Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
[2] Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, United States.
[3] Reporting year end is 31 March.

Company name	Address	Class of shares	% of class held
Kamewa Holding AB * (in liquidation)	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Karl Maybach-Hilfe GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
Kinolt FZE	Warehouse Number FZLIU10BD09, Liu 10, BD09 Jafza South Jebel Ali Free Zone, PO Box 263346, Dubai, United Arab Emirates	Ordinary	100
Kinolt GmbH	Konrad-Zuse-Str. 3, 47877, Willich	Ordinary	100
Kinolt Group SA	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Kinolt Guc Kaynaklari Sistemleri San. Ve Tic A.A.	Kazim Ozalp Mah. Kuleli, Sok. No:83/5 Cankaya-Ankara, Turkey	Ordinary	100
Kinolt Hong Kong Limited	20th Floor, Euro-Trade Centre, 21-23 Des Vouex Road Central, Hong Kong	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 **	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 LLC	Electrozavodskaya str, 33, bld.5, floor 4, room VII, office 12, Moscow, 107076, Russia	Ordinary	100
Kinolt Pte. Limited	1 Kaki Bukit View Techview #05-03/04, 415941, Singapore	Ordinary	100
Kinolt SA	Rue de l'Avenir 61, 4460, Grace-Hollogne, Belgium	Ordinary	100
Kinolt SAS	Tour Opus 2, La Defense 9, 77 Esplanade du General du Gaulle, 92914 Paris La Defense Cedex, France	Ordinary	100
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
Kinolt USA Inc.	Corporation Trust Center, 1209 Orange Street, Wilmington, County of New Castle, Delaware, USA	Common Stock	100
LC Nuclear Limited	Derby [1]	Ordinary	100
MTU Africa (Proprietary) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Capital Stock	100
MTU America Inc.	Wilmington [2]	Ordinary	100
MTU Asia PTE Limited	10 Tukang Innovation Drive, Singapore 618302	Ordinary	100
MTU Benelux B.V.	Merwedestraat 86, 3313 CS, Dordrecht, Netherlands	Ordinary	100
MTU China Company Limited	Room 1803 18/F Ascendas Plaza, No.333 Tian Yao Qiao Road, Xuhai Distrcit, Shanghai, 200030, China	Ordinary	100
MTU do Brasil Limitada	Via Anhanguera, KM 29203, 05276-000 Sao Paulo – SP, Brazil	Ordinary	100
MTU Engineering (Suzhou) Company Limited	9 Long Yun Road, Suzhou Industrial Park, Suzhou 215024, Jiang Su, China	Ordinary	100
MTU France S.A.S.	Immeuble Colorado, 8/10 rue de Rosa Luxembourg-Parc des Bellevues 95610, Erangy-sur-Oise, France	Ordinary	100
MTU Friedrichshafen GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
MTU Hong Kong Limited	Room 1006, 10/F, Hang Seng Tsimshatsui Building, 18 Carnarvon Road, Tsimshatsui, Kowloon, Hong Kong	Ordinary	100
MTU Ibérica Propulsión y Energia S.L.	Calle Copérnico 26–28, 28823 Coslada, Madrid, Spain	Ordinary	100
MTU India Private Limited [3]	6th Floor, RMZ Galleria, S/Y No. 144 Bengaluru, Bangalore, Kamataka 560,064, India	Ordinary	100
MTU Israel Limited	4 Ha'Alon Street, South Building, Third Floor, 4059300 Kfar Neter, Israel	Ordinary	100
MTU Italia S.r.l.	Via Aurelia Nord, 328, 19021 Arcola (SP), Italy	Capital Stock	100
MTU Japan Co. Limited	Resorttrust Building 4-14-3, Nishitenma Kita-ku, Osaka 530-0047, Japan	Ordinary	100
MTU Korea Limited	22nd Floor, Olive Tower, 41 Sejongdaero 9 gil, Junggu, 100-737 Seoul, Republic of Korea	Ordinary	100
MTU Middle East FZE	S3B5SR06, Jebel Ali Free Zone, South P.O. Box 61141, Dubai, United Arab Emirates	Ordinary	100
MTU Motor Türbin Sanayi ve Ticaret. A.Ş.	Hatira Sokak, No. 5, Ömerli Mahellesi, 34555 Arnavutköy, Istanbul, Turkey	Ordinary	100
MTU Onsite Energy GmbH	Dasinger Strasse 11, 86165, Augsburg, Germany	Capital Stock	100
MTU Onsite Energy Systems GmbH	Rotthofer Strasse 8, 94099 Ruhstorf a.d. Rott, Germany	Capital Stock	100
MTU Polska Sp. z o.o.	Ul. Śląska, Nr 9. Raum, Ort: Stargard Szczeciński, Plz: 73–110, Poland	Ordinary	100

* Dormant entity.
** 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.
1 Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
2 Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, United States.
3 Reporting year end is 31 March.

Company name	Address	Class of shares	% of class held
MTU Reman Technologies GmbH	Friedrich-List-Strasse 8, 39122 Magdeburg, Germany	Capital Stock	100
MTU Rus Limited Liability Company	Shabolovka Street 2, 119049, Moscow, Russian Federation	Ordinary	100
MTU South Africa (Proprietary) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Ordinary	100
MTU UK Limited	Derby [1]	Ordinary	100
NEI International Combustion Limited *	Derby [1]	Ordinary	100
NEI Mining Equipment Limited *	Derby [1]	Ordinary	100
NEI Nuclear Systems Limited *	Derby [1]	Ordinary	100
NEI Parsons Limited *	Derby [1]	Ordinary	100
NEI Peebles Limited *	Derby [1]	Ordinary	100
NEI Power Projects Limited *	Derby [1]	Ordinary	100
Nightingale Insurance Limited	Maison Trinity, Trinity Square, St. Peter Port, GY1 4AT, Guernsey	Ordinary	100
No-Break Power Limited *	101/102 Cirencester Business Park, Love Lane, Cirencester, GL7 1XD, United Kingdom	Ordinary	100
Power Jets (Research and Development) Limited *	The Whittle Estate, Cambridge Road, Whetstone, Leicester, LE8 6LH, England	Ordinary	100
Powerfield Limited	Derby [1]	Ordinary	100
Precision Casting Bilbao S.A.U.	Calle El Barracón 1, Baracaldo, Vizcaya, 48910, Spain	Ordinary	100
PT MTU Indonesia	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
PT Rolls-Royce	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
Rolls-Royce (Ireland) Unlimited Company *	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 *	Derby [1]	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 drive Cincinato Braga No. 47, Planalto District, São Bernando do Campo, SP, 09890-900, 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	305–306 Indigo Building 1, 20 Jiuxianqiao Road, Beijing, 100016, China	Registered Capital	100
Rolls-Royce Civil Nuclear S.A.S.	23 chemin du Vieux Chêne, 38240, Meylan, France	Ordinary	100
Rolls-Royce Commercial Aero Engines Limited *	Derby [1]	Ordinary	100
Rolls-Royce Control Systems Holdings Co	Wilmington [2]	Common Stock	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 [1]	Ordinary	100
Rolls-Royce Controls and Data Services Limited *	Derby [1]	Ordinary	100
Rolls-Royce Corporation	Wilmington [2]	Common Stock	100
Rolls-Royce Crosspointe LLC	Wilmington [2]	Partnership (no equity)	100
Rolls-Royce Defense Products and Solutions, Inc.	Wilmington [2]	Common Stock	100
Rolls-Royce Defense Services, Inc.	Wilmington [2]	Common Stock	100
Rolls-Royce Deutschland Ltd & Co KG	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Rolls-Royce Electrical Norway AS	Jarleveien 8A, 7041, Trondheim 500, Norway	Ordinary	100
Rolls-Royce Energy Angola, Limitada *	Rua Rei Katyavala, Edificio Rei Katyavala, Entrada B, Piso 8, Luanda, Angola	Quota	100
Rolls-Royce Energy Systems Inc.	Wilmington [2]	Common Stock	100
Rolls-Royce Engine Services Holdings Co.	Wilmington [2]	Common Stock	100
Rolls-Royce Engine Services Limitada Inc. (in liquidation)	Bldg. 06 Berthaphil Compound, Jose Abad Santos Avenue, Clark Special Economic Zone, Clark, Pampanga, Philippines	Capital Stock	100

* Dormant entity.
[1] Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
[2] Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, United States.

Company name	Address	Class of shares	% of class held
Rolls-Royce Erste Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Rolls-Royce Finance Company Limited	Derby [1]	Deferred Ordinary	100 100
Rolls-Royce Finance Holdings Co.	Wilmington [2]	Common Stock	100
Rolls-Royce Fuel Cell Systems Limited	Derby [1]	Ordinary	100
Rolls-Royce General Partner Limited *	Derby [1]	Ordinary	100
Rolls-Royce General Partner (Ireland) Limited	29 Earlshot Terrace, Dublin 2, Ireland	Ordinary	100
Rolls-Royce Group Limited	Kings Place, 90 York Way, London, N1 9FX, England	Ordinary Ordinary A	100 100
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 *,[3]	Derby [1]	Ordinary	100
Rolls-Royce India Private Limited [3]	Birla Tower West, 2nd Floor 25, Barakhamba Road, New Delhi, 110001, India	Equity	100
Rolls-Royce Industrial & Marine Power Limited *	Derby [1]	Ordinary	100
Rolls-Royce Industrial Power (India) Limited *,[3]	Derby [1]	Ordinary	100
Rolls-Royce Industrial Power Engineering (Overseas Projects) Limited	Derby [1]	Ordinary	100
Rolls-Royce Industries Limited	Derby [1]	Ordinary	100
Rolls-Royce International Limited	Derby [1]	Ordinary	100
Rolls-Royce International s.r.o.	Pobřežní 620/3, Postal code 186 00, Karlin – Prague 8, Czech Republic	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 [1]	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 [2]	Common Stock	100
Rolls-Royce Mexico Administration S. de R.L. de C.V.	Boulevard Adolfo Ruiz Cortinez 3642-403, Fracc Costa de Oro, Verzcruz CP 94299 6, Mexico	Ordinary	100
Rolls-Royce Mexico S. de R.L. de C.V.	Boulevard Adolfo Ruiz Cortinez 3642-403, Fracc Costa de Oro, Verzcruz CP 94299 6, Mexico	Ordinary	100
Rolls-Royce Military Aero Engines Limited *,[3]	Derby [1]	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 [2]	Common Stock	100
Rolls-Royce North America Holdings, Inc.	Wilmington [2]	Common Stock	100
Rolls-Royce North America, Inc.	Wilmington [2]	Common Stock	100
Rolls-Royce North America Ventures, Inc.	Wilmington [2]	Common Stock	100
Rolls-Royce North American Technologies, Inc.	Wilmington [2]	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	Birla Tower West, 2nd Floor, 25 Barakhamba Road, New Delhi, 110001, India	Ordinary	100
Rolls-Royce Overseas Holdings Limited	Derby [1]	Ordinary Ordinary A	100 100
Rolls-Royce Overseas Investments Limited	Derby [1]	Ordinary	100
Rolls-Royce Placements Limited	Derby [1]	Ordinary	100
Rolls-Royce plc	Kings Place, 90 York Way, London, N1 9FX, England	Ordinary	100
Rolls-Royce Power Engineering plc	Derby [1]	Ordinary	100
Rolls-Royce Power Systems AG	Maybachplatz 1, 88045, Friedrichshafen, Germany	Ordinary	100
Rolls-Royce Retirement Savings Trust Limited *,[3]	Derby [1]	Ordinary	100
Rolls-Royce Saudi Arabia Limited	PO Box 88545, Riyadh, 11672, Saudi Arabia	Cash shares	100

* Dormant entity.
1 Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
2 Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, United States.
3 Reporting year end is 31 March.

Company name	Address	Class of shares	% of class held
Rolls-Royce Singapore Pte. Limited	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100
Rolls-Royce Solutions Berlin GmbH	Villa Rathenau, Wilhelminenhofstrasse 75, 12459 Berlin, Germany	Preference A Preference	100 100
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	Derby [1]	Ordinary	100
Rolls-Royce Turkey Power Solutions Industry and Trade Limited	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 *	Derby [1]	Ordinary	100
Rolls-Royce Zweite Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Ross Ceramics Limited	Derby [1]	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 **	Derby [1]	Limited by guarantee	100
Spare IPG 20 Limited *	Derby [1]	Ordinary	100
Spare IPG 21 Limited *	Derby [1]	Ordinary	100
Spare IPG 24 Limited *	Derby [1]	Ordinary	100
Spare IPG 27 Limited *	Taxiway Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, KY11 9JT, Scotland	Ordinary 7% Cumulative Preference	100 100
Spare IPG 32 Limited *	Derby [1]	7.25% Cumulative Preference Ordinary	100 100
Spare IPG 4 Limited *	Derby [1]	Ordinary	100
The Bushing Company Limited *	Derby [1]	Ordinary	100
Timec 1487 Limited *	Derby [1]	Ordinary	100
Trigno Energy S.R.L.	Zona Industriale, San Salvo, 66050, Italy	Ordinary	100
Turbine Surface Technologies Limited **	Derby [1]	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	100 100
Vessel Lifter, Inc. *	Corporation Service Company, 1201 Hays Street, Tallahassee, Florida 32301, United States	Common Stock	100
Vinters Defence Systems Limited *	Derby [1]	Ordinary	100
Vinters Engineering Limited	Derby [1]	Ordinary	100
Vinters International Limited	Derby [1]	Ordinary	100
Vinters Limited	Derby [1]	Ordinary	100
Vinters-Armstrongs (Engineers) Limited *	Derby [1]	Ordinary	100
Vinters-Armstrongs Limited *	Derby [1]	Ordinary B	100
Yocova PTE. Ltd.	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100

* Dormant entity.
** 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.
[1] Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
[3] Reporting year end is 31 March.

JOINT VENTURES AND ASSOCIATES

Company name	Address	Class of shares	% of class held	Group interest held %
Aero Gearbox International SAS **	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 [2]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.4) LLC	Wilmington [2]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.5) LLC	Wilmington [2]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.6) LLC	Wilmington [2]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.7) LLC	Wilmington [2]	Partnership (no equity held)	–	50
Alpha Leasing (US) (No.8) LLC	Wilmington [2]	Partnership (no equity held)	–	50
Alpha Leasing (US) LLC	Wilmington [2]	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 Street, 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	Dachauer Strasse 655, 80995, Munich, Germany	Capital Stock	44	44
Eurojet Turbo GmbH	Lilienthalstrasse 2b, 85399 Halbergmoos, Germany	Capital Stock	46	46
Force MTU Power Systems Private Limited	Mumbai Pune Road, Akurdi, Pune, Maharashtra 411035, India	Capital Stock	49	49
Genistics Holdings Limited	Derby [1]	Ordinary A	100	50
Global Aerospace Centre for Icing and Environmental Research Inc. **	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 **,[3]	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

** These entities are accounted for as joint operations (see note 1 to the consolidated Financial Statements).
[1] Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
[2] Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, United States.
[3] Reporting year end is 31 March.

Company name	Address	Class of shares	% of class held	Group interest held %
Metlase Limited	Unipart House, Garsington Road, Cowley, Oxford, OX4 2PG, England	Ordinary B	100	20
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 GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	33.3	33.3
MTU Turbomeca Rolls-Royce ITP GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	50	50
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 *	Derby [1]	Ordinary	50	50
Rolls-Royce & Partners Finance (US) (No 2) LLC	Wilmington [2]	Partnership (no equity held)	–	50
Rolls-Royce & Partners Finance (US) LLC	Wilmington [2]	Partnership (no equity held)	–	50
SAFYRR Propulsion Limited	Derby [1]	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 **	Tefen Industrial Zone, PO Box 16, 24959, Israel	Ordinary A Ordinary B	50 50	50
Texas Aero Engine Services LLC	The Corporation Trust Company, 1209, Orange Street, Wilmington, Delaware 19801, United States	Partnership (no equity held)	–	50
TRT Limited	Derby [1]	Ordinary B	100	49.9
UK Nuclear Restoration Limited *	Booths Park, Chelford Road, Knutsford, Cheshire, WA16 8QZ, England	Ordinary	20	20
Xian XR Aero Components Co., Limited **	Xujiawan, Beijiao, Po Box 13, Xian 710021, Shaanxi, China	Ordinary	49	49

* Dormant company.
** These entities are accounted for as joint operations (see note 1 to the consolidated Financial Statements).
[1] Moor Lane, Derby, Derbyshire, DE24 8BJ, England.
[2] Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808, United States.