

FINANCIAL STATEMENTS

Consolidated Financial Statements

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CONSOLIDATED INCOME STATEMENT

For the year ended 31 December 2018

	Notes	2018 £m	Restated* 2017 £m
Revenue	2	15,729	14,747
Cost of sales ¹		(14,531)	(12,325)
Gross profit		1,198	2,422
Commercial and administrative costs ¹		(1,595)	(1,222)
Research and development costs	3	(768)	(843)
Share of results of joint ventures and associates	11	4	9
Operating (loss)/profit		(1,161)	366
Gain arising on the acquisition of ITP Aero	25	-	785
Gain arising on the disposal of L'Orange	25	358	-
(Loss)/profit before financing and taxation[†]	2	(803)	1,151
Financing income	4	271	2,911
Financing costs	4	(2,415)	(164)
Net financing		(2,144)	2,747
(Loss)/profit before taxation		(2,947)	3,898
Taxation	5	554	(515)
(Loss)/profit for the year		(2,393)	3,383
Attributable to:	6		
Ordinary shareholders		(2,401)	3,382
Non-controlling interests		8	1
(Loss)/profit for the year		(2,393)	3,383
Other comprehensive income		182	290
Total comprehensive (loss)/income for the year		(2,211)	3,673
Earnings per ordinary share attributable to ordinary shareholders:	6		
Basic		(129.15)p	184.41p
Diluted		(129.15)p	183.80p
Payments to ordinary shareholders in respect of the year:			
Per share		11.7p	11.7p
Total		220	216
[†] Underlying profit before taxation	2	466	199

* The 2017 figures have been restated for IFRS 15 Revenue from Contracts with Customers, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ Included within cost of sales and commercial and administrative costs are exceptional charges relating to the Trent 1000 and Trent 900 Civil Aerospace programmes and restructuring costs. Further details can be found in note 2.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2018

	Notes	2018 £m	Restated* 2017 £m
(Loss)/profit for the year		(2,393)	3,383
Other comprehensive income (OCI):			
Actuarial movements on post-retirement schemes	19	27	735
Share of OCI of joint ventures and associates	11	(1)	(1)
Related tax movements	5	(2)	(307)
Items that will not be reclassified to profit or loss		24	427
Foreign exchange translation differences on foreign operations		171	(133)
Reclassified to income statement on disposal of L'Orange		(19)	-
Cash flow hedge reserve movements		(17)	-
Share of OCI of joint ventures and associates	11	18	(5)
Related tax movements	5	5	1
Items that may be reclassified to profit or loss		158	(137)
Total other comprehensive income		182	290
Total comprehensive (loss)/income for the year		(2,211)	3,673
Attributable to:			
Ordinary shareholders		(2,219)	3,672
Non-controlling interests		8	1
Total comprehensive (loss)/income for the year		(2,211)	3,673

* The 2017 figures have been restated for IFRS 15 *Revenue from Contracts with Customers*, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

CONSOLIDATED BALANCE SHEET

At 31 December 2018

	Notes	2018 £m	Restated *	
			31 December 2017 £m	1 January 2017 £m
ASSETS				
Intangible assets	9	5,295	5,565	4,116
Property, plant and equipment	10	4,929	4,658	4,134
Investments – joint ventures and associates	11	412	375	555
Investments – other	11	22	26	38
Other financial assets	17	343	610	382
Deferred tax assets	5	2,092	1,451	1,785
Post-retirement scheme surpluses	19	1,944	2,125	1,346
Non-current assets		15,037	14,810	12,356
Inventories	12	4,287	3,803	3,353
Trade receivables and other assets	13	4,690	4,353	3,683
Contract assets	13	2,057	1,945	1,875
Taxation recoverable		34	17	32
Other financial assets	17	22	36	5
Short-term investments		6	3	3
Cash and cash equivalents	14	4,974	2,953	2,771
Current assets		16,070	13,110	11,722
Assets held for sale	25	750	7	5
TOTAL ASSETS		31,857	27,927	24,083
LIABILITIES				
Borrowings	15	(858)	(82)	(172)
Other financial liabilities	17	(647)	(601)	(693)
Trade payables and other liabilities	16	(8,292)	(6,885)	(6,133)
Contract liabilities	16	(3,794)	(4,104)	(3,366)
Current tax liabilities		(138)	(209)	(211)
Provisions for liabilities and charges	18	(1,122)	(550)	(632)
Current liabilities		(14,851)	(12,431)	(11,207)
Borrowings	15	(3,804)	(3,406)	(3,185)
Other financial liabilities	17	(3,542)	(2,461)	(5,129)
Trade payables and other liabilities	16	(1,940)	(2,238)	(1,822)
Contract liabilities	16	(5,336)	(3,607)	(2,946)
Deferred tax liabilities	5	(962)	(1,071)	(713)
Provisions for liabilities and charges	18	(795)	(393)	(263)
Post-retirement scheme deficits	19	(1,303)	(1,387)	(1,375)
Non-current liabilities		(17,682)	(14,563)	(15,433)
Liabilities associated with assets held for sale	25	(376)	-	-
TOTAL LIABILITIES		(32,909)	(26,994)	(26,640)
NET (LIABILITIES)/ASSETS		(1,052)	933	(2,557)
EQUITY				
Called-up share capital	20	379	368	367
Share premium account		268	195	181
Capital redemption reserve		161	162	162
Cash flow hedging reserve		(106)	(112)	(107)
Merger reserve		406	3	3
Translation reserve		809	657	789
Accumulated losses		(2,991)	(343)	(3,954)
Equity attributable to ordinary shareholders		(1,074)	930	(2,559)
Non-controlling interests		22	3	2
TOTAL EQUITY		(1,052)	933	(2,557)

* The figures at 1 January and 31 December 2017 have been restated for IFRS 15 Revenue from Contracts with Customers, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

The financial statements on pages 107 to 174 were approved by the Board on 28 February 2019 and signed on its behalf by:

Warren East Stephen Daintith
Chief Executive Chief Financial Officer

CONSOLIDATED CASH FLOW STATEMENT

For the year ended 31 December 2018

	Notes	2018 £m	Restated* 2017 £m
Reconciliation of cash flows from operating activities			
Operating (loss)/profit		(1,161)	366
Profit on disposal of property, plant and equipment		11	11
Share of results of joint ventures and associates	11	(4)	(9)
Dividends received from joint ventures and associates	11	105	79
Amortisation and impairment of intangible assets	9	565	343
Depreciation and impairment of property, plant and equipment	10	521	450
Impairment of and other movements on investments	11	6	14
Increase/(decrease) in provisions		1,003	(1)
Increase in inventories		(616)	(194)
Increase in trade receivables and other assets		(469)	(169)
Increase in contract assets		(112)	(70)
Decrease in amounts payable for financial penalties from agreements with investigating bodies		-	(286)
Increase in trade payables and other liabilities		1,732	398
Increase in contract liabilities		1,419	1,399
Cash flows on other financial assets and liabilities held for operating purposes		(732)	(664)
Net defined benefit post-retirement cost recognised in profit before financing	19	352	240
Cash funding of defined benefit post-retirement schemes	19	(181)	(249)
Share-based payments	21	35	34
Net cash inflow from operating activities before taxation		2,474	1,692
Taxation paid		(248)	(180)
Net cash inflow from operating activities		2,226	1,512
Cash flows from investing activities			
Additions of unlisted investments	11	(6)	(4)
Additions of intangible assets	9	(680)	(647)
Disposals of intangible assets	9	13	7
Purchases of property, plant and equipment – net of government grants of £5m (2017: £14m)		(905)	(730)
Disposals of property, plant and equipment		43	4
Acquisition of ITP Aero	25	-	263
Disposal of L'Orange	25	573	-
Other investments in joint ventures and associates and other investment movements	11	(13)	(47)
Net cash outflow from investing activities		(975)	(1,154)
Cash flows from financing activities			
Repayment of loans		(37)	(160)
Proceeds from increase in loans		1,054	309
Capital element of finance lease payments		(23)	(6)
Net cash flow from increase in borrowings and finance leases		994	143
Interest received		27	14
Interest paid		(92)	(64)
Interest element of finance lease payments		(5)	(3)
Increase in short-term investments		(3)	-
Issue of ordinary shares (net of expenses)		1	21
Purchase of ordinary shares		(1)	(24)
Dividends to NCI		(3)	-
Redemption of C Shares		(216)	(214)
Net cash inflow/(outflow) from financing activities		702	(127)
Change in cash and cash equivalents		1,953	231
Cash and cash equivalents at 1 January		2,933	2,771
Exchange gains/(losses) on cash and cash equivalents		66	(69)
Cash and cash equivalents at 31 December		4,952	2,933

* The 2017 figures have been restated for IFRS 15 *Revenue from Contracts with Customers*, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details. This does not affect cash flows, but has changed the reconciliation of operating profit to net cash inflow from operating activities.

CONSOLIDATED CASH FLOW STATEMENT CONTINUED

For the year ended 31 December 2018

	2018 £m	2017 £m
Reconciliation of movements in cash and cash equivalents to movements in net funds/(debt)		
Change in cash and cash equivalents	1,953	231
Cash flow from increase in borrowings and finance leases	(994)	(143)
Cash flow from increase in short-term investments	3	-
Change in net funds/(debt) resulting from cash flows	962	88
New finance leases in the year	(97)	(57)
Net debt (excluding cash and cash equivalents) on acquisition of ITP Aero	-	(34)
Net debt (excluding cash and cash equivalents) of previously unconsolidated subsidiary	-	(18)
Exchange gains/(losses) on net funds/(debt)	54	(59)
Fair value adjustments	(69)	131
Movement in net funds/(debt)	850	51
Net debt at 1 January excluding the fair value of swaps	(532)	(583)
Net funds/(debt) at 31 December excluding the fair value of swaps	318	(532)
Fair value of swaps hedging fixed rate borrowings	293	227
Net funds/(debt) at 31 December	611	(305)

The movement in net funds/(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 and disposal of businesses £m	Net funds of previously unconsolidated subsidiaries £m	Exchange differences £m	Fair value adjustments £m	Reclassi- fications £m	At 31 December £m
2018								
Cash at bank and in hand	838	170	-	-	15	-	-	1,023
Money market funds	589	630	-	-	3	-	-	1,222
Short-term deposits	1,526	1,155	-	-	48	-	-	2,729
Cash and cash equivalents (per balance sheet)	2,953	1,955	-	-	66	-	-	4,974
Overdrafts	(20)	(2)	-	-	-	-	-	(22)
Cash and cash equivalents (per cash flow statement)	2,933	1,953	-	-	66	-	-	4,952
Short-term investments	3	3	-	-	-	-	-	6
Other current borrowings	(39)	(38)	-	-	(1)	15	(739)	(802)
Non-current borrowings	(3,292)	(972)	-	-	-	(84)	739	(3,609)
Finance leases	(137)	(81)	-	-	(11)	-	-	(229)
Financial liabilities	(3,468)	(1,091)	-	-	(12)	(69)	-	(4,640)
Net funds/(debt) excluding fair value swaps	(532)	865	-	-	54	(69)	-	318
Fair value of swaps hedging fixed rate borrowings	227	-	-	-	-	66	-	293
Net funds/(debt)	(305)	865	-	-	54	(3)	-	611
2017								
Cash at bank and in hand	872	(5)	-	-	(29)	-	-	838
Money market funds	552	44	-	-	(7)	-	-	589
Short-term deposits	1,347	212	-	-	(33)	-	-	1,526
Cash and cash equivalents (per balance sheet)	2,771	251	-	-	(69)	-	-	2,953
Overdrafts	-	(20)	-	-	-	-	-	(20)
Cash and cash equivalents (per cash flow statement)	2,771	231	-	-	(69)	-	-	2,933
Short-term investments	3	-	-	-	-	-	-	3
Other current borrowings	(169)	159	(6)	(18)	3	-	(8)	(39)
Non-current borrowings	(3,121)	(280)	(28)	-	(2)	131	8	(3,292)
Finance leases	(67)	(79)	-	-	9	-	-	(137)
Financial liabilities	(3,357)	(200)	(34)	(18)	10	131	-	(3,468)
Net debt excluding fair value swaps	(583)	31	(34)	(18)	(59)	131	-	(532)
Fair value of swaps hedging fixed rate borrowings	358	-	-	-	-	(131)	-	227
Net debt	(225)	31	(34)	(18)	(59)	-	-	(305)

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2018

Notes	Attributable to ordinary shareholders							Total £m	Non- controlling interests (NCI) £m	Total equity £m
	Share capital £m	Share premium £m	Capital redemption reserve £m	Cash flow hedging reserve £m ²	Merger reserve £m	Translation reserve £m	Accum- lated losses ³ £m			
At 1 January 2017 as previously reported	367	181	162	(107)	3	811	445	1,862	2	1,864
Impact of adopting IFRS 15 ¹	-	-	-	-	-	(22)	(4,442)	(4,464)	-	(4,464)
Other ¹	-	-	-	-	-	-	43	43	-	43
At 1 January 2017 restated ¹	367	181	162	(107)	3	789	(3,954)	(2,559)	2	(2,557)
Profit for the year ¹	-	-	-	-	-	-	3,382	3,382	1	3,383
Foreign exchange translation differences on foreign operations ¹	-	-	-	-	-	(133)	-	(133)	-	(133)
Movements on post-retirement schemes	19	-	-	-	-	-	735	735	-	735
OCI of joint ventures and associates	11	-	-	(5)	-	-	(1)	(6)	-	(6)
Related tax movements	5	-	-	-	-	1	(307)	(306)	-	(306)
Total comprehensive income for the year	-	-	-	(5)	-	(132)	3,809	3,672	1	3,673
Arising on issues of ordinary shares	20	1	14	-	-	-	(14)	1	-	1
Issue of C Shares ⁴	-	-	(215)	-	-	-	1	(214)	-	(214)
Redemption of C Shares	-	-	215	-	-	-	(215)	-	-	-
Ordinary shares purchased	-	-	-	-	-	-	(24)	(24)	-	(24)
Share-based payments - direct to equity ⁵	-	-	-	-	-	-	51	51	-	51
Related tax movements	5	-	-	-	-	-	3	3	-	3
Other changes in equity in the year	1	14	-	-	-	-	(198)	(183)	-	(183)
At 31 December 2017	368	195	162	(112)	3	657	(343)	930	3	933
Impact of adopting IFRS 9	-	-	-	-	-	-	(15)	(15)	-	(15)
At 1 January 2018	368	195	162	(112)	3	657	(358)	915	3	918
(Loss)/profit for the year	-	-	-	-	-	-	(2,401)	(2,401)	8	(2,393)
Foreign exchange translation differences on foreign operations	-	-	-	-	-	171	-	171	-	171
Reclassified to income statement on disposal of L'Orange	-	-	-	-	-	(19)	-	(19)	-	(19)
Movements on post-retirement schemes	19	-	-	-	-	-	27	27	-	27
Debited to cash flow hedge reserve	-	-	-	(17)	-	-	-	(17)	-	(17)
OCI of joint ventures and associates	11	-	-	18	-	-	(1)	17	-	17
Related tax movements	5	-	-	5	-	-	(2)	3	-	3
Total comprehensive loss for the year	-	-	-	6	-	152	(2,377)	(2,219)	8	(2,211)
Shares issued in respect of acquisition of ITP Aero	10	-	-	-	403	-	-	413	-	413
Other issues of ordinary shares	20	1	73	-	-	-	-	74	-	74
Issue of C Shares ⁴	-	-	(217)	-	-	-	1	(216)	-	(216)
Redemption of C Shares	-	-	216	-	-	-	(216)	-	-	-
Shares issued to employee share trust	-	-	-	-	-	-	(75)	(75)	-	(75)
Share-based payments - direct to equity ⁵	-	-	-	-	-	-	32	32	-	32
Transfer of joint operations to subsidiaries	-	-	-	-	-	-	-	-	15	15
Transactions with NCI	-	-	-	-	-	-	-	-	(4)	(4)
Related tax movements	5	-	-	-	-	-	2	2	-	2
Other changes in equity in the year	11	73	(1)	-	403	-	(256)	230	11	241
At 31 December 2018	379	268	161	(106)	406	809	(2,991)	(1,074)	22	(1,052)

¹ The 2017 figures have been restated for IFRS 15 *Revenue from Contracts with Customers*, an update to the provisional fair values of the ITP Aero acquisition and other adjustments.

See note 27 for more details.

² See accounting policies note 1.

³ At 31 December 2018, **13,538,921** ordinary shares with a net book value of **£123m** (2017: 6,466,153, 2016: 6,854,216 ordinary shares with net book values of £52m and £56m respectively) were held for the purpose of share-based payment plans and included in accumulated losses. During the year, **468,165** ordinary shares with a net book value of **£4m** (2017: 4,992,304 shares with a net book value of £42m) vested in share-based payment plans. During the year, the Company acquired **80,810** (2017: 92,537) of its ordinary shares via reinvestment of dividends received on its own shares and purchased **nil** (2017: 2,711,349) of its ordinary shares through purchases on the London Stock Exchange. During the year, the Company issued **47,556,914** new ordinary shares relating to the first five instalments for the acquisition of ITP Aero and **7,460,173** new ordinary shares (2017: 1,740,355) to the Group's share trust for its employee share-based payment plans with a net book value of **£74m** (2017: £14m).

⁴ 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.

⁵ Share-based payments - direct to equity is the share-based payment charge for the year less the actual cost of vesting excluding those vesting from own shares and cash received on share-based schemes vesting.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1 Accounting policies

The Company

Rolls-Royce Holdings plc (the Company) is a public company incorporated under the Companies Act 2006 and domiciled in the United Kingdom. The Consolidated Financial Statements of the Company for the year ended 31 December 2018 consist of the consolidation of the Financial Statements of the Company and its subsidiaries (together referred to as the Group) and include the Group's interest in jointly controlled and associated entities.

Basis of preparation and statement of compliance

In accordance with the Companies Act 2006 and European Union (EU) regulations, these Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and interpretations issued by the IFRS Interpretations Committee (IFRIC), as adopted for use in the EU effective at 31 December 2018 (Adopted IFRS).

The Company has elected to prepare its individual Company Financial Statements under FRS 101 *Reduced Disclosure Framework*. They are set out on pages 175 to 177 and the accounting policies in respect of Company Financial Statements are set out on page 176.

The Consolidated Financial Statements have been prepared on the historical cost basis except where Adopted IFRS requires 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* – and on a going concern basis as described on page 55.

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

The preparation of Consolidated Financial Statements in conformity with Adopted IFRS 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 results could differ from those estimates.

Revisions to Adopted IFRS in 2018

IFRS 15 Revenue from Contracts with Customers

The Group adopted IFRS 15 on 1 January 2018 using the 'full' retrospective approach.

IFRS 15 provides a single, principles-based five-step model to be applied to all sales contracts with customers. It is based on the transfer of control of goods and services to customers. In summary:

- revenues on original equipment (OE) and time and material aftermarket contracts are generally recognised at the point of delivery;
- revenues on long-term aftermarket contracts and some OE contracts (generally for products without an alternative use to the specific contract) are recognised on an activity basis using the costs incurred as the measure of the activity;
- costs to fulfil contracts are recognised as they are incurred; and
- costs to obtain a contract are amortised over the period of the contract against revenue.

The impact on the Group of adopting IFRS 15 is very significant, with a cumulative adjustment to equity at 1 January 2017 being £4.5bn. The income statement for 2017 and the balance sheets at 1 January and 31 December 2017 have been restated to reflect the adoption of IFRS 15 – see note 27.

IFRS 9 Financial Instruments

The Group adopted IFRS 9 on 1 January 2018. IFRS 9 relates to the accounting for financial instruments and covers:

- classification and measurement – certain trade receivables are now classified as 'fair value through other comprehensive income';
- impairment – additional requirements for the measurement of expected credit losses on financial assets; and
- hedge accounting – amendments to requirements.

Except for hedge accounting, retrospective application is not required with any adjustment being made to reserves on 1 January 2018. In accordance with the transitional provisions in IFRS 9, the Group has not restated its 2017 comparative information. For hedge accounting, the Group considered the new requirements; no changes to the existing hedge relationships were necessary and the Group has applied the standard prospectively.

The cumulative impact of IFRS 9 on the balance sheet at 1 January 2018 of £15m is set out in more detail in note 27.

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; the actual outcome may differ from that calculated. The key judgements and key sources of estimation uncertainty at the balance sheet date, that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities within the next financial year, are summarised below. Further details are included within the significant accounting policies as indicated.

	Key judgements	Key sources of estimation uncertainty	Page
Revenue recognition	Whether Civil Aerospace OE and aftermarket contracts should be combined How performance on long-term aftermarket contracts should be measured Whether any costs should be treated as wastage Whether sales of spare engines to joint ventures are at fair value	Estimates of future revenues and costs of long-term contractual arrangements	115
Risk and revenue sharing arrangements	Determination of the nature of entry fees received		116
Taxation	Whether deferred tax assets should be recognised	Estimates necessary to assess whether it is probable that sufficient suitable taxable profits will arise in the UK to utilise the deferred tax assets	117
Financial instruments		Valuation of financial instruments without an observable market value	118
Business combinations	Identification of acquired assets and liabilities	Estimates to allocate purchase price	119
Capitalisation of internally generated developments costs	Determination of the criteria for starting, and subsequently ceasing, capitalisation Determination of the basis for amortising capitalised development costs		119
Impairment of non-current assets	Determination of cash-generating units for assessing impairment of goodwill	Estimates of cash flow forecasts and discount rates to assess the value in use	121
Provisions	Assessment of satisfying the criteria for the recognition of a provision, particularly in respect of restructuring	Estimates of expenditure required to settle the obligation, in particular where long-term contracts are assessed as onerous	121
Post-retirement benefits		Estimates of market value of scheme assets without an observable market value and assumptions for valuing the defined benefit obligation	122

Sensitivities for key sources of estimation risk are disclosed in the relevant notes where this is appropriate and practicable.

Significant accounting policies

The Group's significant accounting policies are set out below. With the exception of IFRS 9, which has been adopted with effect from 1 January 2018, 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 of joint arrangements and associates made up to 31 December. ITP Aero was acquired on 19 December 2017. ITP Aero did not have any significant trading activity between the acquisition date and 31 December 2017. L'Orange (a subsidiary of Power Systems) was sold on 1 June 2018.

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.

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 venturers under a contractual arrangement. Joint arrangements may be either joint ventures or joint operations. An associate is an entity, being 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 joint ventures and associates are accounted for using the equity method of accounting. Joint operations are accounted for using proportionate accounting.

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. Transactions with non-controlling interests are recorded directly in equity.

1 Accounting policies *continued*

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.

As a result of the announcement on 6 July 2018 of the proposed disposal of the Commercial Marine business, it has been treated as a disposal group held for sale, with its assets and liabilities presented separately on the balance sheet.

Revenue recognition

Key judgement – Whether Civil Aerospace OE and aftermarket contracts should be combined

In the Civil Aerospace business, OE contracts are with the airframers (except for spare engines), while the aftermarket contracts are with the aircraft operators, although there may be interdependencies between them. IFRS 15 includes additional guidance on the combination of contracts, in particular that contracts with unrelated parties should not be combined. Notwithstanding the interdependencies, the Directors consider that, as the operators are ultimately purchasing an aircraft from the airframer, of which the engines are part, the engine contract should be considered separately from the aftermarket contract. In making this judgement, they also took account of evolving industry practice.

Key estimate – Estimates of future revenues and costs of 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, 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.

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 repair, 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 which is also of a nature that the Group would not expect to incur and hence is not reflected in the contract price. For example, where there are 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 cost in the period. Any costs identified as wastage are expensed when the obligation to incur them arises – see note 2.

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.

Revenue recognised comprises sales to the Group's customers after discounts and amounts payable to customers. 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 above. 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. Revenue excludes value added taxes. 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. Management 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 services and OE 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 costs method described in the key judgements, provided the outcome of contracts can be assessed with reasonable certainty.

1 Accounting policies continued

The Group generates a significant portion of its revenue and profit 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. 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.

- 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 costs incurred to meet performance obligations.
- Where material, wastage costs (see key judgements on page 115) are recorded as an exceptional non-underlying expense.

If the expected costs to fulfil a contract exceed the expected revenues, 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 engine is transferred to the customer.

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

Risk and revenue sharing arrangements (RRSAs)

Key judgment – 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 share of development costs borne by the workshare partner and of the revenue it receives reflect the partner's proportionate cost of providing its production parts compared to the overall manufacturing cost of the engine. The share is based on a jointly-agreed forecast at the commencement of the arrangement.

These arrangements are complex and have features that could be indicative of: a collaboration agreement, including sharing of risk and cost in a development programme; a long-term supply agreement; sharing of intellectual property; or a combination of these. These receipts are deferred and recognised against cost of sales over the estimated number of units to be delivered. In previous years, these cash entry fees were treated as a reduction to research and development costs. However, in assessing the accounting under IFRS 15 for the participation fee payments we sometimes make to our OE customers, we have also re-assessed the entry fees received from the Group's suppliers under RRSAs.

The payments to suppliers of their shares of the programme cash flows for their production components are charged to cost of sales as programme revenue arises. Cash entry fees received are initially deferred on the balance sheet and recognised as a reduction in cost of sales incurred, on a 15-year straight-line basis pro rata over the estimated number of units produced.

The Group 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.

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.

1 Accounting policies *continued*

Government grants

Government grants 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 in the balance sheet 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

Key judgement – Whether deferred tax assets should be recognised

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 amounts and timing of future taxable profits.

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.

Further details can be found in note 5

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; and
- 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 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 198.

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 assets and liabilities into functional currencies at the rate prevailing at the year-end are included in profit 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 investments, and from the translation of the profits or losses at average rates, are recognised in OCI. The cumulative amount of exchange adjustments was, on transition to IFRS in 2004, deemed to be nil.

1 Accounting policies *continued*

Financial instruments

Key estimate – Valuation of financial instruments without an observable market value

Financial liabilities include financial RRSAs, the value of which is determined based on the estimated future cash flows.

Financial instruments – Classification and measurement

IFRS 9 has changed the classification of financial assets compared to IAS 39. A summary of the changes is included in note 27.

Financial assets

Financial assets primarily include trade receivables, cash and cash equivalents (comprising cash at bank, money market funds and short term deposits), short term investments, derivatives (foreign exchange contracts, commodity contracts, 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 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 and short-term investments are measured at fair value through profit and loss (FVPL). Money market funds and short-term deposits are measured at FVOCI.
- Derivatives and unlisted investments are measured at FVPL.

Financial liabilities

Financial liabilities primarily consist of trade payables, borrowings, derivatives, financial RRSAs and C Shares.

The classification of financial liabilities under IFRS 9 is unchanged with respect to the previous requirements under IAS 32.

- 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 codifies 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. 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 the customers. 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 or not. On adoption of IFRS 9 on 1 January 2018, additional ECLs of £17m were recognised. Since adoption, there have been no material changes in estimates and assumptions that have led to a significant change in the ECLs allowance.

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. 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 related derivatives is not significant, relative to those held by the rest of the Group.

The Group applies hedge accounting in respect of transactions entered into to manage the fair value and cash flow exposures of its borrowings. Forward foreign exchange contracts are held to manage the fair value exposures of borrowings denominated in foreign currencies and are designated as fair value hedges. Interest rate swaps are held to manage the interest rate exposures of fixed and floating rate borrowings and are designated as fair value or cash flow hedges respectively.

Derivative financial instruments qualify for hedge accounting when: (i) there is a formal designation and documentation at inception of the hedge of the hedging relationship and the Group's risk management objective and strategy for undertaking the hedge; and (ii) the hedge is expected to be effective.

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 hedges derivatives are recognised in OCI subsequently recycled in the income statement to match the recognition of the hedged item. Any ineffectiveness in the hedging relationships 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 in the income statement.

The portion of a gain or loss on an instrument used to hedge a net investment in a foreign operation that is determined to be an effective hedge is recognised in the OCI. The ineffective portion is recognised immediately in the income statement. Gains and losses accumulated in the translation reserve will be recycled to profit when the foreign operation is sold.

All existing effective hedging relationships continue to qualify for hedge accounting under IFRS 9.

1 Accounting policies *continued*

Business combinations and goodwill

Key judgement – Identification 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 assessments based on the Group's industry experience and the advice of third party valuers.

Key estimate – Estimates to allocate purchase price

On the acquisition of a business, fair values are attributed to the identifiable assets and liabilities of the acquired business. This requires estimates of future trading and cash flows of the acquired business. The Group will generally engage an independent valuer to advise on the determination of these fair values.

The fair values attributed to the identifiable assets and liabilities of ITP Aero in 2017 were provisional. In 2018, these have been finalised with the changes shown in note 25.

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 Adopted 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.

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 occurs 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 on a 15-year straight-line basis pro rata over the estimated number of units produced.

Research and development

Key judgement – Determination of the criteria for starting, and subsequently ceasing, capitalisation

IAS 38 requires that internally generated development costs should only be capitalised if strict criteria are met, in particular relating to technical feasibility and generation of future economic benefits. The Group incurs significant research and development expenditure in respect of various development programmes, most notably in the Civil Aerospace business. 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.

Within the Group there is an established Product Introduction and Lifecycle Management process (PILM) in place. This is a gated process which assesses both the technical feasibility and commercial viability of programmes. A multi-functional team is involved in the assessment ensuring the technical and operational aspects of the programme have been assessed, together with the financial assessment. Until the programme has obtained sign off on the criteria set out below, all 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. Consequently, the development costs associated with engine are amortised on a straight-line basis, over a 15-year period from its delivery. The period of 15 years is an estimate of the period of operation of the engine by its initial operator.

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 (which predominantly relates to Civil Aerospace engine programmes) 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.

1 Accounting policies continued

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). Previously, until 30 June 2017, development costs were capitalised from engine certification until entry-into-service. The impact of this change on the 2018 results was an increase in the amount capitalised of £323m (2017: £127m).

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.

Development expenditure capitalised is amortised on a straight-line basis. In accordance with IAS 38, the basis on which programme assets are amortised is assessed annually. At the end of 2017, the basis was amended to amortise programme assets on a 15-year straight-line basis pro rata over the estimated number of units produced. This basis has been applied prospectively from 1 January 2018; the impact in the year is not significant.

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. Assets held that are funded by a customer (in particular in Defence) are not recognised.

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 45 years (average 25 years);
 - leasehold buildings – lower of adviser's estimates or period of lease; and
 - no depreciation is provided on freehold land.
- Plant and equipment – five to 25 years (average 12 years).
- Aircraft and engines – five to 20 years (average 14 years).

Leases

Where the Group has substantially all the risks and rewards of ownership of an asset subject to a lease, the lease is treated as a finance lease. Assets held under finance leases are recognised as assets of the Group at their fair value at the inception of the lease. The corresponding liability to the lessor is included in borrowings. Lease payments are apportioned between interest expense and a reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability. Other leases are treated as operating leases, with payments and receipts taken to the income statement on a straight-line basis over the life of the lease.

1 Accounting policies *continued*

Impairment of non-current assets

Key judgement – Determination of cash-generating units for assessing impairment of goodwill

If it is not possible to assess the recoverable amount of a non-current asset individually (most significantly for goodwill), its recoverable amount is assessed by reference to the cash-generating unit to which the asset belongs. For the purposes of goodwill, the Group considers the cash-generating units to be Rolls-Royce Power Systems AG, Rolls-Royce Deutschland Ltd & Co KG and the Commercial Marine business. Where the Group is reorganised, goodwill is re-allocated to cash-generating units based on where the goodwill originated.

Key estimate – Estimates of cash flow forecasts and discount rates to assess the value in use

The carrying values of a number of items on the balance sheet are dependent on the estimates of future cash flows arising from the Group's operations, in particular:

- The assessment of whether the goodwill (carrying value at **31 December 2018: £1,045m**, 31 December 2017: £1,545m), arising on the consolidation of acquired businesses, is impaired is dependent on the present value of the future cash flows expected to be generated by the relevant business and the discount rate used to calculate a present value.
- The assessment as to whether there are any indications of impairment of development expenditure, certification costs, and customer relationships recognised as intangible assets (carrying values at **31 December 2018: £3,427m**, 31 December 2017: £3,168m) is dependent on estimates of cash flows generated by the relevant assets and the discount rate used to calculate a present value. These estimates include the performance of long-term contractual arrangements as described below, as well as estimates for future market share, pricing and unit cost for uncontracted business. The risk of impairment is generally higher for newer programmes and typically reduces as programmes become more established.

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 to which the asset belongs. Goodwill and intangible assets not yet available for use are tested for impairment annually. Other 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 cash-generating unit) 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.

Inventories

Inventories and work in progress are valued 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.

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.

Provisions

Key judgement – Assessment of satisfying the criteria for the recognition of a provision, particularly in respect of restructuring

Judgement is required to determine whether a valid expectation has been created on those affected by restructuring.

Key estimate – Estimates of expenditure required to settle the obligation

The Group measures provisions (carrying value at **31 December 2018: £1,835m**, 31 December 2017: £943m) at the Directors' best estimate of the expenditure required to settle the obligation at the balance sheet date. These estimates take account of information available and different possible outcomes. Where onerous contracts are being assessed, this will involve similar estimates to those described on page 115 under '*Estimates of future revenues and costs of long-term contractual arrangements*'.

1 Accounting policies continued

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 and are discounted to present value where the effect is material.

The principal provisions are recognised as follows:

- 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;
- contract loss – when the direct costs to fulfil a contract are assessed as being greater than the expected revenue;
- restructuring – when the Group has approved a detailed and formal restructuring plan, and the restructuring has either commenced or has been publicly announced; and
- Trent 1000 in-service issues – when wastage costs are identified as described on page 115.

Post-retirement benefits

Key estimate – Estimates of market value of scheme assets without an observable market value and assumptions for valuing the defined benefit obligation

The Group's defined benefit pension schemes and similar arrangements are assessed annually in accordance with IAS 19. The valuation, which is based on assumptions determined with independent actuarial advice, resulted in a net surplus of £641m before deferred taxation being recognised on the balance sheet at 31 December 2018 (31 December 2017: £738m). The size of the net surplus/deficit is sensitive to: (i) the market value of the assets held by the schemes, some of which do not have observable market values and which are estimated based on third party advice; and (ii) to actuarial assumptions, which include price inflation, pension and salary increases, the discount rate used in assessing actuarial liabilities, mortality and other demographic assumptions and the levels of contributions. Further details and sensitivities are included in note 19.

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

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.

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.

Actuarial gains and losses are recognised immediately in OCI.

In 2018, following clarification provided by the High Court judgement on the Lloyds Banking Group on 26 October 2018, in the UK, the Group has recognised the estimated impact of the obligation to equalise pensions for men and women as a past-service cost – see note 19.

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

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).

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 21 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 and IFRS 4 *Insurance 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 155, the Directors consider the likelihood of crystallisation in assessing whether provision is required for any contingent liabilities.

1 Accounting policies continued

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.

Presentation of underlying results

Underlying results are presented to reflect the economic impact of the Group's foreign exchange risk management activities and to adjust for exceptional items. Further details are given in note 2.

Revisions to IFRS not applicable in 2018

Standards and interpretations issued by the IASB are only applicable if endorsed by the EU. Other than IFRS 16 *Leases* 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.

IFRS 16 *Leases*

The new lease accounting standard IFRS 16 is effective for the year beginning 1 January 2019. It requires all leases to be recognised on the balance sheet with a right-of-use asset capitalised and depreciated over the estimated lease term together with a corresponding liability that will reduce over the same period with an appropriate interest charge recognised. IAS 17 *Leases* only requires leases categorised as finance leases to be recognised on the balance sheet.

At 31 December 2018, the Group held operating leases with a future obligation of £2.3bn (excluding the disposal group held for sale) on a non-discounted basis as disclosed in note 22. The impact of IFRS 16 will be as follows.

Lease liability

A lease liability of £2.1bn will be recognised, being the present value of the future payments, using the Group's incremental borrowing rate applicable to the currency and term of each lease. This is incremental to the existing finance lease liabilities of £0.2bn, resulting in a total liability of £2.3bn. The most significant lease liabilities relate to aircraft engines (£1.7bn) and property (£0.5bn).

The liability relating to operating leases is lower than the IAS 17 future lease obligation due to the discounting of the future payments. Existing balance sheet liabilities for leased aero-engine residual value guarantees will be included in the lease liability classification.

Where leases are held in non-sterling currencies, the spot exchange rates on 1 January 2019 have been used to value them. Lease liabilities will be revalued to spot exchange rates at each future balance sheet date. The most significant exposure will be to changes in the US dollar where a movement of ten cents would have an impact of around £100m on the Group's lease liability.

Right-of-use asset

A right-of-use asset of £1.8bn will be recognised in addition to the existing £0.2bn of property, plant and equipment under finance lease contracts, resulting in a total asset of £2.0bn. The right-of-use asset has been measured either: as if the standard had applied since commencement of the lease (for a small number of high value property leases); or at an amount equal to the lease liability on transition.

The opening right-of-use asset is lower than the opening lease liability due to a combination of:

- the recognition of high value property leases from the commencement of the lease, resulting in: (i) the amortisation of the right-of-use asset being greater than the reduction in the lease liability over the same period; and (ii) where the lease liability is not in the functional currency of the relevant entity it will be revalued for changes in foreign exchange rates, while the right-of use-asset will not be revalued; and
- the right-of-use asset has been reduced to reflect charges previously recognised in the income statement when aero-engine residual value liabilities and an onerous lease provision were established.

Based on the current portfolio of lease contracts above, the Group's full-year expense under IFRS 16 in 2019 will be around £0.3bn depreciation expense within operating profit and a £0.1bn finance charge. The total pre-tax charge to the income statement will be broadly consistent with the previous accounting standard.

Transition

The Group is applying the modified retrospective transition method under which comparative information will not be restated and has elected to use the following practical expedients permitted by the standard:

- on initial application, IFRS 16 will be only been applied to contracts that were previously classified as leases;
- lease contracts with a duration of less than 12 months will continue to be expensed to the income statement on a straight-line basis over the lease term; and
- the lease term has been determined with the use of hindsight where the contract contains options to extend the lease.

The cumulative impact of less than £0.1bn resulting from the adoption of the new standard will be recognised in equity as at 1 January 2019.

2 Segmental analysis

The analysis by divisions (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, power systems and nuclear systems for civil power generation.

Defence – development, manufacture, marketing and sales of military aero engines, naval engines, submarines and aftermarket services.

ITP Aero – design, research and development, manufacture and casting, assembly and test of aeronautical engines and gas turbines (acquired on 19 December 2017, with no significant trading from acquisition date to 31 December 2017).

In 2017, the Group had five operating segments; Civil Aerospace, Defence, Power Systems, Marine and Nuclear. Following the decision to simplify the Group, announced on 17 January 2018, the 2017 segmental analysis has been presented on a consistent basis with the new structure.

Non-core businesses are shown separately and include the results of L'Orange until the date of its disposal on 1 June 2018, Commercial Marine (held for sale from 30 June 2018) and other smaller businesses including former Energy businesses not included in the disposal to Siemens in 2014 (Retained Energy).

Underlying results

We 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 to reflect the economic impact of the Group's foreign exchange risk management activities. Trading transactions are valued at the exchange rates achieved on the derivative contracts settled to cover the net exposures.

Underlying performance excludes the following:

- the effect of acquisition accounting and business disposals;
- the impairment of goodwill and other assets arising on acquisition; and
- exceptional items.

We classify 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-off costs and charges in respect of Civil Aerospace programmes, costs of restructuring programmes and one-off past-service charges and credits on our post-retirement schemes.

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

The tax effect of the adjustments above are excluded from the underlying tax charge. In addition, changes in the amount of recoverable advance corporation tax recognised are also excluded.

See page 129 for the reconciliation between underlying performance and reported performance.

2 Segmental analysis continued

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

	Civil Aerospace £m	Power Systems £m	Defence £m	ITP Aero £m	Corporate £m	Inter- segment £m	Core businesses £m
Year ended 31 December 2018							
Underlying revenue from sale of original equipment	3,119	2,322	1,452	666	-	(375)	7,184
Underlying revenue from aftermarket services	4,259	1,162	1,672	113	-	(54)	7,152
Total underlying revenue	7,378	3,484	3,124	779	-	(429)	14,336
Gross profit	493	882	690	156	-	35	2,256
Commercial and administrative costs	(336)	(377)	(170)	(57)	(51)	-	(991)
Restructuring	(8)	(1)	(3)	(2)	-	-	(14)
Research and development costs	(332)	(188)	(100)	(30)	-	-	(650)
Share of results of joint ventures and associates ¹	21	1	10	-	-	-	32
Underlying operating (loss)/profit	(162)	317	427	67	(51)	35	633
Segment assets	14,272	3,745	2,612	2,210	-	(1,621)	21,218
Investments in joint ventures and associates	380	14	16	-	-	-	410
Segment liabilities	(21,310)	(1,668)	(2,924)	(1,168)	-	1,743	(25,327)
Net (liabilities) /assets	(6,658)	2,091	(296)	1,042	-	122	(3,699)
Investment in intangible assets, property, plant and equipment and joint ventures and associates	1,283	120	151	74	-	-	1,628
Depreciation, amortisation and impairment	500	238	92	87	-	-	917
Year ended 31 December 2017 restated *							
Underlying revenue from sale of original equipment	2,890	1,956	1,398	-	-	-	6,244
Underlying revenue from aftermarket services	3,708	1,052	1,782	-	-	-	6,542
Total underlying revenue	6,598	3,008	3,180	-	-	-	12,786
Gross profit	473	797	728	-	-	-	1,998
Commercial and administrative costs	(362)	(350)	(188)	-	(55)	-	(955)
Restructuring	(11)	(1)	(4)	-	-	-	(16)
Research and development costs	(454)	(181)	(89)	-	-	-	(724)
Share of results of joint ventures and associates ¹	11	(4)	7	-	-	-	14
Underlying operating (loss)/profit	(343)	261	454	-	(55)	-	317
Segment assets	13,038	3,758	2,159	2,190	-	(1,557)	19,588
Investments in joint ventures and associates	357	15	2	-	-	-	374
Segment liabilities	(16,598)	(1,388)	(2,560)	(1,538)	-	1,799	(20,285)
Net (liabilities)/assets	(3,203)	2,385	(399)	652	-	242	(323)
Investment in intangible assets, property, plant and equipment and joint ventures and associates	1,156	124	163	-	-	-	1,443
Depreciation, amortisation and impairment	438	227	85	-	-	-	750

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ The elimination of transactions with joint ventures has been included in the results of joint ventures and associates, previously this was included within cost of sales - see note 11.

2 Segmental analysis continued**Reconciliation to reported results**

	Core businesses £m	Non-core businesses ¹ £m	Total underlying £m	Underlying adjustments and foreign exchange £m	Group at actual exchange rates £m
Year ended 31 December 2018					
Revenue from sale of original equipment	7,184	346	7,530	285	7,815
Revenue from aftermarket services	7,152	385	7,537	377	7,914
Total revenue	14,336	731	15,067	662	15,729
Gross profit	2,256	194	2,450	(1,252)	1,198
Commercial and administrative costs	(991)	(170)	(1,161)	(434)	(1,595)
Restructuring	(14)	(2)	(16)	16	-
Research and development costs	(650)	(39)	(689)	(79)	(768)
Share of results of joint ventures and associates ²	32	-	32	(28)	4
Operating profit/(loss)	633	(17)	616	(1,777)	(1,161)
Gain arising on the disposal of L'Orange	-	-	-	358	358
Profit/(loss) before financing and taxation	633	(17)	616	(1,419)	(803)
Net financing	(150)	-	(150)	(1,994)	(2,144)
Profit/(loss) before taxation	483	(17)	466	(3,413)	(2,947)
Taxation	(152)	(9)	(161)	715	554
Profit/(loss) for the year	331	(26)	305	(2,698)	(2,393)
Attributable to:					
Ordinary shareholders			297	(2,698)	(2,401)
Non-controlling interests			8	-	8
Year ended 31 December 2017 restated *					
Revenue from sale of original equipment	6,244	504	6,748	520	7,268
Revenue from aftermarket services	6,542	381	6,923	556	7,479
Total revenue	12,786	885	13,671	1,076	14,747
Gross profit	1,998	248	2,246	176	2,422
Commercial and administrative costs	(955)	(195)	(1,150)	(72)	(1,222)
Restructuring	(16)	(2)	(18)	18	-
Research and development costs	(724)	(52)	(776)	(67)	(843)
Share of results of joint ventures and associates ²	14	(10)	4	5	9
Operating profit/(loss)	317	(11)	306	60	366
Gain arising on the acquisition of ITP Aero	-	-	-	785	785
Profit/(loss) before financing and taxation	317	(11)	306	845	1,151
Net financing	(106)	(1)	(107)	2,854	2,747
Profit/(loss) before taxation	211	(12)	199	3,699	3,898
Taxation	(131)	(24)	(155)	(360)	(515)
Profit/(loss) for the year	80	(36)	44	3,339	3,383
Attributable to:					
Ordinary shareholders			43	3,339	3,382
Non-controlling interests			1	-	1

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ Includes Commercial Marine (held for sale from 30 June 2018), L'Orange sold on 1 June 2018 and other smaller non-core businesses.

² The elimination of transactions with joint ventures has been included in the results of joint ventures and associates, previously this was included within cost of sales - see note 11.

2 Segmental analysis continued**Disaggregation of revenue from contracts with customers****Analysis by type and basis of recognition**

	Civil Aerospace £m	Power Systems £m	Defence £m	ITP Aero £m	Corporate £m	Inter- segment £m	Core businesses £m
Year ended 31 December 2018							
Original equipment recognised at a point in time	3,119	2,258	694	666	-	(375)	6,362
Original equipment recognised over time	-	64	758	-	-	-	822
Aftermarket services recognised at a point in time	1,575	1,019	718	113	-	21	3,446
Aftermarket services recognised over time	2,630	143	954	-	-	(75)	3,652
Total underlying customer contract revenue¹	7,324	3,484	3,124	779	-	(429)	14,282
Other underlying revenue	54	-	-	-	-	-	54
Total underlying revenue	7,378	3,484	3,124	779	-	(429)	14,336

Year ended 31 December 2017							
Original equipment recognised at a point in time	2,890	1,931	682	-	-	-	5,503
Original equipment recognised over time	-	25	716	-	-	-	741
Aftermarket services recognised at a point in time	1,329	929	829	-	-	-	3,087
Aftermarket services recognised over time	2,343	123	953	-	-	-	3,419
Total underlying customer contract revenue¹	6,562	3,008	3,180	-	-	-	12,750
Other underlying revenue	36	-	-	-	-	-	36
Total underlying revenue	6,598	3,008	3,180	-	-	-	12,786

¹ Includes £(196)m (2017: £(14)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 foreign exchange £m	Group at actual exchange rates £m
Year ended 31 December 2018					
Original equipment recognised at a point in time	6,362	63	6,425	283	6,708
Original equipment recognised over time	822	283	1,105	2	1,107
Aftermarket services recognised at a point in time	3,446	365	3,811	148	3,959
Aftermarket services recognised over time	3,652	20	3,672	229	3,901
Total customer contract revenue	14,282	731	15,013	662	15,675
Other revenue	54	-	54	-	54
Total revenue	14,336	731	15,067	662	15,729

Year ended 31 December 2017					
Original equipment recognised at a point in time	5,503	106	5,609	520	6,129
Original equipment recognised over time	741	398	1,139	-	1,139
Aftermarket services recognised at a point in time	3,087	373	3,460	165	3,625
Aftermarket services recognised over time	3,419	8	3,427	391	3,818
Total customer contract revenue	12,750	885	13,635	1,076	14,711
Other revenue	36	-	36	-	36
Total revenue	12,786	885	13,671	1,076	14,747

¹ Includes Commercial Marine (held for sale from 30 June 2018), L'Orange sold on 1 June 2018 and other smaller non-core businesses.

2 Segmental analysis continued

Analysis by geographical destination

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

	2018 £m	2017 * £m
United Kingdom	1,505	1,709
Germany	1,177	915
Switzerland	675	787
France	251	379
Spain	343	256
Norway	246	194
Italy	304	283
Russia	79	56
Rest of Europe	815	664
Europe	5,395	5,243
United States	5,041	4,279
Canada	366	313
North America	5,407	4,592
South America	351	173
Saudi Arabia	282	285
Rest of Middle East	407	734
Middle East	689	1,019
China	1,483	1,534
Singapore	452	449
Japan	365	216
South Korea	334	243
Malaysia	111	89
India	82	110
Rest of Asia	588	530
Asia	3,415	3,171
Africa	152	235
Australasia	229	205
Other	91	109
	15,729	14,747

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

Order backlog

Contracted consideration that is expected to be recognised as revenue when performance obligations are satisfied in the future (referred to as order backlog) is as follows:

	2018		Total £bn
	Within five years £bn	After five years £bn	
Civil Aerospace	22.1	30.2	52.3
Power Systems	2.9	0.2	3.1
Defence	6.3	0.5	6.8
ITP Aero	0.8	0.1	0.9
	32.1	31.0	63.1

The contracted consideration disclosed above meets the IFRS 15 definition of unrecognised performance obligations. Specifically, 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. We exclude Civil Aerospace OE orders (for deliveries beyond the next 7-12 months) that our customers have placed where they retain a right to cancel. Our expectation based on historical experience is that these orders will be fulfilled. Within the 0-5 years category, contracted revenue in: Defence will largely be recognised in the next three years; 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**

	2018			2017 Restated *		
	Revenue £m	Profit before financing £m	Net financing £m	Revenue £m	Profit before financing £m	Net financing £m
Underlying performance	15,067	616	(150)	13,671	306	(107)
Revenue recognised at exchange rate on date of transaction	781	-	-	1,076	-	-
Realised losses on settled derivative contracts ¹	-	219	465	-	453	195
Net unrealised fair value changes to derivative contracts ²	-	(1)	(2,144)	-	24	2,648
Effect of currency on contract accounting	-	(265)	-	-	(153)	-
Revaluation of trading assets and liabilities	-	23	(302)	-	(6)	1
Net post-retirement scheme financing	-	-	23	-	-	1
Financial RRSAs – foreign exchange differences and changes in forecast payments	-	-	(2)	-	-	12
Gain arising on the acquisition of ITP Aero	-	-	-	-	785	-
Effect of acquisition accounting	-	(175)	(8)	-	(129)	-
Gain arising on the disposal of L'Orange ³	-	358	-	-	-	-
Impairment of goodwill ⁴	-	(155)	-	-	-	-
Trent 1000 exceptional charges ⁵	-	(790)	(15)	-	-	-
Trent 900 exceptional charges ⁵	(119)	(186)	-	-	-	-
Exceptional restructuring charge ⁶	-	(317)	-	-	(104)	-
Pension equalisation ⁷	-	(121)	-	-	-	-
Other	-	(9)	(11)	-	(25)	(3)
Total underlying adjustments	662	(1,419)	(1,994)	1,076	845	2,854
Reported per consolidated income statement	15,729	(803)	(2,144)	14,747	1,151	2,747

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ The adjustments for realised (gains)/losses on settled derivative contracts include adjustments to reflect the losses in the same period as the related trading cash flows.

² The adjustments for unrealised fair value changes to derivative contracts include those included in equity accounted joint ventures and exclude those for which the related trading contracts have been cancelled when the fair value changes are recognised immediately in underlying profit.

³ Gain on the disposal of L'Orange business to Woodward Inc. on 1 June 2018 – see note 25.

⁴ Relates to the impairment of Commercial Marine goodwill given the planned disposal in 2019 – see note 9.

The table below summarises the exceptional items recorded in 2018 and 2017.

	Year to 31 December	
	2018 £m	2017 £m
Programme exceptional items ⁵	976	-
Related foreign exchange impact ⁵	147	-
Restructuring charge ⁶	317	104
Pension equalisation charge ⁷	121	-
	1,561	104

⁵ Included within programme exceptional items is £790m (£905m at prevailing exchange rates) in respect of the abnormal wastage costs on the Trent 1000. In addition there is an exceptional item of £186m (£218m at prevailing exchange rates) that relates to the decision by Airbus to cease A380 deliveries in 2021.

⁶ The Group recorded an exceptional restructuring charge of £317m (2017: £104m) in the year. The costs include: £223m in respect of the Group-wide restructuring programme announced on 14 June 2018; costs relating to ongoing multi-year significant restructuring programmes including restructuring at Power Systems (RRPS2018) and in respect of Defence, reflecting actions to remove cost and improve operational efficiency.

⁷ The cost of equalisation of pension benefits between men and women – see note 19.

Appropriate rates of tax have been applied to adjustments made to profit before tax in the table above. The total underlying adjustments to profit before tax in 2018 are a credit of £715m (2017: charge of £360m). The credit in 2018 was £672m plus an additional £43m relating to the reduction in the Spanish Basque region tax rate. The charge in 2017 was £473m plus an additional charge of £50m, relating to the US Federal tax rate reduction and a credit of £163m, relating to the recognition of advance corporation tax.

2 Segmental analysis continued

Reconciliation to the balance sheet

	2018 £m	Restated * 2017 £m
Reportable segment assets	21,218	19,588
Investments – joint ventures and associates	412	375
Non-core businesses	134	1,181
Assets held for sale	750	7
Cash and cash equivalents and short-term investments	4,980	2,956
Fair value of swaps hedging fixed rate borrowings	293	227
Income tax assets	2,126	1,468
Post-retirement scheme surpluses	1,944	2,125
Total assets	31,857	27,927
Reportable segment liabilities	(25,327)	(20,285)
Non-core businesses	(141)	(554)
Liabilities associated with assets held for sale	(376)	-
Borrowings	(4,662)	(3,488)
Fair value of swaps hedging fixed rate borrowings	-	-
Income tax liabilities	(1,100)	(1,280)
Post-retirement scheme deficits	(1,303)	(1,387)
Total liabilities	(32,909)	(26,994)
Net (liabilities)/assets	(1,052)	933

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

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:

	£m	£m
United Kingdom	4,626	4,085
Germany	2,604	2,680
Spain	1,380	1,387
United States	1,338	1,258
Nordic countries	71	502
Other	639	712
	10,658	10,624

3 Research and development

	2018 £m	Restated * 2017 £m
Expenditure in the year	(1,145)	(1,041)
Capitalised as intangible assets	498	347
Amortisation and impairment of capitalised costs ¹	(121)	(149)
Net cost recognised in the income statement	(768)	(843)
Underlying adjustments relating to effects of acquisition accounting and foreign exchange	79	67
Net underlying cost recognised in the income statement	(689)	(776)

* The 2017 figures have been restated for the revised policy for recognition of entry fees received from risk and revenue sharing arrangements as a result of the adoption of IFRS 15. See note 27 for more details.

¹ From 1 January 2018, the Group adopted the approach of amortising programme assets on a 15-year straight-line basis pro rata over the estimated number of units produced. See note 1 for more details.

4 Net financing

	Notes	2018		2017 Restated *	
		Per consolidated income statement £m	Underlying financing ¹ £m	Per consolidated income statement £m	Underlying financing ¹ £m
Interest receivable		27	27	11	11
Net fair value gains on foreign currency contracts	17	-	-	2,611	-
Financial RRSAs – foreign exchange differences and changes in forecast payments	17	25	-	17	-
Net fair value gains on commodity contracts	17	-	-	37	-
Financing on post-retirement scheme surpluses	19	56	-	39	-
Net foreign exchange gains		163	-	196	-
Financing income		271	27	2,911	11
Interest payable		(107)	(99)	(67)	(64)
Net fair value losses on foreign currency contracts	17	(2,122)	-	-	-
Financial RRSAs – foreign exchange differences and changes in forecast payments	17	(27)	-	(5)	-
Financial charge relating to financial RRSAs	17	(8)	(8)	(5)	(5)
Net fair value losses on commodity contracts		(22)	-	-	-
Financing on post-retirement scheme deficits	19	(33)	-	(38)	-
Other financing charges		(96)	(70)	(49)	(49)
Financing costs		(2,415)	(177)	(164)	(118)
Net financing		(2,144)	(150)	2,747	(107)
Analysed as:					
Net interest payable		(80)	(72)	(56)	(53)
Net fair value (losses)/gains on derivative contracts		(2,144)	-	2,648	-
Net post-retirement scheme financing		23	-	1	-
Net other financing		57	(78)	154	(54)
Net financing		(2,144)	(150)	2,747	(107)

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ See note 2 for definition of underlying results.

5 Taxation

	UK		Overseas		Total	
	2018 £m	Restated * 2017 £m	2018 £m	Restated * 2017 £m	2018 £m	Restated * 2017 £m
Current tax charge for the year	13	33	167	244	180	277
Less double tax relief	-	-	-	-	-	-
	13	33	167	244	180	277
Adjustments in respect of prior years	(13)	-	15	(10)	2	(10)
Current tax	-	33	182	234	182	267
Deferred tax (credit)/charge for the year	(630)	366	(43)	(16)	(673)	350
Adjustments in respect of prior years	22	(2)	(42)	13	(20)	11
Recognition of advance corporation tax	-	(163)	-	-	-	(163)
Deferred tax charge resulting from reduction in tax rates	-	-	(43)	50	(43)	50
Deferred tax	(608)	201	(128)	47	(736)	248
Recognised in the income statement	(608)	234	54	281	(554)	515

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

5 Taxation continued

Other tax (charges)/credits

	OCI				Equity	
	Items that will not be reclassified		Items that may be reclassified		2018 £m	2017 £m
	2018 £m	2017 £m	2018 £m	2017 £m		
Deferred tax:						
Movement in post-retirement schemes	(2)	(307)	-	-	-	-
Share-based payments – direct to equity	-	-	-	-	2	3
Cash flow hedge	-	-	5	-	-	-
Net investment hedge	-	-	-	1	-	-
Other tax (charges)/credits	(2)	(307)	5	1	2	3

Tax reconciliation

	2018 £m	Restated* 2017 £m
(Loss)/profit before taxation	(2,947)	3,898
Less share of results of joint ventures and associates (note 11)	(114)	(131)
(Loss)/profit before taxation excluding joint ventures and associates	(3,061)	3,767
Nominal tax (credit)/charge at UK corporation tax rate 19% (2017: 19.25%)	(582)	725
UK tax rate differential ¹	51	(47)
Overseas rate differences ²	91	89
Impairment of goodwill	29	-
Exempt gain on the disposal of L'Orange	(117)	-
R&D credits	(23)	(5)
Gain arising on the acquisition of ITP Aero	-	(151)
Other permanent differences	36	(8)
Tax losses in year not recognised in deferred tax	22	24
Adjustments in respect of prior years	(18)	1
Recognition of advance corporation tax	-	(163)
Reduction in closing deferred taxes resulting from decrease in tax rates ³	(43)	50
	(554)	515
Underlying items (note 2)	161	155
Non-underlying items	(715)	360
	(554)	515

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

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 in countries, such as the US and Germany, which have higher tax rates than the UK.

³ The 2018 reduction in corporation tax rates relates to the reduction in the Spanish Basque region tax rate. The 2017 comparative relates to the reduction in the Federal tax rate in the US.

Deferred taxation assets and liabilities

	2018 £m	Restated* 2017 £m
At 1 January	380	1,072
Impact of adopting IFRS 9	2	-
Amount credited/(charged) to income statement	736	(248)
Amount charged to other comprehensive income	(2)	(307)
Amount credited to cash flow hedge reserve	5	-
Amount credited to equity	2	3
On disposal/acquisition of businesses	6	(118)
Transferred to assets held for sale	(4)	-
Exchange differences	5	(22)
At 31 December	1,130	380
Deferred tax assets	2,092	1,451
Deferred tax liabilities	(962)	(1,071)
	1,130	380

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

5 Taxation continued

The analysis of the deferred tax position is as follows:

	At 1 January £m	Impact of adopting IFRS 9 £m	At 1 January restated £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Merger and acquisition related activity ¹ £m	Exchange differences £m	At 31 December £m
2018									
Intangible assets	(419)	-	(419)	(203)	-	-	5	(3)	(620)
Property, plant and equipment	(158)	-	(158)	77	-	-	1	(5)	(85)
Other temporary differences	258	2	260	(106)	5	2	(1)	4	164
Net contract liabilities	63	-	63	(6)	-	-	-	-	57
Pensions and other post-retirement scheme benefits	(482)	-	(482)	19	(2)	-	(3)	7	(461)
Foreign exchange and commodity financial assets and liabilities	381	-	381	244	-	-	-	-	625
Losses	306	-	306	704	-	-	-	-	1,010
R&D credit	268	-	268	7	-	-	-	2	277
Advance corporation tax	163	-	163	-	-	-	-	-	163
	380	2	382	736	3	2	2	5	1,130

	At 1 January £m	Impact of adopting IFRS 15 £m	At 1 January restated £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Merger and acquisition related activity ¹ £m	Exchange differences £m	At 31 December £m
2017 restated *									
Intangible assets	(389)	170	(219)	167	-	-	(319)	(48)	(419)
Property, plant and equipment	(191)	(15)	(206)	95	-	-	(29)	(18)	(158)
Other temporary differences	28	299	327	(74)	-	3	(12)	14	258
Net contract liabilities	(512)	518	6	57	-	-	-	-	63
Pensions and other post-retirement scheme benefits	(131)	-	(131)	(69)	(307)	-	-	25	(482)
Foreign exchange and commodity financial assets and liabilities	926	-	926	(545)	-	-	-	-	381
Losses	339	-	339	(50)	-	-	12	5	306
R&D credit	30	-	30	8	-	-	230	-	268
Advance corporation tax	-	-	-	163	-	-	-	-	163
	100	972	1,072	(248)	(307)	3	(118)	(22)	380

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ Merger and acquisition activity includes Commercial Marine deferred tax transferred to assets held for sale, the disposal of L'Orange and the 2017 comparative includes the acquisition of ITP Aero.

Unrecognised deferred tax assets

	2018 £m	Restated* 2017 £m
Advance corporation tax	19	19
Losses and other unrecognised deferred tax assets	111	103
Deferred tax not recognised on unused tax losses and other items on the basis that future economic benefit is uncertain	130	122

* Restated for ITP Aero.

Deferred tax assets include **£998m** (2017: £285m) relating to tax losses in the UK and **£163m** (2017: £163m) relating to advance corporation tax (ACT), as we conclude it is probable that the UK business will generate taxable profits and tax liabilities in the future against which we can utilise these losses and ACT. They do not time expire.

Most of the tax losses relate to our Civil Aerospace business in the UK which makes initial losses through the investment period of a programme and margin through its services contracts. The programme lifecycles typically range between 30 and 55 years with more of our 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), all of which are still in the investment stage.

5 Taxation continued

The increase in the losses in 2018 is mainly due to the adoption of IFRS 15 (where the most significant impact of adopting the standard was in our Civil Aerospace business in the UK) together with a number of large one off exceptional profit-impacting items relating to the Trent 1000 and Trent 900 programmes and the impact of the restructuring charge. Details of these are included in note 2. 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 Group's Civil Aerospace business, to assess the level of future taxable profits. The recoverability of UK deferred tax assets has been assessed in 2018 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;
- growth rates for the period beyond the forecasts reflecting the markets in which the UK businesses operate and external sources (circa 2% to 4.4%);
- the long-term profit growth profile of certain of our more recently launched large engine programmes; and
- the term of our large 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. The assessment takes into account the UK tax laws effective from April 2017 that in broad terms restrict the offset of the carried forward tax losses to 50% of current year profits.

Based on this, the Group concludes that it is probable that the UK business will generate taxable income and tax liabilities in the future against which we can use the losses and ACT. 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. Based on current forecasts and using various scenarios the losses and ACT will be used in full within the next 20 to 30 years. Whilst there is significant judgement involved in the assessment the range is well within our expected programme lifecycles. This is an area the Board continuously reassesses.

As announced in the Spanish Basque region tax reform legislation, the corporation tax rate reduced from 28% to 26% with effect from 1 January 2018 and will reduce to 24% with effect from 1 January 2019. The rate reduction to 24% was enacted on 27 March 2018. As this rate reduction was enacted prior to the year end, the closing deferred tax assets and liabilities of the Spanish ITP Aero companies have been calculated at this rate. The resulting credit of £43m has been recognised in the income statement.

The Budget 2016 announced that the UK tax rate will reduce to 17% with effect from 1 April 2020. The rate reduction to 17% was substantively enacted on 6 September 2016. The deferred tax assets and liabilities of UK companies within the group have therefore been calculated at 17%.

The temporary differences associated with investments in subsidiaries, joint ventures and associates, for which a deferred tax liability has not been recognised, aggregate to £99m (2017: £188m). 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) are calculated by dividing the profit attributable to ordinary shareholders by the weighted average number of ordinary shares in issue during the year, excluding ordinary shares held under trust, which have been treated as if they had been cancelled.

Diluted EPS are calculated by adjusting the weighted average number of ordinary shares in issue during the year for the bonus element of share options.

	2018			2017 Restated*		
	Basic	Potentially dilutive share options ¹	Diluted	Basic	Potentially dilutive share options	Diluted
(Loss)/profit attributable to ordinary shareholders (£m)	(2,401)		(2,401)	3,382		3,382
Weighted average number of ordinary shares (millions)	1,859	–	1,859	1,834	6	1,840
EPS (pence)	(129.15p)	–	(129.15p)	184.41p	(0.61p)	183.80p

¹ As there is a loss, the effect of the potentially dilutive ordinary shares is anti-dilutive.

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

	2018		2017 Restated*	
	Pence	£m	Pence	£m
Underlying EPS/Underlying profit attributable to ordinary shareholders	15.98	297	2.34	43
Total underlying adjustments to (loss)/profit before tax (note 2)	(183.59)	(3,413)	201.70	3,699
Related tax effects	38.46	715	(19.63)	(360)
EPS/(Loss)/profit attributable to ordinary shareholders	(129.15)	(2,401)	184.41	3,382
Diluted underlying EPS	15.98		2.34	

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

7 Auditors' remuneration

	2018 £m	2017 £m
Fees payable to the Company's auditor for the audit of the Company's annual Financial Statements ¹	0.4	0.3
Fees payable to the Company's auditor and its associates for the audit of the Company's subsidiaries pursuant to legislation ²	8.7	7.3
Total fees payable for audit services	9.1	7.6
Fees payable to the Company's auditor and its associates for other services:		
Audit related assurance services ³	0.8	0.7
Taxation compliance services	-	0.1
Taxation advisory services	-	-
All other services	0.1	1.0
Total fees payable to the Company's auditor and its associates ⁴	10.0	9.4
Fees payable in respect of the Group's pension schemes:		
Audit	0.1	0.2
Taxation compliance services	-	-

¹ The Company's auditor changed in 2018. 2018 fees are those paid to PwC, 2017 fees are those paid to KPMG.

² The level of fees payable to the Company's auditor for the audit of the Company's annual Financial Statements reflects the fact that limited incremental work is required in respect of the audit of these Financial Statements. Rolls-Royce plc, a subsidiary of the Company, is also required to prepare Consolidated Financial Statements and the fees payable to the Company's auditor for the audit of those Financial Statements, including the audit of the sub-consolidation, is included in the audit of the Company's subsidiaries pursuant to legislation.

³ This includes £0.5m (2017: £0.3m) for the review of the half-year report.

⁴ Audit fees for overseas entities are reported at the average exchange rate for the year.

8 Employee information

	2018 Number	Restated* 2017 Number
United Kingdom	23,400	22,500
Germany	10,000	10,600
United States	6,300	6,200
Nordics	3,000	3,000
Spain	2,800	-
Canada	1,000	1,000
Rest of world	8,000	6,700
Average number of employees	54,500	50,000
Civil Aerospace	25,500	24,300
Power Systems	10,500	10,300
Defence	10,500	10,300
ITP Aero	3,700	-
Corporate ¹	100	200
Core businesses	50,300	45,100
Non-core businesses ²	4,200	4,900
Average number of employees	54,500	50,000
	£m	£m
Wages, salaries and benefits	3,208	2,982
Social security costs	479	413
Share-based payments (note 21)	35	34
Pensions and other post-retirement scheme benefits (note 19)	470	372
Group employment costs ³	4,192	3,801

* The segmental employee numbers have been restated to reflect the Group restructuring described in note 2.

¹ 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.

² Includes Commercial Marine (held for sale from 30 June 2018), L'Orange (sold on 1 June 2018) and Retained Energy.

³ Remuneration of key management personnel is shown in note 24.

9 Intangible assets

	Goodwill £m	Certification costs £m	Development expenditure £m	Contractual aftermarket rights £m	Customer relationships £m	Software £m	Other £m	Total £m
Cost								
At 1 January 2017 as previously reported	1,874	1,325	1,944	1,007	540	742	663	8,095
Impact of adoption of IFRS 15 ¹	-	(503)	-	(1,007)	-	-	-	(1,510)
Foreign exchange adjustment ²	-	(21)	-	-	-	-	-	(21)
At 1 January 2017 restated	1,874	801	1,944	-	540	742	663	6,564
Additions	-	112	347	-	-	135	53	647
Acquisition of ITP Aero ³	-	4	162	-	895	7	61	1,129
Disposals	-	-	-	-	-	(13)	-	(13)
Reclassifications	-	-	(9)	-	-	-	9	-
Exchange differences	(5)	-	15	-	(3)	(2)	8	13
At 1 January 2018	1,869	917	2,459	-	1,432	869	794	8,340
Additions	-	35	498	-	-	110	37	680
Transferred to assets held for sale ⁴	(666)	-	(38)	-	(26)	(6)	(12)	(748)
Disposal of L'Orange ⁵	(136)	-	(48)	-	(40)	-	(11)	(235)
Disposals	-	(4)	(1)	-	-	(16)	-	(21)
Reclassifications	5	-	-	-	-	3	(3)	5
Exchange differences	15	-	13	-	18	4	6	56
At 31 December 2018	1,087	948	2,883	-	1,384	964	811	8,077
Accumulated amortisation and impairment								
At 1 January 2017 as previously reported	337	440	888	433	209	414	294	3,015
Impact of adoption of IFRS 15 ¹	-	(134)	-	(433)	-	-	-	(567)
At 1 January 2017 restated	337	306	888	-	209	414	294	2,448
Charge for the year ⁶	-	33	149	-	51	81	29	343
Disposals	-	-	-	-	-	(6)	-	(6)
Exchange differences	(13)	-	8	-	(4)	(1)	-	(10)
At 1 January 2018	324	339	1,045	-	256	488	323	2,775
Charge for the year ⁶	-	35	114	-	90	103	39	381
Impairment	155	-	7	-	-	22	-	184
Transferred to assets held for sale ⁴	(439)	-	(29)	-	(21)	(1)	(12)	(502)
Disposal of L'Orange ⁵	-	-	(31)	-	(27)	-	(8)	(66)
Disposals	-	-	-	-	-	(8)	-	(8)
Reclassifications	5	(1)	-	-	-	1	-	5
Exchange differences	(3)	-	5	-	6	2	3	13
At 31 December 2018	42	373	1,111	-	304	607	345	2,782
Net book value								
At 31 December 2018	1,045	575	1,772	-	1,080	357	466	5,295
At 31 December 2017 restated	1,545	578	1,414	-	1,176	381	471	5,565
At 31 December 2017 as previously reported	1,545	1,117	1,450	873	1,247	380	451	7,063

¹ The adoption of IFRS 15 results in the reclassification of participation fees as contract assets and the de-recognition of contractual aftermarket rights (CARs).

² The foreign exchange adjustment relates to the revision of the foreign exchange rate applied to the initial recognition of non-monetary assets and liabilities - see note 27.

³ Changes to the provisional balances presented at 31 December 2017 reflect additional information during 2018 about facts which existed at the date of acquisition, since the acquisition occurred close to the year end - see note 27.

⁴ The Commercial Marine business was classified as a 'held for sale' disposal group on 30 June 2018 - see note 25.

⁵ The disposal of the L'Orange business to Woodward Inc. was completed on 1 June 2018 - see note 25.

⁶ Charged to cost of sales except development costs, which are charged to research and development costs.

9 Intangible assets *continued*

Goodwill

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

Cash-generating unit (CGU) or group of CGUs

	Primary reporting segment	2018 £m	2017 £m
Rolls-Royce Power Systems AG	Power Systems	750	868
Rolls-Royce Deutschland Ltd & Co KG	Civil Aerospace	246	244
Commercial Marine – arising from the acquisitions of Vinters Limited and Scandinavian Electric Holding AS ^{1,2}	Non-core	–	382
Other ¹	Various	49	51
		1,045	1,545

¹ Commercial Marine goodwill in 2017 has been restated for the reorganisation of the Marine business following the announcement to simplify the group on 17 January 2018.

² Commercial Marine goodwill of £382m at 1 January 2018 has been impaired by £155m and the balance of £227m transferred to assets held for sale – see note 25.

Goodwill has been tested for impairment during 2018 on the following basis:

- With the exception of the Commercial Marine business (see below), the carrying values of goodwill have been assessed by reference to value in use. These have been estimated using cash flows from the most recent forecasts prepared by management, which are consistent with past experience and external sources of information on market conditions. These forecasts generally cover the next five years. Growth rates for the period not covered by the forecasts are based on a range of growth rates (1.8-2.5%) that reflect the products, industries and countries in which the relevant CGU or group of CGUs operate.
- 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:

Commercial Marine

On 6 July 2018, the Group announced the sale of Commercial Marine to KONGSBERG for a cash consideration of approximately £425m. The disposal is expected to complete in 2019 and the business meets the criteria of IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* that where the carrying value of a disposal group is expected to be recovered through a sale transaction, the disposal group should be treated as held for sale, with assets and liabilities presented separately on the balance sheet measured at the lower of carrying value or fair value less costs to dispose. Following reclassification, the non-current assets of Commercial Marine are no longer amortised.

As a result of the classification of the Commercial Marine business as a disposal group, its carrying value was assessed against the anticipated proceeds and the disposal costs. An impairment charge of £155m for the related goodwill (with an additional £5m impairment charge to property, plant and equipment) has been recognised in the income statement and the remaining net balance of £227m transferred to assets held for sale.

Rolls-Royce Power Systems AG

- trading assumptions (e.g. volume of equipment deliveries, pricing achieved and cost escalation) are based on current and known future programmes, estimates of capture of market share and long-term economic forecasts;
- cash flows beyond the five-year forecasts are assumed to grow at 1.8% (2017: 1.8%); and
- pre-tax discount rate 12% (2017: 11.7%).

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 and cost escalation) are based on current and known future programmes, estimates of customers' fleet requirements and long-term economic forecasts;
- cash flows beyond the five-year forecasts are assumed to grow at 2.5% (2017: 2.5%); and
- pre-tax discount rate 13% (2017: 13%).

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.

9 Intangible assets *continued*

Other intangible assets

Other intangible assets have been reviewed for impairment in accordance with the requirements of IAS 36 *Impairment of Assets*. Where an impairment test was considered necessary, it has been performed on the following basis.

- The carrying values have been assessed by reference to value in use. These have been estimated using cash flows from the most recent forecasts prepared by management, which are consistent with past experience and external sources of information on market conditions over the lives of the respective programmes.
- The key assumptions underlying cash flow projections are assumed market share, programme timings, unit cost assumptions, discount rates, and foreign exchange rates.
- The pre-tax cash flow projections have been discounted at 7-13% (2017: 9-13%), based on the Group's weighted average cost of capital, adjusted for the estimated programme risk, for example taking account of whether or not the forecast cash flows arise from contracted business.

On the basis of impairment reviews and tests performed, no impairments are required. However, a combination of adverse changes in assumptions (e.g. market size and share, unit costs and programme delays) and other variables (e.g. discount rate and foreign exchange rates), could result in impairment in future years.

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 2017 previously presented	1,667	4,599	491	765	7,522
Foreign exchange adjustment *	-	-	20	-	20
At 1 January 2017 restated	1,667	4,599	511	765	7,542
Additions	45	156	156	446	803
Acquisition of ITP Aero *	74	142	27	11	254
Transferred to assets held for sale	(5)	(11)	-	-	(16)
Disposals/write-offs	(13)	(111)	(4)	(9)	(137)
Reclassifications	92	308	29	(429)	-
Exchange differences	(18)	(61)	(5)	(11)	(95)
Adjustment ¹	-	-	20	-	20
At 1 January 2018 restated *	1,842	5,022	734	773	8,371
Additions	54	273	251	396	974
Disposal of L'Orange ²	(23)	(72)	-	(4)	(99)
Transferred to assets held for sale ³	(91)	(138)	-	(30)	(259)
Disposals/write-offs	(29)	(140)	(19)	-	(188)
Reclassifications	140	287	(3)	(424)	-
Exchange differences	23	64	4	11	102
At 31 December 2018	1,916	5,296	967	722	8,901

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments.

See note 27 for more details. The update to the provisional fair values of ITP Aero are set out in note 25.

¹ Adjustment relates to industrial engines sold with the Energy business in 2014.

² The disposal of the L'Orange business to Woodward Inc. was completed on 1 June 2018 - see note 25.

³ The Commercial Marine business was classified as a held for sale disposal group on 30 June 2018 - see note 25.

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 2017	515	2,765	126	2	3,408
Charge for the year ⁴	58	351	35	-	444
Impairment	3	3	-	-	6
Transferred to assets held for sale	(3)	(10)	-	-	(13)
Disposals/write-offs	(3)	(100)	(1)	-	(104)
Reclassifications	(7)	7	-	-	-
Exchange differences	(9)	(32)	(1)	-	(42)
Adjustment ¹	-	-	14	-	14
At 1 January 2018 restated *	554	2,984	173	2	3,713
Charge for the year ⁴	67	376	80	-	523
Impairment	-	2	-	5	7
Disposal of L'Orange ²	(4)	(34)	-	-	(38)
Transferred to assets held for sale ³	(26)	(96)	-	-	(122)
Disposals/write-offs	(19)	(123)	(9)	-	(151)
Exchange differences	7	33	-	-	40
At 31 December 2018	579	3,142	244	7	3,972
Net book value					
At 31 December 2018	1,337	2,154	723	715	4,929
At 31 December 2017 restated *	1,288	2,038	561	771	4,658
At 31 December 2017 as previously reported	1,288	2,051	514	771	4,624

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments.

See note 27 for more details. The update to the provisional fair values of ITP Aero are set out in note 25.

¹ Adjustment relates to industrial engines sold with the Energy business in 2014.

² The disposal of the L'Orange business to Woodward Inc. was completed on 1 June 2018 – see note 25.

³ The Commercial Marine business was classified as a held for sale disposal group on 30 June 2018 – see note 25.

⁴ Depreciation charged during the year is presented in the income statement or included in the cost of inventory as appropriate.

Property, plant and equipment includes:

	2018 £m	2017 £m
Net book value of finance leased assets:		
Land and buildings	4	5
Plant and equipment	5	7
Aircraft and engines	153	82
Assets held for use in operating leases:		
Cost	813	552
Depreciation	(192)	(140)
Net book value	621	412
Capital expenditure commitments	362	257
Cost of fully depreciated assets	1,573	1,355

The Group's share of equity accounted entities' capital commitments is **£9m** (2017: £20m).

11 Investments

Composition of the Group

The entities contributing to the Group's financial results are listed on pages 178 to 185.

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 2017	835	9	844	38
Reclassification from deferred income	(289)	-	(289)	-
At 1 January 2017 restated ¹	546	9	555	38
Exchange differences	(47)	2	(45)	2
Additions	47	1	48	4
Transfer ITP Aero from joint venture to subsidiary	(204)	-	(204)	-
Impairment ²	-	(2)	(2)	(12)
Consolidation of previously non-consolidated subsidiary	-	-	-	(6)
Share of retained loss ³	(60)	(10)	(70)	-
Reclassification of deferred profit to deferred income ¹	99	-	99	-
Share of OCI	(6)	-	(6)	-
At 1 January 2018 restated ¹	375	-	375	26
Exchange differences	41	-	41	-
Additions	17	-	17	6
Impairment	(7)	-	(7)	(2)
Disposals	-	-	-	(3)
Consolidation of previously non-consolidated subsidiary	-	-	-	(5)
Share of retained loss ³	(101)	-	(101)	-
Reclassification of deferred profit to deferred income ¹	70	-	70	-
Share of OCI	17	-	17	-
At 31 December 2018	412	-	412	22

¹ Deferred profit on sales to joint ventures was previously credited to deferred income. During the year, the Group has concluded that it is more appropriate for the credit to be included in the carrying value of the investment in the entity - up to the extent of the Group's interest in the entity. The corresponding income statement treatment has been reassessed on a consistent basis; previously this was included in cost of sales. The Group has concluded that it is more appropriate for this to be included in the share of results of joint ventures and associates. The 2017 comparatives have been restated for this change.

² The unlisted investment impairment of £12m relates to the consolidation of a previously non-consolidated subsidiary.

³ See table below.

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

	2018 £m	2017 £m
Share of results of joint ventures and associates	114	131
Adjustments for intercompany trading	(110)	(122)
Share of results of joint ventures and associates (income statement)	4	9
Dividends paid by joint ventures and associates to the Group (cash flow statement)	(105)	(79)
³ Share of retained loss above	(101)	(70)

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%

11 Investments continued

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

	APL		HAESL		SAESL		ITP Aero ¹	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
Revenue	254	188	1,497	954	1,141	933	689	
Profit and total comprehensive income for the year	61	60	72	48	41	40	46	
Dividends paid during the year	(47)	(25)	(65)	(44)	(43)	(47)	-	
Profit for the year included the following:								
Depreciation and amortisation	(110)	(94)	(13)	(11)	(12)	(12)	(51)	
Interest income	1	-	-	-	-	-	11	
Interest expense	(58)	(34)	(2)	(1)	(3)	(2)	(15)	
Income tax expense	(14)	(10)	(14)	(9)	(4)	-	-	
Current assets	355	185	421	268	379	362		
Non-current assets	2,759	2,116	124	114	161	148		
Current liabilities	(755)	(531)	(248)	(116)	(207)	(202)		
Non-current liabilities	(1,825)	(1,299)	(101)	(91)	(164)	(138)		
Net assets	534	471	196	175	169	170		
Included in the above:								
Cash and cash equivalents	103	23	46	9	17	32		
Current financial liabilities ²	(702)	(503)	-	-	-	-		
Non-current financial liabilities ²	(1,603)	(1,101)	(88)	(83)	(164)	(137)		
Reconciliation to the carrying amount recognised in the Financial Statements								
Ownership interest	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		
Group share of net assets above	267	235	98	88	85	85		
Goodwill	-	-	36	34	97	92		
Adjustments for intercompany trading	(267)	(235)	(3)	-	-	-		
Included in the balance sheet	-	-	131	122	182	177		

¹ On 19 December 2017, the Group acquired the remaining share of ITP Aero to take the total shareholding to 100% - see note 25.

² Excluding trade payables and other liabilities.

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

	Individually material joint ventures (above)		Other joint ventures		Associates		Total	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
Assets:								
Non-current assets	271	259	559	561	-	-	830	820
Current assets	402	314	393	367	-	-	795	681
Liabilities: ¹								
Current liabilities	(230)	(160)	(240)	(350)	-	-	(470)	(510)
Non-current liabilities	(130)	(114)	(613)	(502)	-	-	(743)	(616)
	313	299	99	76	-	-	412	375
¹ Liabilities include borrowings of	(126)	(111)	(439)	(488)	-	-	(565)	(599)

12 Inventories

	2018 £m	Restated* 2017 £m
Raw materials	553	558
Work in progress	1,551	1,398
Finished goods	2,168	1,818
Payments on account	15	29
	4,287	3,803
Inventories stated at net realisable value	223	244
Amount of inventory write-down	69	85
Reversal of inventory write-down	21	4

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

13 Trade receivables and other assets

	2018 £m	Restated* 2017 £m
Trade receivables ¹	2,680	2,709
Amounts owed by joint ventures and associates ¹	229	270
Costs to obtain contracts with customers ²	42	51
Other receivables	1,146	1,115
Prepayments	593	208
	4,690	4,353
Contract assets ³	1,403	1,290
Participation fee contract assets ³	654	655
Total contract assets	2,057	1,945
	6,747	6,298
Analysed as:		
Financial instruments (note 17):		
Trade receivables and similar items	3,361	3,375
Other non-derivative financial assets	489	477
Non-financial instruments	2,897	2,446
	6,747	6,298

	2018 £m	Restated* 2017 £m
Trade receivables and other assets expected to be recovered in more than one year:		
Trade receivables	-	16
Amounts owed by joint ventures and associates	-	1
Costs to obtain contracts	34	39
Other receivables	63	41
Prepayments	91	61
	188	158
Contract assets	1,108	1,020
Participation fee contract assets	605	578
Total contract assets	1,713	1,598
	1,901	1,756

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

¹ Includes £146m of trade receivables held to collect or sell and nil 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 £13m (2017: £6m) in the year. There were no impairment losses.

³ Contract assets include £1,097m (2017: £1,027m) of Civil Aerospace LTSA assets where the increase is primarily due to revenue being recognised based on stage of completion of LTSAs, measured on a cost-to-cost basis, that is circa £180m greater than the revenue invoiced in the year on these customer contracts i.e. those with debit balances. Catch-up adjustments of £111m in Civil Aerospace have reduced the contract asset primarily due to revised measurement of progress towards completing performance obligations as cost estimates have increased (an offsetting £27m catch-up adjustment relating to the RRSA partner share is included in prepayments). Similar timing differences between revenue recognised on a stage of completion basis and invoices raised have occurred to a lesser extent in other businesses. No impairment losses on contract assets have arisen during the year. Participation fee contract assets are flat year-on-year with additional amounts paid during 2018 being offset by amortisation.

14 Cash and cash equivalents

	2018 £m	2017 £m
Cash at bank and in hand	1,023	838
Money-market funds	1,222	589
Short-term deposits	2,729	1,526
Cash and cash equivalents per the balance sheet	4,974	2,953
Overdrafts (note 15)	(22)	(20)
Cash and cash equivalents per cash flow statement (page 110)	4,952	2,933
Cash held as collateral against third party obligations (note 18)	4	22

Cash and cash equivalents at 31 December 2018 includes £31m (2017: £23m) that is not available for general use by the Group. This balance predominantly relates to cash held in non-wholly owned subsidiaries and joint arrangements.

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

15 Borrowings

	Current		Non-current		Total	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
Unsecured						
Overdrafts	22	20	-	-	22	20
Bank loans	298	39	354	572	652	611
6.75% Notes 2019 £500m ¹	504	-	-	519	504	519
2.375% Notes 2020 US\$500m ²	-	-	383	362	383	362
2.125% Notes 2021 €750m ²	-	-	699	701	699	701
0.875% Notes 2024 €550m ²	-	-	498	-	498	-
3.625% Notes 2025 US\$1,000m ²	-	-	765	726	765	726
3.375% Notes 2026 £375m ¹	-	-	403	412	403	412
1.625% Notes 2028 €550m ²	-	-	502	-	502	-
Other loans ³	-	-	5	-	5	-
Secured						
Obligations under finance leases ⁴	34	23	195	114	229	137
	858	82	3,804	3,406	4,662	3,488

¹ 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.

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 Other loans are held by entities classified as joint operations. The loans are disclosed after adjustments have been made on consolidation to eliminate the extent of the Group's interest in the entity - see note 1.

⁴ Obligations under finance leases are secured by related leased assets.

16 Trade payables and other liabilities

	Current		Non-current		Total	
	2018 £m	Restated* 2017 £m	2018 £m	Restated* 2017 £m	2018 £m	Restated* 2017 £m
Trade payables	2,520	2,014	-	10	2,520	2,024
Amounts owed to joint ventures and associates	635	43	18	7	653	50
Accruals	1,673	1,452	109	94	1,782	1,546
Deferred receipts from RRSA workshare partners	9	73	520	482	529	555
Government grants ¹	14	20	85	82	99	102
Other taxation and social security	125	126	-	-	125	126
Other payables ²	3,316	3,157	1,208	1,563	4,524	4,720
	8,292	6,885	1,940	2,238	10,232	9,123
Contract liabilities ³	3,794	4,104	5,336	3,607	9,130	7,711
	12,086	10,989	7,276	5,845	19,362	16,834

¹ During the year £8m (2017: £7m) of government grants were released to the income statement.

² Other payables include £378m (2017: £378m) for financial penalties from agreements with investigating bodies and £245m (2017: £648m) for deferred consideration in relation to the acquisition of ITP Aero. During the year £2,823m (2017: £2,570m) of the opening contract liability was recognised as revenue.

³ During the year £2,823m (2017: £2,570m) of the opening contract liability was recognised as revenue. Contract liabilities have increased by £1,419m with the main reasons being (i) an increase of £1,014m in Civil Aerospace LTSA liabilities to £5,584m (2017: £4,570m) including a £192m catch-up adjustment as progress towards completing performance obligations has been re-measured with cost estimates updated to reflect technical issues across various engine programmes including rectifying manufacturing quality issues on Trent 900 turbine blades and the latest information around future aircraft utilisation patterns and their resultant effect on shop visit costs. Invoices raised in Civil Aerospace during 2018 for LTSA services as engines were utilised by customers were greater than revenue recognised as costs were incurred; (ii) an increase in OE deposits mainly on Civil Aerospace and Power Systems programmes; (iii) an increase of £190m in Defence with a greater value of invoices raised in the year than recognised as revenue and favourable catch-up adjustments of circa £40m; (iv) a £40m reduction in ITP Aero including a favourable catch-up adjustment on its external customer contracts of around £20m; and (vi) a reclassification of £148m of Commercial Marine balances now as held for sale.

16 Trade payables and other liabilities continued

	2018 £m	Restated* 2017 £m
Trade and other payables are analysed as follows:		
Financial instruments (note 17):		
Trade payables and similar items	5,659	4,088
Other non-derivative financial liabilities	1,754	2,096
Non-financial instruments	11,949	10,650
	19,362	16,834

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

17 Financial instruments

Carrying values and fair values of financial instruments

	Notes	Basis for determining fair value	Assets			Liabilities		Total £m
			Fair value through profit or loss £m	Fair value through OCI £m	Amortised cost £m	Fair value through profit or loss £m	Other £m	
2018								
Unlisted non-current asset investments	11	A	22	–	–	–	–	22
Trade receivables and similar items	13	B/C	–	146	3,215	–	–	3,361
Other non-derivative financial assets	13	B	–	–	489	–	–	489
Derivative financial assets ¹		C	365	–	–	–	–	365
Short-term investments		B	–	–	6	–	–	6
Cash and cash equivalents	14	B	1,222	–	3,752	–	–	4,974
Borrowings	15	D/E	–	–	–	–	(4,662)	(4,662)
Derivative financial liabilities ¹		C	–	–	–	(3,871)	–	(3,871)
Financial RRSAs		F	–	–	–	–	(227)	(227)
Other		F	–	–	–	–	(62)	(62)
C Shares		B	–	–	–	–	(29)	(29)
Trade payables and similar items	16	B	–	–	–	–	(5,659)	(5,659)
Other non-derivative financial liabilities	16	B	–	–	–	–	(1,754)	(1,754)
			1,609	146	7,462	(3,871)	(12,393)	(7,047)

	Notes	Basis for determining fair value	Assets				Liabilities		Total £m
			Fair value through profit or loss £m	Loans and receivables £m	Available for sale £m	Cash £m	Fair value through profit or loss £m	Other £m	
2017, restated*									
Unlisted non-current asset investments	11	A	–	26	–	–	–	–	26
Trade receivables and similar items	13	B/C	–	3,375	–	–	–	–	3,375
Other non-derivative financial assets	13	B	–	477	–	–	–	–	477
Derivative financial assets ¹		C	646	–	–	–	–	–	646
Short-term investments		B	–	3	–	–	–	–	3
Cash and cash equivalents	14	B	–	1,526	589	838	–	–	2,953
Borrowings	15	D/E	–	–	–	–	–	(3,488)	(3,488)
Derivative financial liabilities ¹		C	–	–	–	–	(2,730)	–	(2,730)
Financial RRSAs		F	–	–	–	–	–	(247)	(247)
Other		F	–	–	–	–	–	(57)	(57)
C Shares		B	–	–	–	–	–	(28)	(28)
Trade payables and similar items	16	B	–	–	–	–	–	(4,088)	(4,088)
Other non-derivative financial liabilities	16	B	–	–	–	–	–	(2,096)	(2,096)
			646	5,407	589	838	(2,730)	(10,004)	(5,254)

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

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 £11m (2017: £31m) and liabilities £3,517m (2017: £2,115m).

17 Financial instruments continued

Fair values equate to book values for both 2018 and 2017, with the following exceptions:

	Basis for determining fair value	2018		2017	
		Book value £m	Fair value £m	Book value £m	Fair value £m
Borrowings	D	(3,754)	(3,634)	(2,720)	(2,750)
Borrowings	E	(908)	(887)	(768)	(768)
Financial RRSAs	F	(227)	(235)	(247)	(250)

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 below.

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.

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. 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 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).

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 by discounting contractual future cash flows. (Level 2 as defined by IFRS 13).

F 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
2018								
Non-current assets	47	4	292	343	-	-	-	343
Current assets	16	2	4	22	-	-	-	22
Assets	63	6	296	365	-	-	-	365
Current liabilities	(523)	(15)	-	(538)	(52)	(28)	(29)	(647)
Non-current liabilities	(3,304)	(25)	(4)	(3,333)	(175)	(34)	-	(3,542)
Liabilities	(3,827)	(40)	(4)	(3,871)	(227)	(62)	(29)	(4,189)
	(3,764)	(34)	292	(3,506)	(227)	(62)	(29)	(3,824)
2017 restated *								
Non-current assets	362	16	232	610	-	-	-	610
Current assets	27	9	-	36	-	-	-	36
Assets	389	25	232	646	-	-	-	646
Current liabilities	(493)	(10)	-	(503)	(50)	(20)	(28)	(601)
Non-current liabilities	(2,208)	(14)	(5)	(2,227)	(197)	(37)	-	(2,461)
Liabilities	(2,701)	(24)	(5)	(2,730)	(247)	(57)	(28)	(3,062)
	(2,312)	1	227	(2,084)	(247)	(57)	(28)	(2,416)

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

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. Where the effectiveness of a hedging relationship in a cash flow hedge is demonstrated, changes in the fair value that are deemed effective are included in the cash flow hedge reserve and released to match actual payments on the hedged item. 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 hedges. The Group uses interest rate swaps and forward rate agreements to manage its exposure to movements in interest rates.

17 Financial instruments continued

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

	Foreign exchange instruments		Commodity instruments		Interest rate instruments		Total	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
At 1 January	(2,312)	(5,551)	1	(56)	227	358	(2,084)	(5,249)
Acquisition of business	-	7	-	2	-	-	-	9
Movements in fair value hedges	-	-	-	-	66	(131)	66	(131)
Movements in cash flow hedges	(14)	-	(9)	-	(1)	-	(24)	-
Movements in other derivative contracts ¹	(2,122)	2,611	(22)	37	-	-	(2,144)	2,648
Contracts settled	684	621	(4)	18	-	-	680	639
At 31 December	(3,764)	(2,312)	(34)	1	292	227	(3,506)	(2,084)

¹ Included in financing.

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	
	2018 £m	Restated* 2017 £m	2018 £m	Restated* 2017 £m
At 1 January as previously reported	(247)	(101)	(57)	(15)
Impact of adopting IFRS 15 ¹	-	-	-	(42)
At 1 January as restated	(247)	(101)	(57)	(57)
Exchange adjustments included in OCI	(3)	(14)	(1)	-
Acquisition of business	-	(161)	-	-
Additions	(3)	-	(25)	(3)
Financing charge ²	(8)	(5)	(1)	(1)
Excluded from underlying profit:				
Changes in forecast payments ²	(2)	2	-	-
Exchange adjustments ²	-	10	-	1
Cash paid	36	22	22	-
Other	-	-	-	3
At 31 December	(227)	(247)	(62)	(57)

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments – see note 27 for more details.

¹ IFRS 15 adoption results in a change in accounting treatment for parts sold with an option to repurchase and also future obligations to airframers arising from sale of our OE on their airframes – see note 27.

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 and cross-currency interest rate swaps (the hedging instruments) which for accounting purposes are designated as fair value hedges. Although the hedging instruments have similar critical terms to the hedged item, some ineffectiveness, predominantly due to cross currency basis, will still remain. The impact of any hedge ineffectiveness on the financial position and performance of the Group is as follows:

	Hedged item ¹				Hedging Instrument ²				Hedge ineffectiveness in the period ³ £m	Weighted average FX rate
	Nominal £m	FV adjustment in the period £m	FV adjustment since inception £m	Carrying amount £m	Nominal £m	Carrying amount asset £m	Carrying amount liability £m	FV movement in the period £m		
Sterling	(875)	25	(34)	(907)	875	34	-	(25)	-	1.00
US Dollar	(987)	(61)	(165)	(1,148)	987	169	-	65	4	1.52
Euro	(1,607)	(33)	(97)	(1,699)	1,607	90	-	26	(7)	1.15

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.

17 Financial instruments *continued*

Risk management policies and hedging activities

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

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

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 US dollar receipts that it hedges against the euro using foreign exchange forward contracts.

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 maximum exposure to credit risk at the balance sheet date is represented by the carrying value of each financial asset, including derivative financial instruments.

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

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

The Group's Spanish subsidiary, 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 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.

17 Financial instruments continued**Derivative financial instruments**

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

	Expected maturity					Fair value	
	Nominal amount £m	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Assets £m	Liabilities £m
At 31 December 2018							
Foreign exchange contracts:							
Cash flow hedges	335	162	120	53	-	4	(11)
Non-hedge accounted	29,080	5,528	5,113	14,808	3,631	59	(3,816)
Interest rate contracts:							
Fair value hedges	3,469	500	329	639	2,001	293	-
Cash flow hedges	19	4	4	11	-	-	(1)
Non-hedge accounted	-	-	-	-	-	3	(3)
Commodity contracts:							
Cash flow hedges	6	2	1	1	2	1	(8)
Non-hedge accounted	250	92	79	77	2	5	(32)
	33,159	6,288	5,646	15,589	5,636	365	(3,871)
At 31 December 2017 restated *							
Foreign exchange contracts:							
Cash flow hedges	214	97	81	36	-	7	-
Non-hedge accounted	29,375	5,793	4,503	12,626	6,453	382	(2,701)
Interest rate contracts:							
Fair value hedges	2,500	-	500	967	1,033	227	-
Cash flow hedges	19	4	4	11	-	-	-
Non-hedge accounted	-	-	-	-	-	5	(5)
Commodity contracts:							
Cash flow hedges	41	8	7	19	7	5	(3)
Non-hedge accounted	241	85	68	81	7	20	(21)
	32,390	5,987	5,163	13,740	7,500	646	(2,730)

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

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 £m	Euro £m	Other £m	Total £m
At 31 December 2018					
Currencies sold forward:					
Sterling	-	-	63	230	293
US dollar	24,376	-	3,280	753	28,409
Euro	84	119	-	274	477
Other	87	39	94	16	236
At 31 December 2017 restated *					
Currencies sold forward:					
Sterling	-	-	127	241	368
US dollar	25,426	-	2,268	802	28,496
Euro	136	177	-	251	564
Other	27	29	89	16	161

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

17 Financial instruments continued

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

	2018 £m	Restated* 2017 £m
Sterling	875	875
US dollar	1,233	1,260
Euro	1,636	666

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

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

	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
At 31 December 2018					
Unlisted non-current investments	2	7	13	-	22
Trade receivables and similar items	376	2,246	687	52	3,361
Other non-derivative financial assets	72	341	47	29	489
Short-term investments	-	-	-	6	6
Cash and cash equivalents	2,008	928	1,792	246	4,974
Assets	2,458	3,522	2,539	333	8,852
Borrowings	(1,441)	(1,435)	(1,753)	(33)	(4,662)
Financial RRSAs	-	(47)	(180)	-	(227)
Other	(24)	(38)	-	-	(62)
C Shares	(29)	-	-	-	(29)
Trade payables and similar items	(2,099)	(2,600)	(860)	(100)	(5,659)
Other non-derivative financial liabilities	(854)	(421)	(379)	(100)	(1,754)
Liabilities	(4,447)	(4,541)	(3,172)	(233)	(12,393)
	(1,989)	(1,019)	(633)	100	(3,541)
At 31 December 2017 restated *					
Unlisted non-current investments	-	5	20	1	26
Trade receivables and similar items	244	2,282	747	102	3,375
Other non-derivative financial assets	106	262	62	47	477
Short-term investments	-	-	-	3	3
Cash and cash equivalents	827	1,055	807	264	2,953
Assets	1,177	3,604	1,636	417	6,834
Borrowings	(1,462)	(1,225)	(767)	(34)	(3,488)
Financial RRSAs	-	(60)	(187)	-	(247)
Other	(18)	(39)	-	-	(57)
C Shares	(28)	-	-	-	(28)
Trade payables and similar items	(1,600)	(1,645)	(710)	(133)	(4,088)
Other non-derivative financial liabilities	(696)	(515)	(828)	(57)	(2,096)
Liabilities	(3,804)	(3,484)	(2,492)	(224)	(10,004)
	(2,627)	120	(856)	193	(3,170)

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

17 Financial instruments continued**Currency exposures**

The Group's actual currency exposures 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 2018					
Sterling ¹	-	3	(237)	6	(228)
US dollar	(2)	-	(5)	5	(2)
Euro	2	(14)	-	12	-
Other	-	10	13	-	23
At 31 December 2017					
Sterling ¹	-	3	(642)	11	(628)
US dollar	(10)	-	(5)	8	(7)
Euro	3	212	-	7	222
Other	-	4	18	(3)	19

¹ The euro exposure primarily relates to deferred consideration on the acquisition of ITP Aero. Movements in this balance in relation to foreign exchange (recognised through the consolidated income statement) are partially matched by the related foreign exchange movement in the subsidiary's net assets, recognised through the consolidated statement of other comprehensive income.

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 2018					
Unlisted non-current asset investments	22	-	-	-	22
Trade receivables and similar items	2,891	265	132	73	3,361
Other non-derivative financial assets	489	-	-	-	489
Derivative financial assets	365	-	-	-	365
Short-term investments	6	-	-	-	6
Cash and cash equivalents	4,974	-	-	-	4,974
	8,747	265	132	73	9,217
At 31 December 2017 restated *					
Unlisted non-current asset investments	26	-	-	-	26
Trade receivables and similar items	3,053	200	72	50	3,375
Other non-derivative financial assets	476	-	1	-	477
Derivative financial assets	646	-	-	-	646
Short-term investments	3	-	-	-	3
Cash and cash equivalents	2,953	-	-	-	2,953
	7,157	200	73	50	7,480

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

17 Financial instruments continued**Contractual maturity analysis of non-derivative financial liabilities**

	Gross values				Carrying value £m
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	
At 31 December 2018					
Borrowings	(983)	(520)	(1,014)	(2,699)	(4,662)
Financial RRSA's	(48)	(62)	(59)	(73)	(227)
Other	(27)	(3)	(25)	(7)	(62)
C Shares	(29)	-	-	-	(29)
Trade payables and similar items	(5,542)	(51)	(40)	(26)	(5,659)
Other non-derivative financial liabilities	(1,273)	(150)	(259)	(72)	(1,754)
	(7,902)	(786)	(1,397)	(2,877)	(12,393)
At 31 December 2017					
Borrowings	(186)	(831)	(1,345)	(1,598)	(3,488)
Financial RRSA's	(40)	(50)	(96)	(80)	(247)
Other	(21)	(3)	(26)	(7)	(57)
C Shares	(28)	-	-	-	(28)
Trade payables and similar items	(4,027)	(44)	(17)	-	(4,088)
Other non-derivative financial liabilities	(1,208)	(436)	(331)	(121)	(2,096)
	(5,510)	(1,364)	(1,815)	(1,806)	(10,004)

Expected maturity analysis of derivative financial instruments

	Gross values				Carrying value £m
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	
At 31 December 2018					
Derivative financial assets:					
Cash inflows	1,001	934	2,187	2,061	
Cash outflows	(979)	(869)	(2,185)	(1,934)	
Other net cash flows	24	7	15	16	
	46	72	17	143	365
Derivative financial liabilities:					
Cash inflows	4,753	4,753	13,481	3,437	
Cash outflows	(5,531)	(5,656)	(16,298)	(4,257)	
Other net cash flows	(14)	(12)	(12)	-	
	(792)	(915)	(2,829)	(820)	(3,871)
At 31 December 2017					
Derivative financial assets:					
Cash inflows	2,018	1,345	5,810	2,912	
Cash outflows	(1,955)	(1,307)	(5,788)	(2,835)	
Other net cash flows	32	30	21	21	
	95	68	43	98	646
Derivative financial liabilities:					
Cash inflows	3,922	3,288	8,005	4,362	
Cash outflows	(4,504)	(3,847)	(9,551)	(5,392)	
Other net cash flows	(11)	(6)	(10)	-	
	(593)	(565)	(1,556)	(1,030)	(2,730)

The Group regularly renegotiates the contractual maturities of its foreign exchange contracts. In general, the effect of such negotiations is the settlement of derivative financial liabilities somewhat earlier than the contractual maturity date.

17 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 and the periods in which they reprice. The value shown is the carrying amount.

At 31 December 2018	Effective interest rate %	Total £m	Period in which interest rate reprices	
			6 months or less £m	6-12 months £m
Short-term investments ¹		6	6	-
Cash and cash equivalents ²		4,974	4,974	-
Unsecured bank and other loans				
Other bank borrowings		(109)	(22)	-
£200m floating rate loan	GBP LIBOR + 1.260	(200)	(200)	-
£43m floating rate loan	GBP LIBOR + 0.402	(43)	(43)	-
£280m floating rate loan	GBP LIBOR + 0.805	(280)	(280)	-
€50m fixed rate loan	2.350%	(14)	-	-
€20m floating rate loan	EUR LIBOR + 1.931	(13)	(13)	-
€30m floating rate loan ³	EUR LIBOR + 2.001	(15)	(15)	-
Other loans ⁴		(5)	(5)	-
Unsecured bond issues				
6.75% Notes 2019 £500m	6.750%	(504)	-	-
Effect of interest rate swaps	GBP LIBOR + 2.982	-	(504)	-
2.375% Notes 2020 US\$500m	2.375%	(383)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.841	-	(383)	-
2.125% Notes 2021 €750m	2.125%	(699)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.701	-	(699)	-
0.875% Notes 2024 €550m	0.8750%	(498)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.7437	-	(498)	-
3.625% Notes 2025 US\$1,000m	3.625%	(765)	-	-
Effect of interest rate swaps	GBP LIBOR + 1.466	-	(765)	-
3.375% Notes 2026 £375m	3.375%	(403)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.893	-	(403)	-
1.625% Notes 2028 €550m	1.625%	(502)	-	-
Effect of interest rate swaps	GBP LIBOR + 1.0934	-	(502)	-
Other secured				
Obligations under finance leases	4.126%	(229)	-	-
		318		

¹ Interest on the short-term investments are at fixed rates.

² Cash and cash equivalents comprises bank balances and demand deposits and earn interest at rates based on daily deposit rates.

³ Interest rate swap in place to hedge floating rate loan.

⁴ Other loans are held by entities classified as joint operations. The loans are disclosed after adjustments have been made on consolidation to eliminate the extent of the Group's interest in the entity - see note 1.

17 Financial instruments continued

At 31 December 2017	Effective interest rate %	Total £m	Period in which interest rate reprices	
			6 months or less £m	6-12 months £m
Short-term investments ¹		3	1	2
Cash and cash equivalents ²		2,953	2,953	-
Unsecured bank and other loans				
Other borrowings		(54)	(20)	-
£200m floating rate loan	GBP LIBOR + 1.260	(200)	(200)	-
£43m floating rate loan	GBP LIBOR + 0.402	(43)	(43)	-
£280m floating rate loan	GBP LIBOR + 0.805	(280)	(280)	-
€50m fixed rate loan	2.350%	(20)	-	-
€20m floating rate loan	EUR LIBOR + 1.931	(15)	(15)	-
€30m floating rate loan ³	EUR LIBOR + 2.001	(19)	(19)	-
Unsecured bond issues				
6.75% Notes 2019 £500m	6.750%	(519)	-	-
Effect of interest rate swaps	GBP LIBOR + 2.982	-	(519)	-
2.375% Notes 2020 US\$500m	2.375%	(362)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.841	-	(362)	-
2.125% Notes 2021 €750m	2.125%	(701)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.701	-	(701)	-
3.625% Notes 2025 US\$1,000m	3.625%	(726)	-	-
Effect of interest rate swaps	GBP LIBOR + 1.466	-	(726)	-
3.375% Notes 2026 £375m	3.375%	(412)	-	-
Effect of interest rate swaps	GBP LIBOR + 0.893	-	(412)	-
Other secured				
Obligations under finance leases	4.144%	(137)		
		(532)		

¹ Interest on the short-term investments are at fixed rates.

² Cash and cash equivalents comprises bank balances and demand deposits and earn interest at rates based on daily deposit rates.

³ Interest rate swap in place to hedge floating rate loan.

Some 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 2018, none of these were in breach. 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.

In addition, the Group has **£2,500m** (2017: £2,106m) of undrawn committed borrowing facilities which is available for at least the next four years.

Sensitivity analysis

Sensitivities at 31 December (all other variables held constant) – impact on profit after tax and equity	2018 £m	Restated* 2017 £m
Sterling 10% weaker against the US dollar	(2,421)	(2,348)
Sterling 10% stronger against the US dollar	2,014	1,968
Euro 10% weaker against the US dollar	(268)	(148)
Euro 10% stronger against the US dollar	219	118
Sterling 10% weaker against the Euro	(32)	(77)
Sterling 10% stronger against the Euro	26	62
Commodity prices 10% lower	(21)	(22)
Commodity prices 10% higher	21	22

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP Aero acquisition and other adjustments. See note 27 for more details.

At 31 December 2018 the Group had no material sensitivity to changes in interest rates on that date. The main interest rate sensitivity for the Group arises as a result of the gross up of net cash and this is mitigated as described under the interest rate risk management policies on page 147.

17 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:

	2018		2017	
	Millions	Nominal value £m	Millions	Nominal value £m
At 1 January	28,429	28	28,125	28
Issued	216,717	217	215,235	215
Redeemed	(216,075)	(216)	(214,931)	(215)
At 31 December	29,071	29	28,429	28

Payments to shareholders in respect of the year represent the value of C Shares to be issued in respect of the results for the year. Issues of C Shares were declared as follows:

	2018		2017	
	Pence per share	£m	Pence per share	£m
Interim	4.60	86	4.60	85
Final	7.10	135	7.10	131
	11.70	221	11.70	216

18 Provisions for liabilities and charges

	Restated* At 1 January 2018 £m	Charged to income statement £m	Utilised £m	Transferred to liabilities held for sale £m	Exchange differences £m	At 31 December 2018 £m
Warranties and guarantees	450	75	(132)	(25)	5	373
Contract loss	127	125	(46)	(1)	1	206
Restructuring	36	263	(96)	(1)	2	204
Customer financing	25	2	(10)	-	-	17
Insurance	63	41	(17)	-	-	87
Tax related interest and penalties	64	(2)	(1)	-	1	62
Employer liability claims	52	(1)	(3)	-	-	48
Trent 1000 exceptional costs ¹	-	1,069	(290)	-	-	779
Other	126	40	(21)	(5)	1	141
	943	1,612	(616)	(32)	10	1,917
Current liabilities	550					1,122
Non-current liabilities	393					795

* The 2017 figures have been restated for IFRS 15, an update to the provisional fair values of the ITP acquisitions and other adjustments. See note 27 for more details.

¹ The exceptional charge to the income statement for Trent 1000 exceptional costs of £790m shown in note 2 is calculated taking into account foreign exchange derivative contracts in place. The above charge is calculated at prevailing exchange rates.

Provisions for warranties and guarantees primarily relate to products sold and generally cover a period of up to three years.

Provisions for contract losses are recorded when the direct costs to fulfil a contract are assessed as being greater than the expected revenue.

Restructuring provisions are made for Group approved, formal restructuring programmes where the restructuring has either commenced or has been publicly announced. Included is the Group-wide restructuring programme announced on 14 June 2018, which is an on-going multi-year restructuring programme across the business and reflects the severance costs as well as the consultancy costs that will help deliver the planned reductions. The majority of the provision is expected to be utilised over the next two years.

Customer financing provisions cover guarantees provided for asset value and/or financing.

18 Provisions for liabilities and charges *continued*

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.

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

The Trent 1000 exceptional costs provision relates to the full anticipated costs of the Trent 1000 in-service issues over 2017 to 2022 that are considered abnormal in nature, which fall outside the scope of normal TotalCare costs. These costs are mostly in respect of non-contractual customer compensation claims.

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

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 **US\$2.3bn** (2017: US\$3.3bn) (on a discounted basis) to provide facilities to enable customers to purchase aircraft (of which approximately US\$630m could be called during 2019). 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. Consequently the Directors do not consider that there is a significant exposure arising from the provision of these facilities.

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 reflect better the time span over which these exposures could arise. These amounts do not represent values that are expected to crystallise. The commitments are denominated in US dollars. As the Group does not generally adopt cash flow hedge accounting for future foreign exchange transactions, this amount is reported, together with the sterling equivalent at the reporting date spot rate. The values of aircraft providing security are based on advice from a specialist aircraft appraiser.

	2018		2017	
	£m	\$m	£m	\$m
Gross commitments	93	119	145	196
Value of security ¹	(24)	(30)	(41)	(55)
Indemnities	(19)	(24)	(51)	(69)
Net commitments	50	65	53	72
Net commitments with security reduced by 20% ²	60	77	64	86
¹ Security includes unrestricted cash collateral of	4	6	22	29

² Although sensitivity calculations are complex, the reduction of relevant security by 20% illustrates the sensitivity to changes in this assumption.

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.

19 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.
- 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 most recent funding valuations, where relevant, updated by the scheme actuaries to 31 December 2018.

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 (LOI) portfolios, which hold investments designed to offset interest rate and inflation rate risks. In addition, in the UK, the scheme has invested in a longevity swap, which is designed to offset longevity risks in respect of approximately two-thirds of current pensioners.

Amounts recognised in the income statement

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Defined benefit schemes:						
Current service cost and administrative expenses	183	58	241	190	58	248
Past-service cost in respect of equalisation ¹	121	–	121	–	–	–
Other past-service credit ²	(9)	(1)	(10)	(8)	–	(8)
	295	57	352	182	58	240
Defined contribution schemes	41	100	141	33	100	133
Operating cost	336	157	493	215	158	373
Net financing (credit)/charge in respect of defined benefit schemes	(55)	32	(23)	(38)	37	(1)
Total income statement charge	281	189	470	177	195	372

¹ In the UK, past-service costs of £121m have been recognised relating to the estimated cost of equalising benefits earned after May 1990 between men and women. The Rolls-Royce UK Pension Fund has to provide Guaranteed Minimum Pensions (GMPs) which, as a result of statutory rules, have been calculated differently for men and women. Although equal treatment in pension provision for males and females has been required since 1990, there has been uncertainty on whether and how pension schemes are required to equalise GMPs. A High Court judgement on the Lloyds Banking Group hearing was published on 26 October 2018. The judgement confirmed that GMPs earned from 1990 must be equalised and highlighted an acceptable range of methods. The estimated cost of this equalisation is £97m. In addition, a cost of £24m has been recognised in relation to obligations to equalise certain other post-1990 benefits between men and women. The total cost of £121m represents the Directors' best estimate of the cost, based on actuarial advice. However, the final cost will differ from this amount when the actual method of equalisation is agreed with the Trustee and subsequently implemented.

² In addition, a past-service credit of £9m has arisen related to the restructuring activities. This credit has been offset against the restructuring costs. All amounts have been excluded from the underlying results.

The operating cost is charged as follows:

	Defined benefit		Defined contribution		Total	
	2018 £m	2017 £m	2018 £m	2017 £m	2018 £m	2017 £m
Cost of sales	176	169	104	92	280	261
Commercial and administrative costs	148	38	21	23	169	61
Research and development	28	33	16	18	44	51
	352	240	141	133	493	373

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 **£31m** (2017: £30m) in the year.

19 Post-retirement benefits continued

Net financing comprises:

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Financing on scheme obligations	286	59	345	317	65	382
Financing on scheme assets	(341)	(27)	(368)	(355)	(28)	(383)
Net financing (income)/charge in respect of defined benefit schemes	(55)	32	(23)	(38)	37	(1)
Financing income on scheme surpluses	(55)	(1)	(56)	(38)	(1)	(39)
Financing cost on scheme deficits	–	33	33	–	38	38

Amounts recognised in OCI in respect of defined benefit schemes

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Actuarial gains and losses arising from:						
– demographic assumptions	(130)	(4)	(134)	208	15	223
– financial assumptions	782	134	916	96	(88)	8
– experience adjustments	(6)	9	3	173	9	182
Return on scheme assets excluding financing income	(705)	(53)	(758)	265	57	322
	(59)	86	27	742	(7)	735

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

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Present value of funded obligations	(10,847)	(758)	(11,605)	(11,499)	(774)	(12,273)
Fair value of scheme assets	12,773	735	13,508	13,607	750	14,357
Net asset/(liability) on funded schemes	1,926	(23)	1,903	2,108	(24)	2,084
Present value of unfunded obligations	–	(1,289)	(1,289)	–	(1,346)	(1,346)
Net asset ¹ /(liability) recognised in the balance sheet	1,926	(1,312)	614	2,108	(1,370)	738
Post-retirement scheme surpluses	1,926	18	1,944	2,108	17	2,125
Post-retirement scheme deficits	–	(1,303)	(1,303)	–	(1,387)	(1,387)
Included in liabilities associated with assets held for sale	–	(27)	(27)			

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

Overseas schemes are located in the following countries:

	2018			2017		
	Assets £m	Obligations £m	Net £m	Assets £m	Obligations £m	Net £m
Canada	186	(227)	(41)	197	(243)	(46)
Germany	–	(749)	(749)	–	(789)	(789)
US pension schemes	549	(596)	(47)	553	(602)	(49)
US healthcare schemes	–	(446)	(446)	–	(460)	(460)
Other	–	(29)	(29)	–	(26)	(26)
Net asset/(liability) recognised in the balance sheet	735	(2,047)	(1,312)	750	(2,120)	(1,370)

19 Post-retirement benefits *continued*

Defined benefit schemes

Assumptions

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

	2018	2017
Discount rate	2.95%	2.55%
Inflation assumption (RPI) ¹	3.40%	3.40%
Rate of increase in salaries	3.65%	3.65%
Life expectancy from age 65: current male pensioner	22.1 years	22.2 years
future male pensioner currently aged 45	23.4 years	23.5 years
current female pensioner	23.4 years	23.5 years
future female pensioner currently aged 45	25.2 years	25.3 years

¹ This is the assumption for the Retail Price Index. The Consumer Price Index is assumed to be 1.1% lower.

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 indexed 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 S2 'All' actuarial tables, with future improvements in line with the CMI 2017 core projections and long-term improvements of 1.25%. Where appropriate, these are adjusted to take account of the scheme's actual experience.

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.

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

	2018	2017
Discount rate	3.40%	2.90%
Inflation assumption	2.90%	2.10%
Long-term healthcare cost trend rate	4.80%	4.80%
Male life expectancy from age 65: current pensioner	21.1 years	20.2 years
future pensioner currently aged 45	23.1 years	22.1 years

Changes in present value of defined benefit obligations

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	(11,499)	(2,120)	(13,619)	(12,014)	(2,112)	(14,126)
Exchange differences	-	(56)	(56)	-	81	81
Current service cost	(179)	(56)	(235)	(183)	(56)	(239)
Past service cost	(112)	-	(112)	8	-	8
Finance cost	(286)	(59)	(345)	(317)	(65)	(382)
Contributions by employees	(2)	(3)	(5)	(3)	(7)	(10)
Benefits paid out	585	78	663	533	87	620
Disposal of businesses	-	31	31	-	-	-
Actuarial gains/(losses)	646	140	786	477	(64)	413
Transfers	-	(2)	(2)	-	(3)	(3)
Settlement curtailment	-	-	-	-	19	19
At 31 December	(10,847)	(2,047)	(12,894)	(11,499)	(2,120)	(13,619)
Funded schemes	(10,847)	(758)	(11,605)	(11,499)	(774)	(12,273)
Unfunded schemes	-	(1,289)	(1,289)	-	(1,346)	(1,346)

The defined benefit obligations are in respect of:

Active plan participants	(4,229)	(1,088)	(5,317)	(4,625)	(1,124)	(5,749)
Deferred plan participants	(1,975)	(157)	(2,132)	(2,243)	(164)	(2,407)
Pensioners	(4,643)	(802)	(5,445)	(4,631)	(832)	(5,463)
Weighted average duration of obligations	19	15	18	20	16	19

19 Post-retirement benefits continued

Changes in fair value of scheme assets

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	13,607	750	14,357	13,350	747	14,097
Exchange differences	–	24	24	–	(56)	(56)
Administrative expenses	(4)	(2)	(6)	(7)	(2)	(9)
Financing	341	27	368	355	28	383
Return on plan assets excluding financing	(705)	(53)	(758)	265	57	322
Contributions by employer	117	64	181	174	75	249
Contributions by employees	2	3	5	3	7	10
Benefits paid out	(585)	(78)	(663)	(533)	(87)	(620)
Settlements/curtailment	–	–	–	–	(19)	(19)
At 31 December	12,773	735	13,508	13,607	750	14,357
Total return on scheme assets	(364)	(26)	(390)	620	85	705

Fair value of scheme assets at 31 December

	2018			2017		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Sovereign debt	9,388	315	9,703	9,135	308	9,443
Derivatives on sovereign debt	–	–	–	–	2	2
Corporate debt instruments	3,447	356	3,803	3,223	337	3,560
Interest rate swaps	1,342	–	1,342	2,266	–	2,266
Inflation swaps	(375)	–	(375)	(480)	–	(480)
Cash and similar instruments ¹	(1,991)	22	(1,969)	(1,761)	20	(1,741)
LDI portfolios ²	11,811	693	12,504	12,383	667	13,050
Longevity swap ³	(292)	–	(292)	(187)	–	(187)
Listed equities	592	39	631	1,141	76	1,217
Unlisted equities	128	–	128	162	–	162
Synthetic equities ⁴	(13)	(4)	(17)	–	2	2
Sovereign debt	–	5	5	–	4	4
Corporate debt instruments	548	–	548	100	–	100
Cash	–	2	2	8	2	10
Other	(1)	–	(1)	–	(1)	(1)
At 31 December	12,773	735	13,508	13,607	750	14,357

¹ Cash and similar instruments include repurchase agreements on UK Government bonds amounting to £(1,991)m (2017: £(2,285)m). The latest maturity date for these short-term borrowings is 12 October 2020.

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 Under the longevity swap, the Rolls-Royce UK Pension Fund has agreed an average life expectancy of pensioners with a counterparty. If pensioners live longer than expected, the counterparty will make payments to the fund to offset the additional cost of paying pensioners. If the reverse applies, the cost of paying pensioners will be reduced but the scheme will be required to make payments to the counterparty. The longevity swap is valued at fair value in accordance with IFRS 13 Level 3 – see note 17.

⁴ A portfolio of swap contracts designed to provide investment returns in line with global equity markets. The notional value of the portfolio was \$281m (2017: \$84m).

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 2018, there was an indirect holding of £0.3m in the Group's financial instruments.

The longevity swap is valued by the scheme actuaries based on the difference between the agreed longevity assumptions at inception and actual longevity experience. All other fair values are provided by the fund managers. Where available, the fair values are quoted prices (e.g. listed equity, sovereign debt and corporate bonds). Unlisted investments (private equity) are included at values provided by the fund manager in accordance with relevant guidance. Other significant assets are valued based on observable inputs such as yield curves.

19 Post-retirement benefits continued

Future contributions

The Group expects to contribute approximately £220m to its defined benefit schemes in 2019 (UK: £140m, Overseas: £80m).

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 0.5% 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 required contribution for current service cost 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. Employer contributions (inclusive of employee contributions paid by a salary sacrifice arrangement) will subsequently be paid at a rate of 27% in 2019 and 28.5% in 2020 (2018: 27%). The SoC includes an arrangement for a potential increase in contributions during 2021 to 2023 (capped at £48.3m a year) if the Technical Provisions funding position is below 107% at 31 March 2020. As at 31 December 2018 the Technical Provisions funding position was estimated to be 111%.

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 2018, 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 longevity risk of approximately two thirds of UK pensioner liabilities is also hedged. Where appropriate, the table also includes the corresponding movement in the value of the plan assets.

The sensitivity analyses 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.

		2018 £m	2017 £m
Reduction in the discount rate of 0.25% ¹	Obligation	(510)	(590)
	Plan assets (LDI portfolio)	624	675
Increase in inflation of 0.25% ¹	Obligation	(275)	(310)
	Plan assets (LDI portfolio)	272	291
Increase in real increase in salaries of 0.25%	Obligations	(90)	(105)
One year increase in life expectancy	Obligations	(465)	(545)

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.

20 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 2017	1	-	1,838	367
Shares issued to employee share trust	-	-	2	1
At 31 December 2017	1	-	1,840	368
Shares issued to employee share trust	-	-	8	2
Shares issued in relation to the acquisition of ITP Aero	-	-	48	9
At 31 December 2018	1	-	1,896	379

The rights attaching to each class of share are set out on page 200.

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 17.

21 Share-based payments

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

	2018 £m	2017 £m
Total expense recognised for equity-settled share-based payments transactions	32	31
Total expense recognised for cash-settled share-based payments transactions	3	3
Share-based payments recognised in the consolidated income statement	35	34
Liability for cash-settled share-based payment transactions	6	3

A description of the share-based payment plans is included in the Directors' Remuneration Report on pages 86 to 95.

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

	ShareSave		PSP and LTIP	APRA
	Number Millions	Weighted average exercise price Pence	Number Millions	Number Millions
Outstanding at 1 January 2017	21.4	672	11.6	-
Granted	14.0	758	5.8	0.2
Forfeited	(3.3)	886	(3.4)	-
Exercised	(4.6)	527	(1.0)	-
Outstanding at 1 January 2018	27.5	714	13.0	0.2
Granted	-	-	5.7	0.2
Forfeited	(1.3)	738	(4.4)	-
Exercised	(0.1)	656	(0.4)	-
Outstanding at 31 December 2018	26.1	713	13.9	0.4
Exercisable at 31 December 2018	-	-	-	-
Exercisable at 31 December 2017	-	-	-	-

The weighted average share price at the date share options were exercised was 883p (2017: 756p). The closing price at 31 December 2018 was 830p (2017: 847p).

The weighted average remaining contractual life for the share options as at 31 December 2018 was two years (2017: three years).

Fair values of share-based payment plans

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

	2018	2017
LTIP	815p	739p
PSP - (CFO) ¹	n/a	882p
LTIP (ELT & Board)	739p	714p
ShareSave - 3 year grant	n/a	244p
ShareSave - 5 year grant	n/a	260p
APRA	858p	773p

¹ Stephen Daintith (CFO) received one-off awards in 2017 to compensate him for unvested incentives awarded to him at Daily Mail & General Trust plc (DMGT) which were forfeited as a result of him joining Rolls-Royce - see Remuneration Committee Report on page 89.

PSP and 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).

22 Leases

Operating leases

Leases as lessee

	2018 £m	2017 £m
Non-cancellable operating lease rentals are payable as follows:		
Within one year	303	281
Between one and five years	991	849
After five years	1,049	741
	2,343	1,871

- Operating lease rental obligations at 31 December 2018 relate to: aero engines **£1,422m** (2017: £1,143m) that are used to support customer's aircraft fleets; land and buildings **£834m** (2017: £630m) used for production, administration or training purposes; and equipment **£87m** (2017: £98m).
- Operating leases for aero engines typically contain no specific contractual right to renew. Certain land and building operating leases have renewal options with renewal dates for the most significant property leases, evenly spread between 2022 and 2028, and in 2041. Lease obligations beyond the renewal dates are included in the rentals payable data above where we are reasonably certain to extend the lease.
- Of the operating lease rentals payable, £61m relates to Commercial Marine, classified as held for sale, of which £60m relates to property.
- Both aircraft engines and property contain some contracts where payments are linked to an index such as LIBOR.
- During the year **£300m** was recognised as an expense in the income statement in respect of operating leases (2017: £277m).

Leases as lessor

	2018 £m	2017 £m
Rentals received – credited within revenue from aftermarket services	64	53
Non-cancellable operating lease rentals are receivable as follows:		
Within one year	23	14
Between one and five years	82	46
After five years	55	32
	160	92

The Group acts as lessee and lessor for both land and buildings and gas turbine engines, and acts as lessee for some plant and equipment.

- Sublease payments of **£1m** (2017: nil) and sublease receipts of **£40m** (2017: £36m) were recognised in the income statement in the year.
- The total future minimum sublease payments expected to be made is **£1m** (2017: £1m) and sublease receipts expected to be received are **£55m** (2017: £51m).

Finance leases

	2018			2017		
	Payments £m	Interest £m	Principal £m	Payments £m	Interest £m	Principal £m
Finance lease liabilities are payable as follows:						
Within one year	45	11	34	28	5	23
Between one and five years	137	33	104	94	18	76
After five years	96	5	91	42	4	38
	278	49	229	164	27	137

23 Contingent liabilities

Contingent liabilities in respect of customer financing commitments are described in note 18.

In January 2017, after full co-operation, the Company concluded deferred prosecution agreements with the SFO and the US Department of Justice and a leniency agreement with the MPF, the Brazilian federal prosecutors. Prosecutions of individuals may follow and other investigations or enforcement action may be taken by other authorities. In addition, we 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, but cannot anticipate all the possible actions that may be taken or their potential consequences.

Contingent liabilities exist in respect of guarantees provided by the Group in the ordinary course of business for product delivery, 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** (2017: nil).

24 Related party transactions

	2018 £m	2017 £m
Sales of goods and services to joint ventures and associates	3,237	2,469
Purchases of goods and services from joint ventures and associates	(2,957)	(2,224)
Operating lease payments to joint ventures and associates	(189)	(127)
Guarantees of joint ventures' and associates' borrowings	-	5
Dividends received from joint ventures and associates	105	79
Other income received from joint ventures and associates	2	2

Included in sales of goods and services to joint ventures and associates are sales of spare engines amounting to **£563m** (2017: £418m). Profit recognised in the year on such sales amounted to **£157m** (2017: £75m), 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 **£132m** (2017: £67m).

The aggregated balances with joint ventures are shown in notes 13 and 16. Transactions with Group pension schemes are shown in note 19.

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 59 to 61) and the members of the Executive Team (described on page 62). Remuneration for key management personnel is shown below:

	2018 £m	2017 £m
Salaries and short-term benefits	19	16
Post-retirement schemes	-	-
Share-based payments	5	7
	24	23

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 86 to 95. The charge for share-based payments above is based on when the award is charged to the income statement in accordance with IFRS 2 *Share-Based Payments*, rather than when the shares vest, which is the basis used in the Directors' Remuneration Report.

25 Acquisitions and disposals

Acquisitions

ITP Aero

On 19 December 2017, the Group completed the acquisition of the 53.1% of the shares of Industria de Turbo Propulsores SA (ITP Aero) owned by SENER Grupo de Ingenieria SA (SENER) which it did not already own.

The consideration of €718m is payable in eight instalments, commencing on 15 January 2018. At the Group's election, each instalment may be settled in either cash or Rolls-Royce Holdings plc shares. If the consideration is in shares, a 3% premium is applied. Interest is accrued on the outstanding balance based on EUR LIBOR + 1.5%.

In 2017, and as permitted by IFRS 3 *Business Combinations*, the fair value of acquired identifiable assets and liabilities was presented on a provisional basis. This has been finalised during 2018 and is set out below.

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 intangible assets at the date of acquisition. The total fair value of acquired identifiable assets and liabilities is £1,637m and a significant part of value was allocated to intangible assets. The valuation indicated a bargain purchase of £303m, which has been recognised in the income statement. Changes to the provisional balances presented at

31 December 2017 reflects additional information obtained during 2018 about facts which existed at the date of acquisition, since the acquisition occurred close to the year end. The adjustments mainly relate to customer relationships and the restatement of balances for IFRS 15.

Recognised amounts of identifiable assets acquired and liabilities assumed

	Provisional £m	Purchase price adjustments £m	Final £m
Intangible assets	1,417	(288)	1,129
Property, plant and equipment	268	(14)	254
Deferred tax assets	148	(148)	–
Inventory	316	(84)	232
Trade receivables and other assets	497	(73)	424
Current tax	2	–	2
Cash and cash equivalents	263	–	263
Trade payables and other liabilities	(625)	309	(316)
Borrowings	(34)	–	(34)
Other financial assets and liabilities	(148)	(4)	(152)
Deferred tax liability	(386)	268	(118)
Provisions	(68)	21	(47)
Total identifiable assets and liabilities	1,650	(13)	1,637
Total consideration	(1,405)	71	(1,334)
Bargain purchase gain arising	245	58	303
Gain from revaluation of existing shares	553	(71)	482
Gain arising on the acquisition of ITP Aero recognised in the income statement	798	(13)	785
Consideration satisfied by:			
Deferred consideration to be paid in cash or shares	648	–	648
Existing shareholding	757	(71)	686
	1,405	(71)	1,334
Identifiable intangible assets comprise:			
Technology, patents and licences	245	(111)	134
Customer relationships	833	62	895
Trademark	44	17	61
In-process development	91	(63)	28
Other	204	(193)	11
	1,417	(288)	1,129

25 Acquisitions and disposals continued**Disposals****L'Orange**

On 1 June 2018, the Group sold its L'Orange business, a subsidiary of Power Systems, to Woodward Inc. for €673m.

2018
£m

Proceeds	
Cash consideration ¹	589
Cash and cash equivalents disposed	(3)
Net cash consideration	586
Disposal costs paid	(13)
Cash inflow per cash flow statement	573
Assets and liabilities disposed	
Intangible assets	169
Property, plant and equipment	61
Investments	3
Deferred tax assets	6
Inventory	40
Deposits (payments received on account)	(1)
Trade receivables and other assets	27
Trade payables and other liabilities	(21)
Current tax	(1)
Provisions for liabilities and charges	(6)
Deferred tax liabilities	(12)
Post-retirement scheme deficits	(31)
Net assets disposed	234
Profit on disposal before disposal costs and continuing obligations	352
Cumulative currency translation gain	19
Profit on disposal of the business	371
Disposal costs	(13)
Non-underlying profit before tax	358

¹ 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 was reassessed at 31 December 2018, no significant adjustments were identified.

25 Acquisitions and disposals continued

Commercial Marine – held for sale

On 6 July 2018, the Group announced the sale of Commercial Marine to KONGSBERG for a cash consideration of approximately £425m. The disposal is expected to complete in 2019.

The transaction meets the criteria of IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* that where the carrying value of a disposal group is expected to be recovered through a sale transaction, the disposal group should be treated as held for sale, with assets and liabilities presented separately on the balance sheet measured at the lower of carrying value or fair value less costs to dispose.

As a result of the decision to classify the Commercial Marine business as held for sale, its carrying value has been assessed against the anticipated proceeds and the disposal costs. An impairment charge of £155m for the related goodwill (with an additional £5m impairment charge to property, plant and equipment) has been recognised in the income statement and the remaining balance of £227m transferred to assets held for sale.

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

	2018 £m
Assets and liabilities held for sale	
Intangible assets	246
Property, plant and equipment ¹	140
Deferred tax assets	4
Inventory ¹	191
Trade receivables and other assets	166
Current tax assets	3
Assets held for sale	750
Trade payables and other liabilities	(313)
Current tax liabilities	(3)
Provisions for liabilities and charges	(33)
Post-retirement scheme deficits	(27)
Liabilities associated with assets held for sale	(376)
Net assets held for sale	374

¹ £7m of assets related to the steering gear business were held for sale at the end of 2017. £3m of property, plant and equipment and £4m of inventory held for sale in 2017 are due to be sold in 2019 as part of the proposed sale to KONGSBERG.

26 Derivation of summary funds flow statement

The table below shows the derivation of the summary funds flow statement (lines marked *) on page 20 from the cash flow statement (CFS) on page 110.

	2018		2017		Source
	£m	£m	£m	£m	
* Underlying profit before tax (PBT) – overleaf		466		199	
Depreciation and impairment of PPE	521		450		CFS
Amortisation and impairment of intangible assets	565		343		CFS
Impairment of goodwill	(155)		(12)		Reversal of underlying adjustment
Acquisition accounting	(175)		(129)		Reversal of underlying adjustment
* Depreciation and amortisation		756		652	
Increase in inventories	(616)		(194)		CFS
Movement in receivables/payables	1,129		226		CFS
Movement in contract assets and liabilities	363		(50)		CFS
Realised derivatives in financing	(465)		(195)		Underlying adjustment (note 2)
Revaluation of trading assets (excluding exceptional items)	170		(6)		Reversal of underlying adjustment
* Movement on net working capital		581		(219)	
* Civil Aerospace LTSA contract balances		944		1,379	
Additions of intangible assets	(680)		(647)		CFS
Purchases of PPE	(905)		(730)		CFS
* Expenditure on PPE and intangible assets		(1,585)		(1,377)	
Realised losses on hedging instruments	219		453		Reversal of underlying adjustment
Foreign exchange on contract accounting	(265)		(153)		Reversal of underlying adjustment
Net unrealised fair value changes to derivatives	(1)		24		Reversal of underlying adjustment
Exceptional restructuring charges (excluding cash spent of £70m)	(256)		(104)		Reversal of underlying adjustment
Underlying financing	150		107		Reversal of charge in underlying PBT
New finance leases in year	(97)		(57)		CFS
Impact of joint venture trading	101		70		JV dividends less share of results – CFS
Increase/(decrease) in provisions	1,003		(1)		CFS
Trent 900 exceptional items in payables	134		-		
Trent 1000 exceptional charges at expected rates	(790)		-		Reversal of underlying adjustment
Trent 900 exceptional items at expected rates	(186)		-		Reversal of underlying adjustment
Trent 1000 and Trent 900 adjustments to spot rates	(147)		-		Reversal of underlying adjustment
Cash flows on other financial assets and liabilities	(267)		(469)		CFS
Share based payments	35		34		CFS
Disposal of intangible assets and PPE	67		21		CFS
Investments in joint ventures and associates	(13)		(47)		CFS
Net interest received and paid	(70)		(53)		CFS
Transactions in ordinary shares	-		(3)		CFS
Other movements	(22)		(8)		
* Other		(405)		(186)	
* Trading cash flow		757		448	
Net defined benefit plans – underlying operating charge	240		240		CFS
Cash funding of defined benefit plans	(181)		(249)		CFS
* Contributions to defined benefit schemes in excess of underlying PBT charge		59		(9)	
* Tax		(248)		(180)	CFS
* Free cash flow		568		259	
* Shareholder payments		(219)		(214)	C Shares and NCI dividends – CFS
* Acquisition of ITP Aero		-		229	CFS
* Disposal of L'Orange		573		-	CFS
* Exceptional restructuring costs		(70)		-	
* DPA payments		-		(286)	CFS
* Other		10		(9)	
* Foreign exchange		54		(59)	CFS
* Change in net debt		916		(80)	

26 Derivation of summary funds flow statement continued

Free cash flow is a measure of financial performance of the business's cash flow to see what is available for distribution among those stakeholders funding the business (including debt holders and shareholders). Free cash flow is calculated as trading cash flow less recurring tax and post-employment benefit expenses. It excludes payments made to shareholders, amounts spent (or received) on business acquisitions and foreign exchange changes on net funds. The Board considers that free cash flow reflects cash generated from the Group's underlying trading.

	2018		2017		Source
	£m	£m	£m	£m	
Reported operating profit		(1,161)		366	
Realised losses on hedging instruments	(219)		(453)		Reported to underlying adjustment (note 2)
Net unrealised fair value changes to derivatives	1		(24)		Reported to underlying adjustment (note 2)
Foreign exchange on contract accounting	265		153		Reported to underlying adjustment (note 2)
Revaluation of trading assets and liabilities	(23)		6		Reported to underlying adjustment (note 2)
Trent 900 and Trent 1000 exceptional charges	976		-		
Effect of acquisition accounting	175		129		Reported to underlying adjustment (note 2)
UK pension equalisation	121		-		Reported to underlying adjustment (note 2)
Impairment of goodwill	155		24		Reported to underlying adjustment (note 2)
Exceptional restructuring charge	317		104		Reported to underlying adjustment (note 2)
Other	9		1		Reported to underlying adjustment (note 2)
Adjustments to reported operating profit		1,777		(60)	
Underlying profit before financing		616		306	
Underlying financing		(150)		(107)	Underlying income statement (note 2)
Underlying profit before tax		466		199	

The table below shows a reconciliation of free cash flow to the change in cash and cash equivalents presented in the cash flow statement on page 110.

	2018		2017	
	£m	£m	£m	£m
Change in cash and cash equivalents		1,953		231
Returns to shareholders		219		214
Net cash flow from changes in borrowings and finance leases		(1,091)		(200)
Increase in short-term investments		3		-
Acquisition of ITP Aero	-		(263)	
Disposal of L'Orange	(573)		-	
Other acquisitions and disposals	(10)		(1)	
Changes in group structure		(583)		(264)
Payments of financial penalties from agreements with investigating bodies		-		286
Exceptional restructuring expenditure		70		-
Other		(3)		(8)
Free cash flow		568		259
Exclude cash outflow of ITP Aero				14
Free cash flow excluding ITP Aero				273

27 Impact of new accounting standards and other adjustments

IFRS 15 Revenue from Contracts with Customers and IFRS 9 Financial Instruments

The restatements of the primary statements arising from adopting IFRS 15, IFRS 9 and other adjustments are summarised below.

Consolidated income statement

For the year ended 31 December 2017

	Previous accounting £m	IFRS 15 impact £m	ITP Aero adjustments ⁶ £m	Other adjustments ¹ £m	IFRS 15 basis 31 December 2017 £m
Revenue	16,307	(1,547)	-	(13)	14,747
Cost of sales	(13,134)	687	-	122	(12,325)
Gross profit²	3,173	(860)	-	109	2,422
Commercial and administrative costs	(1,222)	-	-	-	(1,222)
Research and development costs ³	(795)	(48)	-	-	(843)
Share of results of joint ventures and associates	131	-	-	(122)	9
Operating profit	1,287	(908)	-	(13)	366
Gain arising on the acquisition of ITP Aero	798	-	(13)	-	785
Profit before financing and taxation	2,085	(908)	(13)	(13)	1,151
Financing income	2,973	(58)	-	(4)	2,911
Financing costs	(161)	(8)	-	5	(164)
Net financing⁴	2,812	(66)	-	1	2,747
Profit before taxation	4,897	(974)	(13)	(12)	3,898
Taxation ⁵	(689)	172	-	2	(515)
Profit for the year	4,208	(802)	(13)	(10)	3,383
Attributable to:					
Ordinary shareholders	4,207	(802)	(13)	(10)	3,382
Non-controlling interests	1	-	-	-	1
Profit for the year	4,208	(802)	(13)	(10)	3,383
Earnings per ordinary share attributable to shareholders					
Basic	229.40p	(43.73p)	(0.71p)	(0.55p)	184.41p
Diluted	228.64p	(43.59p)	(0.71p)	(0.54p)	183.80p

¹ The other adjustments impacting profit before taxation for the year arise from the revised calculation of the foreign exchange rate applied to non-monetary assets and liabilities of £(4)m and the revised unwind of discounting of non-current liabilities of £(8)m. As per note 11 deferred profit on sales to joint ventures was previously recognised in cost of sales but is now recognised within the share of results of joint ventures and associates.

² The IFRS 15 impact is predominantly due to de-recognition of contractual aftermarket rights, de-linkage of OE from aftermarket contracts and a change to recognise revenue on long-term service agreements as costs are incurred rather than when the engines are operated.

³ Reclassification of the recognition of contributions received from the Group's suppliers under RRSAs to cost of sales.

⁴ Revised phasing of foreign exchange in line with revised phasing of long-term service agreement revenues and unwind of discounting of future guarantee payments due to customers.

⁵ Consequential change from the restated reported profit before taxation.

⁶ Changes to the provisional balances presented at 31 December 2017 reflect additional information obtained during 2018 about facts which existed at the date of acquisition, since the acquisition occurred close to the year end, together with the impact of IFRS 15 transition in ITP Aero.

27 Impact of new accounting standards and other adjustments *continued*

Consolidated statement of comprehensive income

For the year ended 31 December 2017

	Previous accounting £m	IFRS 15 impact £m	ITP Aero adjustments £m	Other adjustments £m	IFRS 15 basis 31 December 2017 £m
Profit for the year	4,208	(802)	(13)	(10)	3,383
Other comprehensive income (OCI)					
Actuarial movements on post-retirement schemes	735	-	-	-	735
Share of OCI of joint ventures and associates	(1)	-	-	-	(1)
Related tax movements	(307)	-	-	-	(307)
Items that will not be reclassified to profit or loss	427	-	-	-	427
Foreign exchange translation differences on foreign operations	(142)	5	3	1	(133)
Share of OCI of joint ventures and associates	(5)	-	-	-	(5)
Related tax movements	1	-	-	-	1
Items that may be reclassified to profit or loss	(146)	5	3	1	(137)
Total other comprehensive income	281	5	3	1	290
Total comprehensive income for the year	4,489	(797)	(10)	(9)	3,673
Attributable to:					
Ordinary shareholders	4,488	(797)	(10)	(9)	3,672
Non-controlling interests	1	-	-	-	1
Total comprehensive income for the year	4,489	(797)	(10)	(9)	3,673

27 Impact of new accounting standards and other adjustments continued**Consolidated balance sheet**

At 31 December 2017

	Previous Accounting £m	IFRS 15 impact ¹ £m	ITP Aero adjustments ² £m	Other adjustments ³ £m	IFRS 15 basis 31 December 2017 £m	IFRS 9 impact ⁴ £m	1 January 2018 £m
ASSETS							
Intangible assets	7,063	(1,221)	(291)	14	5,565	-	5,565
Property, plant and equipment	4,624	-	(13)	47	4,658	-	4,658
Investments – joint ventures and associates	688	-	-	(313)	375	-	375
Investments – other	26	-	-	-	26	-	26
Other financial assets	610	-	-	-	610	-	610
Deferred tax assets	271	608	(148)	720	1,451	2	1,453
Post-retirement scheme surpluses	2,125	-	-	-	2,125	-	2,125
Non-current assets	15,407	(613)	(452)	468	14,810	2	14,812
Inventories	3,660	64	(84)	163	3,803	-	3,803
Trade receivables and other assets	7,919	(1,587)	(74)	(1,905)	4,353	(12)	4,341
Contract assets	-	-	-	1,945	1,945	(5)	1,940
Taxation recoverable	17	-	-	-	17	-	17
Other financial assets	36	-	-	-	36	-	36
Short-term investments	3	-	-	-	3	-	3
Cash and cash equivalents	2,953	-	-	-	2,953	-	2,953
Current assets	14,588	(1,523)	(158)	203	13,110	(17)	13,093
Assets held for sale	7	-	-	-	7	-	7
TOTAL ASSETS	30,002	(2,136)	(610)	671	27,927	(15)	27,912
LIABILITIES							
Borrowings	(82)	-	-	-	(82)	-	(82)
Other financial liabilities	(581)	(20)	-	-	(601)	-	(601)
Trade payables and other liabilities	(9,527)	(1,762)	300	4,104	(6,885)	-	(6,885)
Contract liabilities	-	-	-	(4,104)	(4,104)	-	(4,104)
Current tax liabilities	(209)	-	-	-	(209)	-	(209)
Provisions for liabilities and charges	(526)	36	7	(67)	(550)	-	(550)
Current liabilities	(10,925)	(1,746)	307	(67)	(12,431)	-	(12,431)
Borrowings	(3,406)	-	-	-	(3,406)	-	(3,406)
Other financial liabilities	(2,435)	(23)	(3)	-	(2,461)	-	(2,461)
Trade payables and other liabilities	(4,178)	(1,901)	14	3,827	(2,238)	-	(2,238)
Contract liabilities	-	-	-	(3,607)	(3,607)	-	(3,607)
Deferred tax liabilities	(1,144)	545	268	(740)	(1,071)	-	(1,071)
Provisions for liabilities and charges	(357)	-	14	(50)	(393)	-	(393)
Post-retirement scheme deficits	(1,387)	-	-	-	(1,387)	-	(1,387)
Non-current liabilities	(12,907)	(1,379)	293	(570)	(14,563)	-	(14,563)
TOTAL LIABILITIES	(23,832)	(3,125)	600	(637)	(26,994)	-	(26,994)
NET ASSETS	6,170	(5,261)	(10)	34	933	(15)	918

¹ The main balance sheet impacts of IFRS 15 have been as follows:**Intangible assets:** De-recognition of Contractual Aftermarket Rights (CARs) and reclassification of participation fees as contract assets as IFRS 15 provides additional guidance on the treatment of payments to customers.**Deferred tax:** Consequential change from the restated cumulative profits.**Inventories:** The cost of parts sold where an option to repurchase is retained e.g. within a larger manufactured assembly. The customer has not obtained control based on the IFRS 15 definition, so the asset has been added to the inventory balance.**Trade receivables/payables and other assets/liabilities:** There are a number of factors: (a) revised revenue allocation between years (deferred income) as a result of de-linkage of OE from aftermarket contracts and a change to recognise revenue on long-term service agreements as costs are incurred rather than as engines are operated, (b) recognition of an additional asset where costs are incurred to obtain a contract that will subsequently be amortised as a reduction against the associated revenue as goods and services are delivered; and (c) reclassifications of: participation fees from intangible assets to contract assets; RRSA payments made ahead of parts usage as a prepayment from trade payables and other liabilities; and amounts billed in advance have increased the trade receivables asset (amount billed) and the contract liability within trade payables and other liabilities to better reflect the contractual position.**Other financial liabilities:** Parts sold with an option to repurchase and future obligations to airframers arising from sale of our OE on their airframes.**Provisions:** As a result of the more refined guidance on contract liabilities in IFRS 15 we have reclassified a balance from provisions.**Net assets:** All of the adjustments to net assets are included within retained earnings in equity, with the exception of £13m (2016: £22m) which arises from the consolidation of overseas entities and is included in the translation reserve.² Changes to the provisional ITP Aero balances presented at 31 December 2017 reflecting additional information obtained during 2018 about facts which existed at the date of acquisition, since the acquisition occurred close to the year end, together with the impact of IFRS 15. Balances reflect the exchange rate at the balance sheet date, rather than the date of acquisition. See note 25.³ Further information on other adjustments is provided on page 173.⁴ Re-assessment of recoverability of financial assets using IFRS 9 principles has resulted in a reduction in net assets of £15m.

27 Impact of new accounting standards and other adjustments *continued*

Consolidated balance sheet

At 31 December 2016

	Previous Accounting £m	IFRS 15 impact ¹ £m	Other adjustments ³ £m	IFRS 15 basis 31 December 2016 £m
ASSETS				
Intangible assets	5,080	(985)	21	4,116
Property, plant and equipment	4,114	-	20	4,134
Investments – joint ventures and associates	844	-	(289)	555
Investments – other	38	-	-	38
Other financial assets	382	-	-	382
Deferred tax assets	876	465	444	1,785
Post-retirement scheme surpluses	1,346	-	-	1,346
Non-current assets	12,680	(520)	196	12,356
Inventories	3,086	89	178	3,353
Trade receivables and other assets	6,956	(1,405)	(1,868)	3,683
Contract assets	-	-	1,875	1,875
Taxation recoverable	32	-	-	32
Other financial assets	5	-	-	5
Short-term investments	3	-	-	3
Cash and cash equivalents	2,771	-	-	2,771
Current assets	12,853	(1,316)	185	11,722
Assets held for sale	5	-	-	5
TOTAL ASSETS	25,538	(1,836)	381	24,083
LIABILITIES				
Borrowings	(172)	-	-	(172)
Other financial liabilities	(651)	(42)	-	(693)
Trade payables and other liabilities	(7,957)	(1,497)	3,321	(6,133)
Contract liabilities	-	-	(3,366)	(3,366)
Current tax liabilities	(211)	-	-	(211)
Provisions for liabilities and charges	(543)	(73)	(16)	(632)
Current liabilities	(9,534)	(1,612)	(61)	(11,207)
Borrowings	(3,185)	-	-	(3,185)
Other financial liabilities	(5,129)	-	-	(5,129)
Trade payables and other liabilities	(3,459)	(1,549)	3,186	(1,822)
Contract liabilities	-	-	(2,946)	(2,946)
Deferred tax liabilities	(776)	533	(470)	(713)
Provisions for liabilities and charges	(216)	-	(47)	(263)
Post-retirement scheme deficits	(1,375)	-	-	(1,375)
Non-current liabilities	(14,140)	(1,016)	(277)	(15,433)
TOTAL LIABILITIES	(23,674)	(2,628)	(338)	(26,640)
NET ASSETS/(LIABILITIES)	1,864	(4,464)	43	(2,557)

Footnote references as per previous page.

27 Impact of new accounting standards and other adjustments continued

Other adjustments can be analysed as follows:

At 31 December 2017

	Deferred profit on JV sales ¹ £m	Other classification changes ² £m	Other ³ £m	Deferred tax ⁴ £m	Other adjustments £m
Intangible assets	-	-	14	-	14
Property, plant and equipment	-	-	47	-	47
Investments – joint ventures and associates	(313)	-	-	-	(313)
Deferred tax assets	-	-	-	720	720
Non-current assets	(313)	-	61	720	468
Inventories	-	-	163	-	163
Trade receivables and other assets	-	(1,945)	40	-	(1,905)
Contract assets	-	1,945	-	-	1,945
Current assets	-	-	203	-	203
Trade payables and other liabilities	35	4,193	(124)	-	4,104
Contract liabilities	-	(4,104)	-	-	(4,104)
Provisions for liabilities and charges	-	(67)	-	-	(67)
Current liabilities	35	22	(124)	-	(67)
Trade payables and other liabilities	278	3,635	(86)	-	3,827
Contract liabilities	-	(3,607)	-	-	(3,607)
Deferred tax liabilities	-	-	-	(740)	(740)
Provisions for liabilities and charges	-	(50)	-	-	(50)
Non-current liabilities	278	(22)	(86)	(740)	(570)
NET ASSETS	-	-	54	(20)	34

At 31 December 2016

	Deferred profit on JV sales ¹ £m	Other classification changes ² £m	Other ³ £m	Deferred tax ⁴ £m	Other adjustments £m
Intangible assets	-	-	21	-	21
Property, plant and equipment	-	-	20	-	20
Investments – joint ventures and associates	(289)	-	-	-	(289)
Deferred tax assets	-	-	-	444	444
Non-current assets	(289)	-	41	444	196
Inventories	-	-	178	-	178
Trade receivables and other assets	-	(1,868)	-	-	(1,868)
Contract assets	-	1,875	-	-	1,875
Current assets	-	7	178	-	185
Trade payables and other liabilities	-	3,393	(72)	-	3,321
Contract liabilities	-	(3,366)	-	-	(3,366)
Provisions for liabilities and charges	-	(16)	-	-	(16)
Current liabilities	-	11	(72)	-	(61)
Trade payables and other liabilities	289	2,975	(78)	-	3,186
Contract liabilities	-	(2,946)	-	-	(2,946)
Deferred tax liabilities	-	-	-	(470)	(470)
Provisions for liabilities and charges	-	(47)	-	-	(47)
Non-current liabilities	289	(18)	(78)	(470)	(277)
NET ASSETS	-	-	69	(26)	43

¹ As per note 11 deferred profit on sales to joint ventures of £313m (2016: £289m) was previously included in trade payables and other liabilities but during the year the Group concluded that it is more appropriate for the credit to be included in the carrying value of the investment in the entity (included within Investments – joint ventures and associates).

² Other classification changes are primarily the result of separately disclosing contract assets and contract liabilities on the face of the balance sheet. In addition, some balances have been reclassified to better reflect the nature of the liability.

³ Other adjustments includes the revision of the foreign exchange rate applied to the initial recognition of non-monetary assets and liabilities that increases net assets by £140m (2016: £147m) and the use of a revised discount rate that increases non-current liabilities by £86m (2016: £78m).

⁴ Includes a gross-up of deferred tax assets and liabilities on pension surpluses that cannot be offset with other deferred tax balances. The impact on net assets arises from the tax effect on the other adjustments that are stated gross and a change in treatment of industrial building allowances.

27 Impact of new accounting standards and other adjustments continued**Cash flows**

The adjustments to the income statement and balance sheet described above do not affect the cash balances, but do alter the categorisation of some items in the cash flow statement. In particular, the de-recognition of contractual aftermarket rights and the transfer of participation fees to contractual assets reduce additions to intangible assets. These cash flows are now included in the net cash flows from operating activities and there is a consequential change to the adjustment for amortisation of intangible assets. Other adjustments are principally within monetary working capital movements.

Classification of financial instruments

IFRS 9 was adopted on 1 January 2018 and affects the classification of financial instruments. If it had been adopted at 31 December 2017, the classifications (see page 144) would have been as follows:

	Assets			Liabilities		Total £m
	Fair value through profit or loss	Fair value through OCI	Amortised cost	Fair value through profit or loss	Other	
	£m	£m	£m	£m	£m	
2017						
Unlisted non-current asset investments	26	-	-	-	-	26
Trade receivables and similar items ¹	-	285	3,090	-	-	3,375
Other non-derivative financial assets	-	-	477	-	-	477
Derivative financial assets	646	-	-	-	-	646
Short-term investments	-	-	3	-	-	3
Cash and cash equivalents ²	589	-	2,364	-	-	2,953
Borrowings	-	-	-	-	(3,488)	(3,488)
Derivative financial liabilities	-	-	-	(2,730)	-	(2,730)
Financial RRSAs	-	-	-	-	(247)	(247)
Other	-	-	-	-	(57)	(57)
C Shares	-	-	-	-	(28)	(28)
Trade payables and similar items	-	-	-	-	(4,088)	(4,088)
Other non-derivative financial liabilities	-	-	-	-	(2,096)	(2,096)
	1,261	285	5,934	(2,730)	(10,004)	(5,254)

¹ Trade receivables are classified as FVTOCI if the Group may sell before the due date.

² Money-market funds are classified as FVTPL, other cash and cash equivalent balances are classified as amortised cost.

COMPANY BALANCE SHEET

At 31 December 2018

	Notes	2018 £m	2017 £m
ASSETS			
Investments – subsidiary undertakings	2	12,521	12,076
Trade and other receivables	3	371	371
Cash and cash equivalents		–	2
Current assets		371	373
TOTAL ASSETS		12,892	12,449
LIABILITIES			
Other financial liabilities	5	(29)	(28)
Trade and other payables	4	(2,008)	(1,794)
Current liabilities		(2,037)	(1,822)
NET ASSETS		10,855	10,627
EQUITY			
Called-up share capital	6	379	368
Share premium account		268	195
Merger reserve		7,029	6,843
Capital redemption reserve		2,432	2,216
Other reserve		218	186
Retained earnings		529	819
TOTAL EQUITY		10,855	10,627

The Financial Statements on pages 175 to 177 were approved by the Board on 28 February 2019 and signed on its behalf by:

Warren East Stephen Daintith
Chief Executive Chief Financial Officer

Company's registered number: 7524813

COMPANY STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2018

	Attributable to ordinary shareholders						
	Share capital £m	Share premium £m	Merger reserve £m	Capital redemption reserve £m	Other reserve ¹ £m	Retained earnings £m	Total equity £m
At 1 January 2018	368	195	6,843	2,216	186	819	10,627
Profit for the year	–	–	–	–	–	–	–
Arising on issues of ordinary shares ²	11	73	403	–	–	–	487
Issue of C Shares	–	–	(217)	–	–	–	(217)
Redemption of C Shares	–	–	–	216	–	(216)	–
Share-based payments – direct to equity	–	–	–	–	32	(74)	(42)
At 31 December 2018	379	268	7,029	2,432	218	529	10,855

¹ The 'Other reserve' represents the value of the share-based payments in respect of employees of subsidiary undertakings for which payment has not been received.

² During the year, the Company issued 47,556,914 new ordinary shares relating to the first five instalments of the Group's acquisition of ITP Aero and 7,460,173 new ordinary shares (2017: 1,740,355) to the Group's share trust for its employee share-based payment plans with a net book value of £74m (2017: £14m).

NOTES TO THE COMPANY FINANCIAL STATEMENTS

1 Accounting policies

Basis of accounting

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

In preparing these Financial Statements, the Company applies the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU (Adopted IFRS), but makes amendments where necessary in order to comply with the Companies Act 2006.

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.
- 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 the 2018 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.

Investments in subsidiary undertakings

Investments in subsidiary undertakings are reported at cost less any amounts written off.

Share-based payments

As described in the Directors' Remuneration Report on pages 86 to 95, the Company grants awards of its own shares to employees of its subsidiary undertakings (see note 21 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.

2 Investments – subsidiary undertakings

	£m
Cost:	
At 1 January 2018	12,076
Additions ¹	413
Cost of share-based payments in respect of employees of subsidiary undertakings less receipts from subsidiaries in respect of those payments	32
At 31 December 2018	12,521

¹ Additions relate to investments in Rolls-Royce plc, relating to the first five instalments for the Group's acquisition of ITP Aero (2017: nil).

The subsidiary and joint venture undertakings are listed on pages 178 to 185.

3 Trade and other receivables

	2018 £m	2017 £m
Amounts owed by subsidiary undertakings	371	371

4 Trade and other payables

	2018 £m	2017 £m
Amounts owed to subsidiary undertakings	2,008	1,794

5 Financial liabilities

C Shares

Movements during the year were as follows:

	C Shares of 0.1p millions	Nominal value £m
At 1 January 2018	28,429	28
Issued	216,717	217
Redeemed	(216,075)	(216)
At 31 December 2018	29,071	29

The rights attaching to C Shares are set out on page 200.

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 2018	1	–	–	1,840	368
Shares issued to employee share trust	–	–	–	8	2
Shares issued in relation to the acquisition of ITP Aero	–	–	–	48	9
At 31 December 2018	1	–	–	1,896	379

The rights attaching to each class of share are set out on page 200.

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 Contingent liabilities

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 2018, these guarantees amounted to **£3,982m** (2017: £2,930m).

8 Other information

Employees

The Company had no employees in 2018.

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 86 to 95.

	2018			2017		
	Highest paid director £000	Other directors £000	Total £000	Highest paid director £000	Other directors £000	Total £000
Remuneration	2,209	2,733	4,942	1,189	4,635	5,824
Gains made on share options	1,734	1,644	3,378	1,259	–	1,259
Company contributions to pension schemes	–	–	–	–	–	–
	3,943	4,377	8,320	2,448	4,635	7,083

No Director accrued any retirement benefits in the year (2017: nil).

SUBSIDIARIES

As at 31 December 2018, the companies listed below and on the following pages are indirectly held by Rolls-Royce Holdings plc except Rolls-Royce Group plc 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 Granduer, 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	Ostre Havnepromenade 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
Data Systems & Solutions, LLC	Wilmington ²	Partnership (no equity)	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, Torrelarragoiti, Parcela 5H, Naves 7 a 10, Zamudia, Vizcaya, Spain	Ordinary	100
Industria de Turbo Propulsores S.A.	Parque Tecnológico 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	Fixed capital B Variable capital B	100 100
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 Tecnológico 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
Kamewa AB *	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Kamewa do Brazil Equipamentos Maritimos Limitada (in liquidation)	401 Rua Visconde de Pitaja 433, Rio de Janeiro, Brazil	Quotas	100
Kamewa Holding AB *	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Karl Maybach-Hilfe GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
MTU Africa (Proprietary) Limited	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Capital Stock	100

* Dormant entity.

** Though the interest held is 50%, the Company controls the entity (see note 1 accounting policies) and, as a result, consolidates the entity and records a non-controlling interest.

¹ Moor Lane, Derby, 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 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 Qiao Road, Xuhai District, 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 Energía 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
MTU Power Systems Sdn. Bhd	Level 10 Menara LGB, 1 Jalan Wan Kadir Taman Tun Dr Ismail, 6000 Kuala Lumpur, Malaysia	Ordinary	100
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
Navis Consult d.o.o.	Ul. Bartola Kašića 5/4, HR-51000, Rijeka, Croatia	Ordinary	75
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
PKMJ Technical Services, Inc.	Wilmington ²	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
Prokura Diesel Services (Proprietary) Limited * (in liquidation)	36 Marconi Street, Montague Gardens, Cape Town, 7441, South Africa	Ordinary	100
PT MTU Indonesia	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100

* Dormant entity.

¹ Moor Lane, Derby, 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
PT Rolls-Royce	Secure Building Blok B JL, Raya Protokol Halim Perdanakusuma, Halim P.K. Makasar, Jakarta, Timur DKI Jakarta	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 AB	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Rolls-Royce Aero Engine Services Limited *	Derby ¹	Ordinary	100
Rolls-Royce Asia Limited	G/F, No 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong	Ordinary	100
Rolls-Royce Australia Pty Limited	Suite 102, 2-4 Lyonpark Road, Macquarie Park, NSW 2113, Australia	Ordinary	100
Rolls-Royce Australia Services Pty Limited	Suite 102, 2-4 Lyonpark Road, Macquarie Park, NSW 2113, Australia	Ordinary	100
Rolls-Royce Brasil Limitada	Rua drive Cincinato Braga No. 47, Planalto District, São Bernardo 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 China Holding Limited	305-306 Indigo Building 1, 20 Jiuxianqiao Road, Beijing, 100016, China	Registered Capital	100
Rolls-Royce Civil Nuclear Canada Limited	597 The Queensway, Peterborough Ontario K9J 7J6, Canada	Common Shares	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, Inc.	Wilmington ²	Common Stock	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	Ordinary	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
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 Group plc	62 Buckingham Gate, London, SW1E 6AT, 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 India Limited * ³	Derby ¹	Ordinary	100

* Dormant entity.

¹ Moor Lane, Derby, 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 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 LLC	Office 41 H, 32-34 Liter A, Nevsky Office, St. Petersburg, 191186, Russian Federation	Ordinary	100
Rolls-Royce International s.r.o.	Pobřežní 620/3, Postal code 186 00, Karlín - Prague 8, Czech Republic	Ordinary	100
Rolls-Royce Italia S.r.l.	Via Castel Morrone 13, 16161, Genoa, Italy	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 Korea Limited	197 Noksan SanEop Buk-Ro (Songjeong-dong), Gangseo-gu, Busan 46753, Republic of Korea	Ordinary	100
Rolls-Royce Leasing Limited	Derby ¹	Ordinary	100
Rolls-Royce Malaysia Sdn. Bhd.	Level 10, Menara LGB, 1 Jalan Wan Kadir Taman Tun Dr Ismail, 6000 Kuala Lumpur, Malaysia	Ordinary	100
Rolls-Royce Marine (Shanghai) Limited	1st Floor Building 14, Lane 8666, Hu Nan Road, Pudong District, Shanghai, PRC	Ordinary	100
Rolls-Royce Marine A/S	Ostre Havnepromenade 34, 9000, Aalborg, Denmark	Ordinary	100
Rolls-Royce Marine AS	Borgundvegen 340, Ålesund, 6009, Norway	Ordinary	100
Rolls-Royce Marine Benelux BV	Werfdijk 2, 3195 HV Pernis, Rotterdam, Netherlands	Ordinary	100
Rolls-Royce Marine Chile S.A.	Alcantra 200, Piso 6, C.O, 7550159 Las Condes, Santiago, Chile	Ordinary	100
Rolls-Royce Marine Deutschland GmbH	Fährstieg 9, 21107, Hamburg, Germany	Capital Stock	100
Rolls-Royce Marine Electrical Systems Limited *	Derby ¹	Ordinary	100
Rolls-Royce Marine España S.A.	Calle Dinamarca s/n (esquina Calle Alemania), Poligono Industrial de Constanti, 43120 Constanti, Tarragona, Spain	Ordinary	100
Rolls-Royce Marine France SARL	122 avenue Charles de Gaulle, 92200 Neuilly-sur-Seine, France	Ordinary	100
Rolls-Royce Marine Hellas S.A.	25 Atki Poseidonos str. & Makrigianni str., Moschato, Athens, GR-18344, Greece	Ordinary	100
Rolls-Royce Marine Hong Kong Limited	G/F, No 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong	Ordinary	100
Rolls-Royce Marine India Private Limited ³	Birla Tower West, 2nd Floor, 25 Barakhamba Road, New Delhi, 110001, India	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, Veracruz 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, Veracruz CP 94299 6, Mexico	Ordinary	100
Rolls-Royce Military Aero Engines Limited * ³	Derby ¹	Ordinary	100
Rolls-Royce Namibia (Proprietary) Limited	2nd Floor, Unit 4, LA Chambers, Aussspann Plaza, Dr Agostinho Neto Road, Aussspannplatz, Windhoek, Namibia	Ordinary	100
Rolls-Royce New Zealand Limited	c/o Deloitte, 80 Queen Street, Auckland Central, Auckland 1010, New Zealand	Ordinary	100
Rolls-Royce Nigeria Limited * (in liquidation)	Civic Towers, Plot GA1, Ozumba Mbadiwe Avenue, Victoria Island, Lagos, Nigeria	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

* Dormant entity.

¹ Moor Lane, Derby, 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 North American Technologies, Inc.	Wilmington ²	Common Stock	100
Rolls-Royce Nuclear Field Services France S.A.S.	ZA Notre-Dame, 84430, Mondragon, France	Ordinary	100
Rolls-Royce Nuclear Field Services, Inc.	Corporation Service Company, 80 State Street, Albany, New York 12207, United States	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	100
Rolls-Royce Overseas Investments Limited	Derby ¹	Ordinary	100
Rolls-Royce Oy AB	P.O. Box 220, Suojantie 5, 26101, Rauma, Finland	A shares	100
Rolls-Royce Placements Limited	Derby ¹	Ordinary	100
Rolls-Royce plc	62 Buckingham Gate, London, SW1E 6AT, England	Ordinary	100
Rolls-Royce Poland Sp. z o.o.	Gniew 83-140, ul. Kopernika 1, Poland	Ordinary	99.9
Rolls-Royce Power Development Limited	Derby ¹	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 Saudi Arabia Limited	PO Box 88545, Riyadh, 11672, Saudi Arabia	Cash shares	100
Rolls-Royce Retirement Savings Trust Limited * ³	Derby ¹	Ordinary	100
Rolls-Royce Singapore Pte. Limited	6 Shenton Way, #33-00 OUE, Downtown Singapore 068809, Singapore	Ordinary	100
Rolls-Royce Sp z.o.o.	Budynek Fronton ul Kamienna 21, Krakow, 31-403, Poland	Ordinary	100
Rolls-Royce Submarines Limited	Derby ¹	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, Turkey	Cash shares	100
Rolls-Royce UK Pension Fund Trustees Limited *	Derby ¹	Ordinary	100
Rolls-Royce Vietnam Limited	Dông Xuyên Industrial Zone, Rach Dũa Ward, Vũng Tàu City, Bà Rịa-Vũng Tàu Province, Vietnam	Capital Stock	100
Rolls-Royce Zweite Beteiligungs GmbH	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Capital Stock	100
Ross Ceramics Limited	Derby ¹	Ordinary	100
Scandinavian Electric Gdansk Sp. z.o.o.	ul. Reja No.3, 80-404, Gdansk, Poland	Ordinary	67
Scandinavian Electric Systems do Brazil Limitada * (in liquidation)	Rua Sao Jose 90, salas 1406 e 1407, Centro, Rio De Janeiro, Brazil	Quotas	66
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 32 Limited *	Derby ¹	7.25% Cumulative Preference Ordinary	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

* 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, 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
Turbine Surface Technologies Limited **	Derby ¹	Ordinary A Ordinary B	Nil 100
Turboreactores S.A. de C.V.	Acceso IV, No.6C, Zona Industrial Benito Juárez, Querétaro, 76120, Mexico	Class A Class B	100 100
Ulstein Holding AS	Sjøgata 80, 6065 Ulsteinvik, Norway	Ordinary	100
Ulstein Maritime Limited *	8 Adelaide Street West, Suite 200, Toronto, ON M5H 0A9, Canada	Common	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

* Dormant entity.

** Though the interest held is 50%, the Company controls the entity (see note 1 accounting policies) and, as a result, consolidates the entity and records a non-controlling interest.

¹ Moor Lane, Derby, DE24 8BJ, England.

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	20	20
Airtanker Services Limited	Airtanker Hub, RAF Brize Norton, Carterton, Oxfordshire, OX18 3LX, England	Ordinary	22	22
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	62 Buckingham Gate, London, SW1E 6AT, England	Ordinary A	100	50
Anecom Aerotest GmbH	122 Freiheitstrasse, Wildau, D-15745, Germany	Capital Stock	35.6	35.6
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	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
EPIX Power Systems, LLC	The Corporation Trust Company, 1209 Orange Street, Wilmington, Delaware 19801, United States	Partnership (no equity held)	-	50
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
Hovden Klubbhus AS	Stålhaugen 5, Ulsteinvik, 6065, Norway	Ordinary	62	62
International Aerospace Manufacturing Private Limited ** ³	Survey No. 3 Kempapura Village, Varthur Hobli, Bangalore, KA 560037, India	Ordinary	50	50
LG Fuel Cell Systems, Inc.	Wilmington ²	Common Stock	22.2	22.2
Light Helicopter Turbine Engine Company (unincorporated partnership)	Suite 119, 9238 Madison Boulevard, Madison, Alabama 35758, United States	Partnership (no equity held)	-	50
MEST Co., Limited	97 Bukjeonggongdan 2-gil, Yangsan-si, Gyeongsangnam-do, 50571, Republic of Korea	Normal	46.8	46.8
Metlase Limited	Unipart House, Garsington Road, Cowley, Oxford, OX4 2PG, England	Ordinary B	100	20

* Dormant company.

** These entities are accounted for as joint operations (see note 1 accounting policies).

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Company name	Address	Class of shares	% of class held	Group interest held %
MTU Turbomeca Rolls-Royce GmbH	Am Söldnermoos 17, 85399 Hallbergmoos, Germany	Capital Stock	33.3	33.3
MTU 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
Offshore Simulator Centre AS	Borgundvegen 340, 6009, Ålesund, Norway	Ordinary	25	25
Qinous GmbH	Villa Rathenau, Wilhelminenhofstrasse 75, 12459 Berlin, Germany	Preference	22	22
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	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
Turbo-Union Limited	Derby ¹	A Shares Ordinary	37.5 40	40
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.

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³ Reporting year end is 31 March.