



# FOCUS TRANSFORM DELIVER



Rolls-Royce is a pre-eminent engineering company focused on world-class power and propulsion systems.



**Front cover**

A Trent 1000 engine being assembled at our Seletar plant in Singapore.

**This page**

A Trent XWB, the world's most efficient large aero engine.

## Financial highlights

### ORDER BOOK

**£79,810m**  
2015: £76,399m

### UNDERLYING\* REVENUE

**£13,783m**  
2015: £13,354m

### UNDERLYING\* PROFIT BEFORE TAX

**£813m**  
2015: £1,432m

### UNDERLYING\* EARNINGS PER SHARE

**30.1p**  
2015: 58.7p

### FULL YEAR PAYMENT TO SHAREHOLDERS

**11.70p**  
2015: 16.37p

### FREE CASH FLOW

**£100m**  
2015: £179m

### REPORTED REVENUE

**£14,955m**  
2015: £13,725m

### REPORTED (LOSS)/PROFIT BEFORE TAX

**£(4,636)m**  
2015: £160m

### REPORTED EARNINGS PER SHARE

**(220.1)p**  
2015: 4.5p

### NET DEBT

**£(225)m**  
2015: £(111)m

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\* All figures in the narrative of the Strategic Report are underlying unless otherwise stated.  
Underlying explanation is in note 2 on page 131.

### FORWARD-LOOKING STATEMENTS

This Annual Report contains forward-looking statements. Any statements that express forecasts, expectations and projections are not guarantees of future performance and guidance may be updated from time to time. This report is intended to provide information to shareholders, and is not designed to be relied upon by any other party or for any other purpose, and the Company and its Directors accept no liability to any other person other than that required under English law. Latest information will be made available on the Group's website. By their nature, these statements involve risk and uncertainty, and a number of factors could cause material differences to the actual results or developments.

# Group at a glance

The Group is organised into five customer-facing businesses: Civil Aerospace, Defence Aerospace, Power Systems, Marine and Nuclear.



Our award-winning Unified Bridge is the result of detailed studies of how crews use the equipment on the bridge, making the vessel safer and easier to operate.

## GROUP

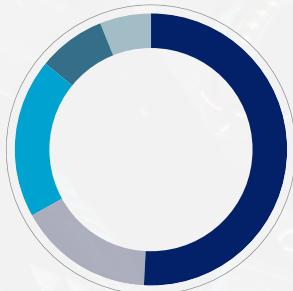
### UNDERLYING REVENUE

**£13,783m**

### UNDERLYING PROFIT BEFORE FINANCING

**£915m**

### UNDERLYING REVENUE MIX



Civil Aerospace	51%
Defence Aerospace	16%
Power Systems	19%
Marine	8%
Nuclear	6%

### ORDER BOOK

**£79.8bn**

### GROSS R&D EXPENDITURE

**£1.3bn**

### PATENTS APPLIED FOR

**672**

### COUNTRIES

**50**

### ENGINEERS (YEAR END)

**16,526**

### EMPLOYEES (YEAR AVERAGE)

**49,900**

**CIVIL AEROSPACE**

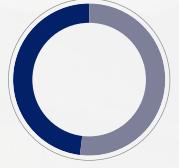
UNDERLYING REVENUE

**£7,067m**

UNDERLYING PROFIT BEFORE FINANCING

**£367m**

UNDERLYING REVENUE MIX



OE revenue	48%
Services revenue	52%

↗ PAGES 18 TO 23 FOR MORE INFORMATION

**DEFENCE AEROSPACE**

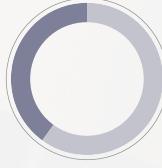
UNDERLYING REVENUE

**£2,209m**

UNDERLYING PROFIT BEFORE FINANCING

**£384m**

UNDERLYING REVENUE MIX



OE revenue	40%
Services revenue	60%

↗ PAGES 24 TO 26 FOR MORE INFORMATION

**POWER SYSTEMS**

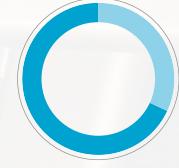
UNDERLYING REVENUE

**£2,655m**

UNDERLYING PROFIT BEFORE FINANCING

**£191m**

UNDERLYING REVENUE MIX



OE revenue	68%
Services revenue	32%

↗ PAGES 27 TO 29 FOR MORE INFORMATION

**MARINE**

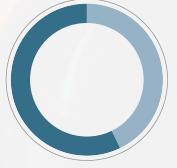
UNDERLYING REVENUE

**£1,114m**

UNDERLYING LOSS BEFORE FINANCING

**£(27)m**

UNDERLYING REVENUE MIX



OE revenue	57%
Services revenue	43%

↗ PAGES 30 TO 32 FOR MORE INFORMATION

**NUCLEAR**

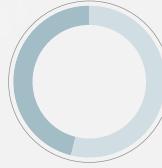
UNDERLYING REVENUE

**£777m**

UNDERLYING PROFIT BEFORE FINANCING

**£45m**

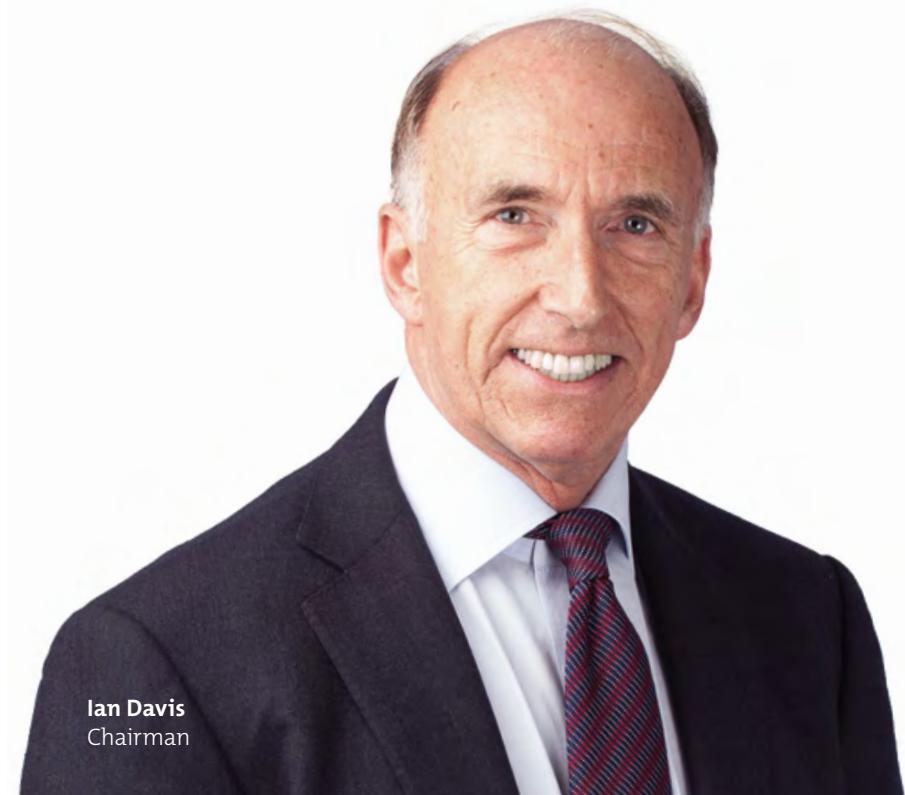
UNDERLYING REVENUE MIX



OE revenue	46%
Services revenue	54%

↗ PAGES 33 TO 35 FOR MORE INFORMATION

# Chairman's statement



Ian Davis  
Chairman

Last year I talked about how Rolls-Royce is a business in transition and how important the next few years were going to be, laying the groundwork for future success. In 2016, we have made a good start to the transformation programme, designed to bring significant and sustainable benefits over the coming years.

Our core strengths lie in our product portfolio, admired by our customers and respected by our competitors. This underpins our exceptional order book which will drive future shareholder value. To unlock these benefits, we need to sustain our investment in our key competitive advantages, including our world-leading research & development capability, as we introduce new products, ramp up production and expand our service capability to support our growing aftermarket.

By necessity, the transformation programme targeted simplifying the way we manage the business and reducing our fixed cost base. I have been very encouraged by the engagement across the Group on what is, understandably, a difficult exercise for many and which has seen around 20% of management roles being removed.

There is much more to do in terms of efficiency and behavioural change to achieve greater cost competitiveness. Key to this will be embedding the thinking around pace and simplicity that Warren East, your Chief Executive, has brought to the business. He will talk more about how we are doing this in the Strategic report.

## Corporate governance

The recent settlements, with the UK Serious Fraud Office and other authorities, are a salient reminder of how critical it is to 'win right'. As a result of past, unacceptable



Progress in 2016 can be judged by how we have overcome our challenges; we have delivered on our commitments in a difficult year while at the same time embarking on a significant transformation."

UNDERLYING EPS

**30.1p**

PAYMENT TO SHAREHOLDERS

**11.7p**

OTHER STATUTORY INFORMATION P186

conduct we have agreed to pay financial penalties and costs of around £671m. These dishonest acts, some as recent as 2013, are a major blemish on the reputation of the business and we have apologised unreservedly.

Importantly, the Board has taken extensive action to strengthen ethics and compliance procedures across the Group over recent years, so that high standards of conduct are embedded as an essential part of the way we do business. We share a determination to see that Rolls-Royce comes out of this episode as a more trusted, resilient and better managed business that wins right every time. Every employee, from the bottom to the top of the Group, is fully aware of the importance of doing the right thing.

As described in the Nominations & Governance Committee report (see page 70) our governance framework was rolled out in the summer and provides clarity and accountability, providing additional integrity to our business.



These dishonest acts... are a major blemish on the reputation of the business and we have apologised unreservedly."

### Shareholder payments

Our stated objective in the long term is to progressively rebuild our payment to shareholders to an appropriate level, subject to the short-term cash needs of the business. This reflects the Board's long-standing confidence in the strong future cash generation of Rolls-Royce.

At this stage, the investment needs of the business remain high, reflected in the low level of free cash flow in 2016 and this is expected again in 2017. In addition, the Board sees the need to retain a degree of balance sheet flexibility.

As a result, it is proposed that the final payment for 2016 is unchanged from 2015 at 7.1 pence per share. Taken together with the interim payment, this brings the full year payment to 11.7 pence per share. As with past payments, the distribution will be in the form of C Shares.

### Board developments

During the year, there have been a number of important changes to the Board. In March, we appointed Brad Singer, a partner of ValueAct Capital, to the Board, at which time he also joined the Science & Technology Committee. Sir Kevin Smith took over the role of Senior Independent Director from Lewis Booth, who continues as chairman of the Audit Committee, an important role for us at the present time. In May, following the 2016 AGM, Dame Helen Alexander stepped down from the Board. In November 2016, Alan Davies stepped down from the Board.

In addition, we announced in September that Stephen Daintith will join the Board in 2017 as Chief Financial Officer. His record of achievement in change management is particularly relevant to the Group. He will succeed David Smith.

Colin Smith will be leaving the Company after 43 years of service and will be stepping down from the Board after this year's AGM. Colin has made a major contribution to the success of the business over many years, including 12 years on the Board. I would like to thank both David and Colin for their valuable support during their time with Rolls-Royce.

More detail on the changes to the Board are set out in the Nominations & Governance Committee report on page 68.

Overall I believe we have a strong and experienced Board, fully engaged with the business and well able to provide both support and scrutiny in equal measure.

### Rebuilding trust and confidence

We made significant efforts in 2016 to improve our communication with stakeholders. The foundations laid in the second half of 2015 were enhanced by a broad range of engagement, including formal events such as the corporate governance seminar in April, which I hosted, and the capital markets' event in November, led by Warren and his team. This latter event brought together senior management from all of our business units with analysts and investors. The event gave our guests the chance to ask questions and improve their understanding of the business.

Despite the challenges we face as a business, we know how important it is to sustain our investment in our people and communities. This has included maintaining active graduate and apprenticeship schemes, as well as investing in our research partnerships and STEM (science, technology, engineering and mathematics) programmes. Internally, we are working hard on employee engagement, including initiatives around diversity and wellbeing (see Sustainable business on page 42 and the Safety & Ethics Committee report on page 109).

During the year, we have also done significant work on the new revenue reporting standard, IFRS 15 *Revenue from Contracts with Customers*. Due to be adopted at the start of 2018, this will go a long way to better align the recognition of profit and cash for our original equipment business in particular, and will help make our performance improvements more transparent. I believe this will be welcomed by many stakeholders, but may take time to be properly understood. As a result, we have undertaken a progressive

communication programme in 2016 to outline the changes, culminating in the capital markets' event in November. You can read more about this on pages 66 and 130.

We have noted with interest the Government's green paper on UK Corporate Governance: The Options for Change and we are actively taking steps to strengthen our interaction with stakeholders, particularly employees. Further detail is included in my introduction to the Directors' report on page 58. I look forward to reporting our progress in our Annual Report next year.

Since taking over as chairman of the Remuneration Committee in May, Ruth Cairnie has undertaken a comprehensive consultation on our proposed new incentive schemes, ahead of this year's AGM. You can read more about our proposed remuneration policy in the Directors' remuneration report on pages 72 to 82.

Feedback from investors suggests that we have improved the level of engagement, transparency and openness in many of our communications. While we can always do better, I believe the team has made a strong start in rebuilding trust.

I know Warren looks forward to introducing Stephen Daintith and Simon Kirby, our new Chief Operating Officer, to the market in the coming months to present their combined views on the strategic priorities for the business, which will define our future path.

### Looking forward

2017 will be another transformative year for Rolls-Royce. We continue to operate in uncertain markets and will need to respond to shifting market dynamics, while at the same time make progress on our core priorities both in terms of customer deliveries and internal organisation changes.

Warren has been building a strong and experienced management team to help him achieve his strategic and operational goals. The Board will continue to both challenge and support their actions as they work to ensure we transition successfully over the next few years to a more profitable and cash-generative future.

**Ian Davis**  
Chairman  
13 February 2017

# Chief Executive's review



**Warren East**  
Chief Executive

“

2016 has been an important year as we accelerated the transformation of Rolls-Royce.”

## Introduction

Overall, we have performed ahead of our expectations for the year as a whole while delivering significant changes to our management and processes.

We increased our large aero-engine production output by 25%, supported the needs of our customers, and made good technical progress in the final stages of the development of the three new large engines, due to enter service over the next twelve months. At the same time we have improved manufacturing lead times for our key Civil Aerospace programmes, an important goal as we ramp up production over the next few years. Progress with our transformation programme was also better than expected, delivering over £60m of in-year benefits compared to our initial target of between £30-50m. Overall, the performance improvements have helped offset a number of changing trading conditions and higher research & development (R&D) spend.

This Strategic report describes the business in depth and provides further information on our financial position and business performance.



## 7 Review of 2016

How the Group performed in a year of significant change.

## 13 Priorities for 2017

Our clear focus and priorities for developing the business.

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How we deliver value from our products and services.

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Summary of our 2016 financial performance.

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Reviewing each of our five customer-facing businesses; with analysis of their markets.

## 36 Financial review

Explaining our 2016 financial performance in more detail.

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Setting out the approach we take to ensure we are a sustainable business.

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How financial and non-financial indicators are used to measure the Group.

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Outlining our main risks together with our risk management process.

## Review of 2016

### Performance in 2016

In 2015, we identified a number of significant headwinds that would hold back performance in 2016, including mixed market conditions and the revenue and cost impacts of some key product transitions.

Looking first at our markets, demand for our large Civil Aerospace products and services remained robust, despite some specific weaknesses for service demand in respect of older engines. At the same time, demand for new corporate jets softened, as did the aftermarket for the regional jets powered by our AE 3007 engines. Defence Aerospace markets held up well with a steady demand for our aftermarket services in particular. Offshore oil & gas markets for our Marine business continued to suffer from the consequences of low oil prices. Alongside weaker industrial demand, this also impacted Power Systems.

Other known headwinds transpired broadly as expected, led by lower Trent 700 volumes and prices, legacy civil large engine aftermarket reductions and weakness in marine markets. At the same time, we have continued to invest in products and services to support our customers and reinforce the long-term strength of our order book, valued at the end of the year at around £80bn.

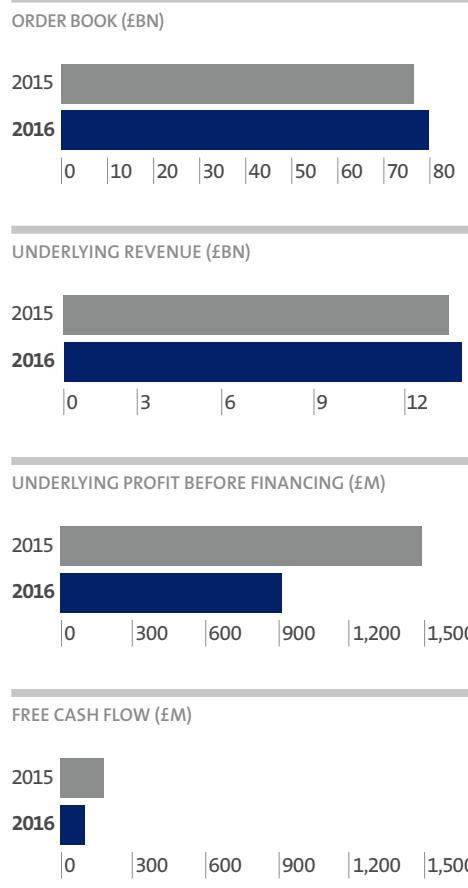
Against this backdrop, Group underlying revenue reduced by 2% on a constant currency basis with reductions in both original equipment and aftermarket revenues, led by the Marine business where revenues were down 24%. More details are included in the Financial summary on page 16 and the Business reviews on pages 18 to 35.

Compared to 2015, underlying profit before finance charges and tax was 45% lower at £915m. On this basis, Civil Aerospace delivered £367m (2015: £812m); Defence Aerospace delivered £384m (2015: £393m); Power Systems delivered £191m (2015: £194m); Marine generated a loss

of £27m (2015: £15m profit) and Nuclear delivered £45m (2015: £51m excluding the £19m R&D credit benefits highlighted in 2015). More detail on each business is included in the Business review.

After underlying financing costs of £102m (2015: £60m including a £34m gain from hedging overseas dividends), underlying profit before tax was £813m (2015: £1,432m).

Since the EU referendum at the end of June, the value of sterling relative to the US dollar has fallen significantly. As a result, we have recognised a £4.4bn in-year non-cash mark-to-market valuation adjustment for our currency hedge book as part of our reported financing costs of £(4,677)m (2015: £(1,341)m). While reported revenue of £14,955m (2015: £13,725m) was unaffected by this adjustment, it impacted reported profit. In addition, our reported results also included a £671m charge for financial penalties from agreements with investigating authorities in connection with historic bribery and corruption involving



intermediaries in a number of overseas markets. Our reported loss before tax was £(4,636)m (2015: £160m profit).

After an underlying tax charge of £261m (2015: £351m), underlying profit after tax for the year was £552m (2015: £1,081m). With an average 1,832m shares in issue, underlying earnings per share were 30.1p (2015: 58.7p).

After a reported tax credit of £604m (2015: £76m charge), the reported loss for the year was £(4,032)m (2015: £84m profit). Reported earnings per share were (220.1)p (2015: +4.5p).

A full reconciliation of underlying to reported profit can be found in note 2 on page 134.

Free cash inflow in the year was £100m (2015: inflow of £179m), better than expected, reflecting strong cash collections from a number of key customers at the very end of the period and an improvement in underlying working capital performance. While some of this positive variance is a timing impact and likely to reverse early in 2017, improved efficiencies should drive a level of sustainable benefit.

A more detailed review of financial performance is included in the Financial summary on page 16 and the Financial review on page 36.

### Our focus on clear priorities for 2016 has helped deliver positive outcomes

Our 2016 priorities were threefold: to strengthen our focus on engineering, operational and aftermarket excellence to drive long-term profitable growth; to deliver a strong start to our transformation programme; and to start rebuilding trust and confidence in our long-term growth prospects.

### Agreement reached with various investigating authorities

In mid-January 2017, we announced that we had entered into Deferred Prosecution Agreements (DPAs) with the UK's Serious Fraud Office (SFO) and the US Department of Justice (DoJ) and completed a Leniency Agreement with Brazil's Ministério Pùblico Federal (MPF). These agreements relate to bribery and corruption involving intermediaries in a number of overseas markets, concerns about which we passed to the SFO from 2012 onwards following a request from the SFO.

The agreements are voluntary and result in the suspension of prosecution provided that the Company fulfils certain requirements, including the payment of financial penalties.

The agreements will result in the total payment of around £671m. This is recognised within our 2016 accounts.

Under the terms of the DPA with the SFO, we agreed to pay £497m plus interest under a schedule lasting up to five years, plus a £13m payment in respect of the SFO's costs. We also agreed to make payments to the DoJ totalling around US\$170m and to the MPF totalling around US\$26m. As a result, the

total payment in 2017 is expected to be £293m (at prevailing exchange rates) with some elements having already been paid.

It is our intention that these financial penalties will be paid from existing facilities and an improved underlying cash flow performance in the longer term.

Payment schedule	SFO	DoJ	MPF	Total
2017	£119m* + £13m	US\$170m	US\$26m	£293m*
2019	£100m*			£100m*
2020	£130m*			£130m*
2021	£148m*			£148m*

\* Plus interest.

**PRIORITY 1****Strengthen focus to drive long-term profitable growth****Increased our focus on engineering, operational and aftermarket excellence**

Over the last few years, we have invested significantly in new product development and manufacturing capabilities. In engineering, in 2016 we invested over £1.3bn in gross R&D. The net investment of £937m was higher than 2015 and our expectations for 2016. A large proportion of this was focused on Civil Aerospace to support delivery of three new engine programmes which will enter service over the next 12 months: the Trent 1000 TEN (Thrust, Efficiency, and New technology), the Trent XWB-97 and the Trent 7000. Supporting these investments was a Group-wide engineering efficiency programme, known internally as E<sup>3</sup>, which has formed part of our overarching transformation programme. Within the engineering team, this change programme has focused on delivering a lean, resilient, lower-cost engineering function through reducing complexity, improving work prioritisation and simplifying management structures.

In operations, over £1.4bn has been invested in new capital equipment since 2011 (£225m in 2016) in transforming our manufacturing footprint across the business.

In Civil Aerospace, these investments in state-of-the-art manufacturing facilities will enable us to meet the significant growth in engine deliveries required to match customer demand for our new Trent engines, particularly the Trent 1000, Trent XWB and Trent 7000. At the same time, the investments lower unit costs and reduce the net cash outflows related to engine production. In Defence Aerospace, the investments have focused on modernisation of facilities such as in Indianapolis to reduce costs and improve delivery performance of both original equipment and spares to support higher standards of customer service. In Marine, new facilities will contribute to a more efficient and scalable manufacturing capability that will address the demands of our customers today, while markets are weak, and tomorrow, when they have recovered.

The benefits of these investments are starting to be seen in improved delivery performance, lower assembly lead times, lower unit costs and increased capacity. For example, in Civil Aerospace, large engine deliveries increased by over 15% to over 355 and capacity is now in place to deliver around 500 engines in 2017; an increase of over a third.

The focus on improving aftermarket excellence has been driven business-by-

business, by customer needs as well as through the broader transformation activities. In Civil Aerospace for example, this has resulted in a progressive change to the structure of our engine overhaul services, our commercial TotalCare® and time and materials product offerings, and management structures. These have enabled us to respond to a changing market and maturing installed engine portfolio by adapting our resources to focus on areas of greatest value to the Group and our customers – such as supporting airframe transitions and rolling out SelectCare™ and TotalCare Flex® offerings and preparing for the launch of LessorCare™. In Defence Aerospace, the focus has been driven by the customer need for more embedded support. This has included increasing our service presence at key customer facilities in the UK and overseas, improving response time and resolving a greater proportion of issues on-wing.

**Engineering excellence**

- Invested to support delivery of three new engine programmes to enter service in the next 12 months.
- New powered gearbox design successfully tested at new German facility.
- Launched a Group-wide engineering efficiency programme, known as E<sup>3</sup> – part of our Group-wide transformation programme.

**Operational excellence**

- £225m invested in 2016 in transforming our manufacturing footprint across the business.
- Increased large aero-engine production output by 25%.
- Started modernisation of Defence Aerospace facility in Indianapolis to reduce costs and improve delivery performance.
- Invested to support delivery of the UK's new Astute and Dreadnought class nuclear-powered submarines.

**Capturing aftermarket value**

- Investment driven business-by-business, by customer needs.
- Restructured our engine overhaul services including an increased equity investment in our MRO JVs.
- Launched new commercial TotalCare product offerings to support maturing installed base.
- Embedded aftermarket support for key Defence Aerospace customers at key customer facilities in the UK and overseas.

## PRIORITY 2

### Deliver a strong start to our transformation programme

#### Transformation programme ahead of expectations

In November 2015, we announced a major transformation programme focused on simplifying the organisation, streamlining senior management, reducing fixed costs and adding greater pace and accountability to decision making. The initial target was to deliver incremental gross cost savings of between £150m-£200m per annum, with the full benefits accruing from the end of 2017 onwards.

Against these initial objectives, which included a target of delivering in-year savings of £30m-50m in 2016, we have made a better than expected start. In-year savings in 2016 were above target, at over £60m. During the year, we also identified significant opportunities to drive sustainable cost savings from the business. As a result, we expect the in-year savings

that can be delivered in 2017 to be between £80m-£110m and we are on track to achieve the top end of the target for the programme as a whole, targeting a run rate of over £200m by the end 2017.

At the same time, other restructuring initiatives have delivered their expected benefits. These included programmes to improve operational efficiency in Civil Aerospace and Defence Aerospace (announced in 2014) and Marine (announced in May 2015), as well as a back office cost saving programme in Marine (announced in October 2015).

In December 2016, an additional reorganisation of the Marine business was announced to further rationalise manufacturing activities in Scandinavia, targeting incremental annualised savings of £50m from mid-2017. Reflecting our cautious near-term outlook for the Marine business, we have also taken an exceptional

charge of around £200m for the impairment of goodwill, principally associated with the acquisition of Vickers in 1999.

In summary, expected ongoing benefits of all current restructuring programmes initiated since 2014 will reduce costs by around £400m by the end of 2018, compared to a 2014 baseline.

In aggregate, ongoing divisional restructuring programmes together with the new programme announced in November 2015 are expected to reduce costs by around £400m by the end of 2018, including the full benefit of the Marine restructuring announced in December 2016. The cost reduction breaks down into incremental legacy Civil Aerospace and Defence Aerospace restructuring savings of £80m, Marine savings of now around £110m and the transformation programme savings of around £200m.

### 2016 progress on our US transformation

In January 2016, construction began on a five-year, US\$600m modernisation programme for our manufacturing and technology research plant in Indianapolis, Indiana, US. This is the largest investment by the Group in the US since we purchased the Allison Engine Company in 1995.

In September 2016, we achieved a major milestone by opening a new, dedicated pre-production facility. This enables us to digitally design, develop, test and perfect new manufacturing methods for the entire site as modern production comes online over the next four years.

When complete, the 1.5 million square feet manufacturing facility will leverage the latest technologies and production methods which, alongside a highly-skilled workforce, will establish our Indianapolis plant as one of the most competitive manufacturing facilities in the world. The site will also house new technology development capabilities which we will apply to our next-generation engines in the US.

We currently employ about 4,000 people in Indianapolis, where engines are designed, assembled and tested for US defence aircraft, civil helicopters, regional and business jets and power systems for US naval vessels.



1. Turbines manufacturing and pre-production method development.

2. Production assembly and test, and customer delivery centre.

3. Experimental assembly and test labs, and LibertyWorks®.

# Making transformation happen

Civil  
AerospaceDefence  
AerospacePower  
Systems

Marine



Nuclear



Group

Simpler  
organisationSimpler  
processesRight behaviours  
and culture

**Competitiveness:**  
improved productivity and cost

£200m  
cost savings

On track to deliver £200m of annual cost savings by the end of 2017.

25%  
growth in large engines

Significant improvement in Trent 1000 and Trent XWB lead times enabling a 25% year-on-year increase in production output of large aero engines.

**Continuous improvement:**  
embedded change for ongoing results

30%  
performance improvement

30% improvement in the lead time and cost of instrumentation and control products for civil nuclear reactors.

42,000  
employees involved in improvement activities

42,000 employees involved in 2016 continuous improvement activities, supported by a network of over 700 facilitators and champions.

**Pace and simplicity:**  
the right tools to stay ahead of our competitors

20%  
reduction in senior management positions

Five market-facing businesses have replaced a divisional structure with significant reduction in management layers and central bureaucracy.

**Accountability:**  
clear ownership and responsibility to deliver

Increased P&L accountability

Full accountability for legacy spares business has allowed service teams in Defence Aerospace to react faster to customer needs and increase revenues.

Efficiencies in Marine

Restructuring of the Marine business has placed full accountability under four market-facing businesses, while right-sizing the organisation to meet the challenges of the offshore marine market.

## PRIORITY 3

### **Rebuilding trust and confidence; steady year with few major surprises**

2016 out-turned ahead of expectations with only a few unexpected developments from an operational perspective, despite the challenges presented by a changing macro-environment and some known weaknesses in the business. The expected headwinds in Civil Aerospace and Marine transpired largely as forecast. In addition, the benefits of outperformance on transformation savings and foreign exchange hedging more than offset some additional programme costs in Civil Aerospace and a range of other smaller one-off items. As a result, external expectations remained largely unchanged throughout the year.

The introduction of the new revenue reporting standard, IFRS 15 *Revenue from Contracts with Customers*, will have a significant impact on how we present our revenues and profits, particularly for Civil Aerospace. As a result, a combination of significant in-house analysis and appropriate progressive communication was undertaken, culminating in a capital markets' event in November. This set out in some detail how we now expect the new standard to change the presentation of our financial results, illustrated through a re-presentation of 2015 performance. All the materials from this investor event were shared at the time and are available on the Company's website at [www.rolls-royce.com](http://www.rolls-royce.com).

### **Priorities for 2017 broadly unchanged; additional focus on developing our long-term vision and strategy**

Overall, the priorities for 2017 are largely unchanged from those set out in 2016. We will continue to invest in strengthening our focus on engineering, operational and aftermarket excellence to drive long-term profitable growth. At the same time, 2017 will be an important year to drive incremental savings from our transformation programme.

At our capital markets' event in November 2016 we set out how our focus is turning towards the Group's long-term goals. Over

### **Rebuild trust and confidence in our long-term growth prospects**

the next few months, the senior leadership team will be concluding the review of our strengths and investment opportunities to define an appropriate vision for the business and the best way we can deliver sustainable shareholder value. Conclusions from this work will be shared during 2017.

Rebuilding trust and confidence in the Group and its long-term prospects remains a key priority for the management team. The focus remains on progressive, effective communication combined with strong operational delivery. While we have made a steady start, more remains to be done. The addition of new management and a renewed focus within the business leadership teams, with clear goals and stronger accountabilities, should provide a strong platform for further progress in 2017.

### **Acquisition of outstanding 53.1% stake in Industria de Turbo Propulsores SA (ITP)**

We were notified in early July that SENER Grupo de Ingeniería SA (SENER) had decided to exercise the put option in respect of its 53.1% stake in ITP. This decision provides us with the opportunity to effectively consolidate several key large engine risk and revenue sharing arrangements (RRSAs) into the business, strengthen our position on a number of important defence aero engine platforms and will enable us to enjoy greater benefits from future aftermarket growth.

Under the shareholder agreement, the consideration of €720m will be settled over a two-year period following completion in eight equal, evenly-spaced instalments. The agreement allows flexibility to settle up to 100% of the consideration in the form of Rolls-Royce shares. Final consideration as to whether the payments will be settled in cash, shares or cash and shares will be determined by Rolls-Royce during the payment period. Completion remains subject to regulatory clearances and is expected in mid-2017.

The acquisition of ITP strengthens our position on Civil Aerospace large engine growth programmes by capturing significant additional value from its long-term aftermarket revenues, including

the high volume Trent 1000 and Trent XWB engines, where ITP has played a key role as a participant in RRSAs. It also enhances the Group's own manufacturing and services capabilities and adds value to the Defence Aerospace business, particularly on the TP400 and EJ200 programmes.

Further details of its impact on the Group will be made available on completion of the acquisition.



### **New Trents to enter service**

2017 will be a milestone year for our Civil Aerospace business and its Trent engine programmes, with three new engines approaching entry into service.

The Trent 1000 TEN will power all variants of the Boeing 787 Dreamliner family and draws on technologies from the Trent XWB and Advance engine programmes.

The Trent XWB-97 will be the sole powerplant for the Airbus A350-1000. Delivering an increased 97,000lbs of thrust, the new engine will allow Airbus to increase the aircraft's payload, range and maximum take-off weight.

The Trent 7000 builds on the success of its predecessor, the Trent 700, delivering a 10% improvement in specific fuel consumption while halving noise output. It will be the sole powerplant for the Airbus A330neo.

Taken together, these developments underline the scale of our commitment to research and technology and delivering on the needs of our customers.

## Priorities For 2017

### **1 Strengthen our focus to drive long-term profitable growth**

#### Engineering excellence

Investing in and developing the excellence of our engineering to produce high-performance power systems.

#### Operational excellence

Transforming our manufacturing and supply chain to embed a lean approach across our facilities and processes.

#### Capturing aftermarket value

Leveraging our installed base, product knowledge and capabilities to provide outstanding services to customers.

### **2 Sustain the strong start to our transformation programme.**

### **3 Continue to rebuild trust and confidence in our long-term growth prospects.**

### **4 Develop our long-term vision and strategy.**

**Underpinned by a commitment to developing our people and our culture in a safe and ethical environment.**

#### **Outlook for 2017**

After a better than expected 2016, year-on-year incremental progress will be modest. Our medium-term trajectory for revenue, profit and free cash flow remains unchanged. On a constant currency basis, Group revenue for 2017 should be marginally higher than that achieved in 2016, despite expected further weakening in offshore oil & gas markets in Marine. Underlying improvements in performance should be driven largely by transformation savings and free cash flow should benefit from increased aftermarket cash revenues in Civil Aerospace, further improvements in working capital efficiency and cost savings. As a result, we expect a modest performance improvement overall and we

are targeting free cash flow to be similar to that achieved in 2016. Individual outlooks are provided in the Business review starting on page 18.

#### **Looking further ahead: long-term outlook remains strong**

We continue to see value in the underlying strengths of our business: the underlying growth of our long-term markets; the quality of our mission-critical technology and services; and the strength of customer demand for these which is reflected in our strong order book. While we have near-term challenges and some core execution priorities, these constants provide us with confidence in a strong, profitable and cash-generative future.

The successful roll-out of new engines, led in particular by the Trent XWB, Trent 1000 and Trent 7000, together with a growing aftermarket, is expected to drive significant revenue growth over the coming ten years as we build towards a 50% plus share of the installed widebody passenger market. As a result, we remain confident that the important investments we are making to modernise our production will create a strong platform to drive customer service and strong cash flows, together with the current investments in new products and the streamlining of our existing product portfolios to ensure we are providing high-value, cost-competitive products into our target end markets.

# Our business model

Our business model seeks to capture value from markets for high-performance power. We do this by developing advanced, integrated power and propulsion systems and providing long-term aftermarket support and delivery of outstanding customer services. We seek to recoup our investment through developing superior products, many of which are selected for use on major multi-year programmes.

## Value creation

Our highly-skilled people create value through a combination of a deep research and product development capability, world-class technology and engineering expertise, and a substantial and experienced supply chain with many relationships and collaborations going back over 25 years.

We make significant investments in advanced technology and engineering

programmes to deliver market-leading products together with the manufacturing capability to produce them.

## Outputs

The outputs from the operation of this business model are: long-term value creation for our customers; a sustainable and competitive market position; and the generation of returns for our shareholders.

Our long-life products typically operate in challenging environments where they are expected to deliver sustained levels of performance, such as fuel efficiency and reliability. For our customers, they deliver value through enhancing the competitiveness of their own product or service, whether airframe or other transport or industrial application.

The product offering is often combined with flexible service options to best suit each customer's operating needs. In certain markets we further strengthen our customer relationships through long-term service agreements where we commit to

deliver exceptional standards of service, including high levels of product operational availability. This provides significant value to customers and, in return, we achieve long-term predictable revenues.

Our long-term competitive position also relies on having a full lifecycle design, sourcing and manufacturing platform which is capable of developing products which incorporate advanced materials often operating close to the limits of their capabilities. Our operational focus is on ensuring we can deliver these on-time and in increasing scale. As production levels rise, we will benefit from increasingly cost-efficient manufacturing and lower unit costs.

By growing our installed base of power systems and leveraging our aftermarket service activities, we enhance our revenue, profit and cash flow. Cash flow is then invested to support future product development and technology programmes, driving growth while providing shareholder returns.

## How we create value

### Inputs

- People and expertise
- R&D capability
- Supply chain collaboration
- Advanced manufacturing
- Customer relationships
- Financial investment



### Value creation

#### Customers:

Differentiated products aligned to their operating requirements

#### Corporate:

Strong market position  
World-class development and production facilities

#### Shareholders:

Long-term cash flow generation



#### Invest in R&D and skilled people

Developing and protecting leading-edge technology and deploying it across our businesses allows us to compete on a global basis and creates high barriers to entry.



#### Develop technology that anticipates customer needs

Our deep understanding of customer needs drives the development of new technologies and products.



#### Disciplined capital allocation

We allocate our capital to achieve a balance of financial strength and liquidity to deliver commercial advantage and sustainable long-term shareholder returns.



#### Design, make and service world-class products

We win and retain customers by developing and delivering products and services that provide more capability and offer better through-life value than those of our competitors.



#### Manufacturing capability

We manufacture cost-efficiently through a combination of economies of scale, developing a lean enterprise and integrated management of our supply chain.



#### Grow market share and installed base

Our substantial order book for both original equipment and services provides good visibility of future revenues and provides a firm foundation to invest with confidence.

## Engineering excellence

- Industry-leading R&D
- Proven product reliability
- Exceptional long-life products
- Differentiated products and services

## 2

## Operational excellence

- Strong supply chain partnerships
- Sustained cost reduction
- Transforming to world-class production capability
- Cost-focused lean enterprise
- High performance culture

## 3

## Capturing aftermarket value

- Long-term relationships with civil and defence customers
- Decades of in-service experience
- Flexible range of service offerings
- Growing installed base and global aftermarket footprint



#### Investment in future programme development

We make significant investment in development programmes which we believe will deliver cost-efficient and competitive next-generation products and services.



#### Secure and maximise aftermarket opportunity

Our equipment is in service for decades. Our deep design knowledge and in-service experience ensures that we are best placed to optimise product performance and availability.



**David Smith**  
Chief Financial  
Officer

# Financial summary

## Order book and order intake

During the year, our order book increased by £3.3bn to £79.8bn, led by Civil Aerospace, which, alongside strong order intake, also benefited from a £2.1bn uplift from a five cent decrease to our long-term US dollar planning rate. Order intake in our Marine business was poor, largely as a result of the continuing weak offshore market. Overall, orders were also lower in Defence Aerospace, Power Systems and Nuclear, although we view the prospects for these businesses as unchanged, reflecting long-term orders won in previous years.

## Underlying trading

Underlying Group revenue declined 2% in 2016 compared to 2015 on a constant currency basis, reflecting declines in both original equipment revenue (down 2%) and services (down 3%) and driven almost entirely by Marine. By business on a constant currency basis, Civil Aerospace revenue was unchanged, Defence Aerospace revenue increased 1%, Power Systems revenue decreased 1%, Marine revenue

decreased 24% and Nuclear revenue increased 11%.

Underlying profit before financing of £915m (2015: £1,492m) was 45% lower on a constant currency basis, led by a significant reduction in Civil Aerospace profit. This reflected the previously communicated volume and margin reductions on link-accounted Trent 700 engines, reduced business jet original equipment volumes, reduced large engine utilisation and increased technical costs for large engines. In addition, reported 2015 numbers included one-off benefits from a methodology change in respect of risk assessment and reversal of impairments and provisions in respect of a Trent 1000 launch customer, totalling £189m and £65m respectively. These were partially offset by strong lifecycle cost improvements on installed engines and some provision releases. Profit in Defence Aerospace at £384m was 8% lower on a constant currency basis largely reflecting additional costs related to the TP400 programme. Power Systems was down 14% year-on-year principally due to volume reduction and adverse changes to product mix.

Marine profit was sharply lower led by continuing weakness in the offshore markets. Nuclear profit was 37% lower than 2015 due to a lower margin mix in submarine projects.

Underlying gross margin was £2,823m, down 390 basis points to 20.5% largely reflecting the lower margins in Civil Aerospace, Defence Aerospace and Marine. Commercial and administrative costs include accruals for employee incentive schemes in line with our current policies. Given the good performance relative to original plan, these are higher than in the prior year. This contributed to commercial and administrative costs being £71m higher on a constant currency basis year-on-year.

The R&D charge increased by 6% over 2015 on a constant currency basis, reflecting increased charges in Civil Aerospace and the adverse year-on-year effect of the favourable R&D credit adjustment taken in 2015 in Nuclear.

Underlying restructuring charges reduced by £41m reflecting the lower level of underlying restructuring as most costs in 2016 were taken as exceptional due to the nature of the restructuring activities within the Group. The exceptional charge in relation to these programmes was £129m in 2016. This included £92m for the transformation programme launched in November 2015, which delivered in-year benefits of over £60m in 2016. The underlying tax rate for 2016 increased to 32.1% (2015: 24.5%). The primary reasons for the increase are the non-recognition of deferred tax assets on losses in Norway, which reflects the current uncertainty in the oil & gas markets, and a different profit mix with more profits arising in countries with higher tax rates.

## GROUP TRADING SUMMARY

	2015*	Underlying change**	Foreign exchange***	2016
<b>Order book</b>	<b>76,399</b>	<b>3,329</b>	<b>82</b>	<b>79,810</b>
<b>Underlying revenue</b>	<b>13,354</b>	<b>(296)</b>	<b>725</b>	<b>13,783</b>
<i>Change</i>		-2%	+5%	+3%
Underlying OE revenue	6,724	(112)	415	7,027
<i>Change</i>		-2%	+6%	+5%
Underlying services revenue	6,630	(184)	310	6,756
<i>Change</i>		-3%	+5%	+2%
<b>Underlying gross margin</b>	<b>3,203</b>	<b>(577)</b>	<b>197</b>	<b>2,823</b>
Gross margin %	24.0%	-390bps		20.5%
Commercial and administrative costs	(1,025)	(71)	(67)	(1,163)
Restructuring costs	(39)	41	(2)	-
Research and development costs	(765)	(47)	(50)	(862)
Joint ventures and associates	118	(11)	10	117
<b>Underlying profit before financing</b>	<b>1,492</b>	<b>(665)</b>	<b>88</b>	<b>915</b>
<i>Change</i>		-45%	+6%	-39%
<b>Underlying operating margin</b>	<b>11.2%</b>	<b>-480bps</b>		<b>6.6%</b>

\* 2015 figures have been restated as a result of £21m of costs previously reported in 'cost of sales', being reclassified as 'other commercial and administrative costs' to ensure consistent treatment with 2016.

\*\* Order book underlying change includes £2.1bn increase from a change to our long-term US dollar planning rate.

\*\*\* Translational foreign exchange impact.

## Reported results

Reported results are impacted by the mark-to-market adjustments driven by movements in USD:GBP and EUR:GBP exchange rates over the year. In addition, we recognised the £671m charge related to the agreements reached in respect of regulatory

investigations, a goodwill impairment charge of £219m largely reflecting a more cautious outlook for our Marine business and £129m of exceptional restructuring cost. As a result, the reported loss before tax was £(4,636)m (2015: a profit of £160m).

### Free cash flow

Free cash inflow in the year was £100m (2015: £179m), better than expected, reflecting strong cash collections from a number of key customers at the very end of the period and an improvement in underlying working capital performance. This helped offset the lower profit before tax and higher expenditure on property, plant and equipment and intangibles. The latter reflects the increased capital investment in new manufacturing capacity, higher capitalised R&D, mainly related to the Trent 1000 TEN and higher certification costs on the Trent XWB-97. More details on the movement in trading and free cash are included in the Funds flow section of the Financial review.

While some of this positive variance is a timing impact and likely to reverse early in 2017, improved efficiencies should drive a level of sustainable benefit.

### Net debt and foreign currency

The Group is committed to maintaining a robust balance sheet with a healthy, investment-grade credit rating. We believe this is important when selling high-performance products and support packages which will be in operation for decades. Standard & Poor's updated its rating in January 2017 to BBB+ from A-/negative outlook and Moody's maintained a rating of A3/stable.

During 2016, the Group's net debt position increased from £111m to £225m, reflecting the £100m free cash inflow, shareholder payments of £301m and £154m for the increased investment in our approved maintenance centre joint ventures following receipt of regulatory approval for the changes to the joint venture agreements in June 2016. In April, we increased our revolving credit facilities by £500m to £2bn to provide additional liquidity.

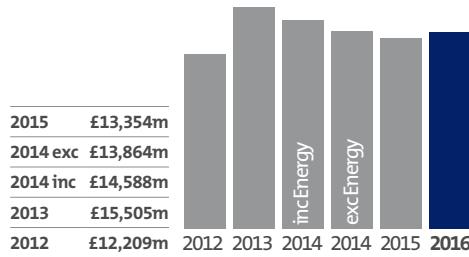
The Group hedges the transactional foreign exchange exposures to reduce volatility to revenues, costs and resulting margins. The hedging policy sets maximum and minimum cover ratios of hedging for net

transactional foreign exchange exposure. It allows us to take advantage of attractive foreign exchange rates, whilst remaining within the cover ratios. A level of flexibility is built into the hedging instruments to manage changes in exposure from one period to the next and to reduce volatility by smoothing the achieved rates over time.

The most significant exposure is the net US dollar income which is converted into GBP (currently approximately \$5bn per year and forecast to increase significantly by 2021). Following the fall in the value of sterling, which resulted from the outcome of the EU referendum, additional cover has been taken out to benefit from the favourable rates. This has resulted in an increase in the nominal value of the hedge book to approximately \$38bn at the end of 2016 (end 2015: \$29bn) together with a reduction in the average rate in the hedge book to £/\$1.55 (end 2015: £/\$1.59). The movement in the average achieved rate year-on-year was around two and a half cents, providing a net underlying Group benefit, after balance sheet effects (the movement in achieved rate also affects creditor and debtor balances of hedged cash flows), of around £20m.

UNDERLYING REVENUE

**£13,783m**



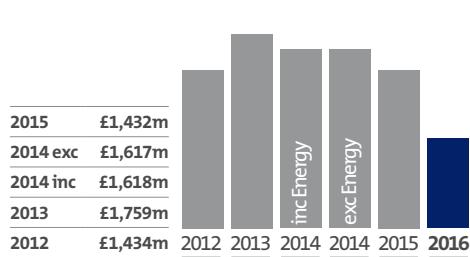
REPORTED REVENUE

**£14,955m**



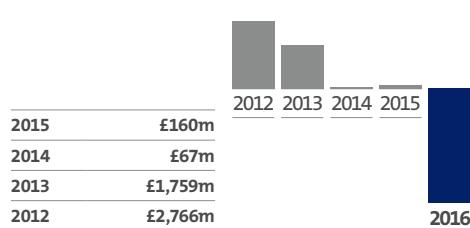
UNDERLYING PROFIT BEFORE TAX

**£813m**



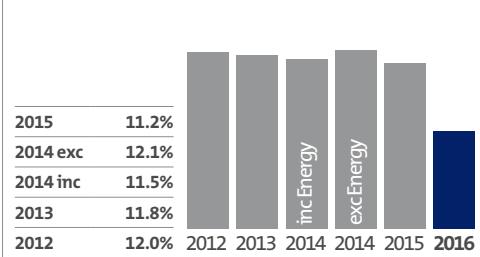
REPORTED (LOSS)/PROFIT BEFORE TAX

**£(4,636)m**



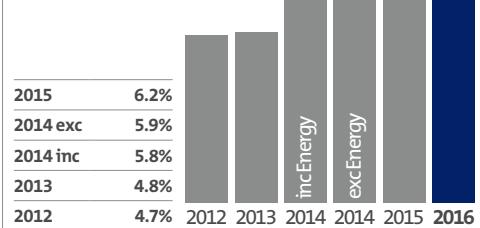
UNDERLYING OPERATING MARGIN

**6.6%**



NET R&amp;D AS A PROPORTION OF UNDERLYING REVENUE

**6.8%**



# Business review



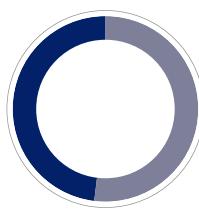
## Summary

The Civil Aerospace business is a major manufacturer of aero engines for the large commercial aircraft and corporate jet markets. We power 35 types of commercial aircraft and have more than 13,000 engines in service around the world.

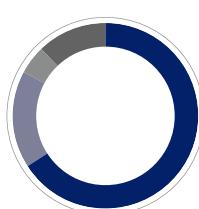
## Key highlights

- Underlying revenue unchanged; gross margins lower:
  - Original equipment (OE): increased deliveries of newer Trent engines but lower link-accounted Trent 700 and business aviation sales reduced achieved margins.
  - Services: growth from in-production large engine fleet, but declining regional and older large engine fleet aftermarket revenues; increase in technical costs for large engines, including the Trent 700 and Trent 900, largely mitigated by foreign exchange benefits.
- £4.4bn order book growth; includes £2.1bn benefit from long-term US dollar planning rate change.
- New programmes: Trent 1000 TEN received EASA certification in July; first test run of new UltraFan® gearbox; first flight of the Airbus A350-1000 powered by the Trent XWB-97.
- Supply chain modernisation reducing costs and increasing capacity for Trent XWB ramp up.
- 2017 outlook: modest growth in revenue and profit; cost improvements offsetting OE and aftermarket mix effects.

### UNDERLYING REVENUE MIX



### UNDERLYING REVENUE BY SECTOR



In 2016, the Trent 1000 was selected to power the first test flight of the Boeing 787-10 Dreamliner. It has already powered the first flights of the 787-8 and 787-9.

## CIVIL AEROSPACE

## Operational review

### Financial overview

Overall, underlying revenue for Civil Aerospace was unchanged (up 2% at actual exchange rates). OE revenue was unchanged, with increases from higher volumes of large engines being offset by the decline in business jet engines and V2500 modules. Aftermarket revenue was down 1% despite strong growth from our in-production engines.

OE revenue from *Large engine: linked and other\** was up 2% reflecting increased volumes of Trent 900s and a higher number of spare Trent XWB engines, partly offset by Trent 700 volume and price reductions, ahead of the introduction of the Trent 7000 for the Airbus A330neo. Sales of spare engines to joint ventures, included in *Large engine: linked and other\**, generated revenue of £288m (2015: £189m).

OE revenue from *Large engine: unlinked installed\** increased 47%, led by higher volumes of Trent XWBs.

\* See table on page 20.

Large engine service revenue reflected double digit growth from our in-production engines which more than offset the reduction from older engines, including the expected lower year-on-year utilisation of Trent 500 and Trent 800 engines. Time and material revenue reduced, as a result of fewer overhauls of engines across the out-of-production fleet. Contract accounting effects within service revenue in 2016 were significantly lower than prior year. As a result, while there was a small foreign exchange improvement in 2016, underlying service revenue from large engines was down 4%. Adjusting for contract accounting effects, service revenue from large engines would have been up 2%.

Revenue from *business aviation*\* OE engine sales was, as expected, lower, particularly for the BR710 engines, reflecting general market weakness and a transition to newer non Rolls-Royce powered platforms. Volumes of our newer BR725 engine, which powers the Gulfstream G650 and G650ER, were stable. Overall, *business aviation*\* OE revenues declined 25% while aftermarket revenue was slightly down. Service revenue from our *regional*\* jet engines declined 14%, reflecting retirements and reduced utilisation of relevant fleets by North American operators in particular.

On the V2500\* programme, which powers aircraft including the Airbus A320, revenue

from OE modules declined 10% reflecting the production slow-down as Airbus transitions to the A320neo, powered by another engine provider. However, V2500\* service revenues were 21% higher, reflecting price escalation on flying hour payments together with increased overhaul activity. Overall gross margins for Civil Aerospace were 16.8% (2015: 22.0%), declining £397m from 2015 on a constant currency basis. The main headwinds were as forecast at the start of the year: OE reductions to the Trent 700 programme; business aviation engines and V2500 modules; reduced utilisation and fewer overhauls of our out-of-production Trent 500 and Trent 800 and RB211 engines; and the declining regional aftermarket. In addition, we also incurred programme charges of around £30m for engines still in development. These were partially offset by the release, after accounting and legal review, of accruals related to the termination in prior years of intermediary services, totalling £53m (2015: £nil). Gross margin from spare engine sales to joint ventures contributed £97m (2015: £67m). The in-year net benefit from long-term contract accounting adjustments totalled £90m (2015: total benefit of £222m, which included a £189m one-off benefit associated with the refinement of our methodology for risk assessment of future revenue). The £90m included a £217m benefit from lifecycle cost improvements (2015: benefit of

## ORDER BOOK

# £71.4bn

£140m). We also recognised in this period a £35m benefit from a five cent change (2015: £nil) to our estimated long-term US dollar to sterling exchange rate to bring our own planning rate within updated external benchmark long-term forecast data. These benefits were offset by technical costs of £98m (2015: £24m) for large engines, including the Trent 900, relating to the need for increased shop visits in the short term, and the Trent 700, where we are upgrading the engine management system, together with a charge of £64m (2015: £83m), reflecting other operational changes.

The year-on-year change was also impacted by a one-off £65m write-back in 2015 of a previously recognised impairment of contractual aftermarket rights (CARs) for sales to a launch customer and the release of a related provision; in 2016 these sales were capitalised as CARs.

Costs below gross margin were £89m higher than the previous year at £818m on an underlying basis. Within this, R&D charges of £568m were £34m higher, reflecting higher spend on key programmes, particularly in respect of the Trent 7000 which are being expensed ahead of capitalisation and lower development cost contributions from risk and revenue sharing partners, partly offset by increased R&D capitalisation on the Trent 1000 TEN.

Underlying commercial and administrative costs were £43m higher than 2015 reflecting increased employee incentive charges. Underlying restructuring costs of £11m were £4m higher than 2015 and profits from joint ventures and associates were down £8m.

As a result, profit before financing and tax was 55% down, reflecting a combination of lower overall gross margins, higher commercial and administrative, R&D and restructuring costs and reduced joint venture and associate profits. Taking account of foreign exchange effects, underlying profit before financing and tax was £367m (2015: £812m).

## CIVIL AEROSPACE | KEY FINANCIAL DATA

£m	2015	Underlying change*	Foreign exchange**	2016
<b>Order book</b>	<b>67,029</b>	<b>4,395</b>	<b>2</b>	<b>71,426</b>
<b>Engine deliveries</b>	<b>712</b>	<b>(63)</b>		<b>649</b>
<b>Underlying revenue</b>	<b>6,933</b>	<b>(27)</b>	<b>161</b>	<b>7,067</b>
<i>Change</i>		—	+2%	+2%
Underlying OE revenue	3,258	14	85	3,357
<i>Change</i>		—	+3%	+3%
Underlying services revenue	3,675	(41)	76	3,710
<i>Change</i>		-1%	+2%	+1%
<b>Underlying gross margin</b>	<b>1,526</b>	<b>(397)</b>	<b>56</b>	<b>1,185</b>
Gross margin %	22.0%	-570bps	16.8%	
Commercial and administrative costs	(296)	(43)	(3)	(342)
Restructuring costs	(7)	(4)	—	(11)
Research and development costs	(515)	(34)	(19)	(568)
Joint ventures and associates	104	(8)	7	103
<b>Underlying profit before financing</b>	<b>812</b>	<b>(486)</b>	<b>41</b>	<b>367</b>
<i>Change</i>		-60%	+5%	-55%
<b>Underlying operating margin</b>	<b>11.7%</b>	<b>-700bps</b>		<b>5.2%</b>

\* Order book underlying change includes £2.1bn increase from a change to our long-term US dollar planning rate.

\*\* Translational foreign exchange impact.

## Trading cash flow

Trading cash flow before working capital movements of £22m declined year-on-year by £462m, driven by a reduction in underlying profit before financing of £445m and increased property, plant and equipment additions. There were also increased certification costs driven by the Trent XWB-97 and higher R&D capitalisation of the Trent 1000 TEN development costs, offset in part by other timing differences including provision movements.

The overall trading cash flow improvement of £43m resulted largely from a significant year-on-year improvement in working capital, due mainly to differences in the timing of payments to suppliers and increased deposits, offset in part by an increase in inventory. In addition, reflecting the lower profits recorded on our linked engines such as the Trent 700, net long-term contract debtor additions were also lower.

## TotalCare net assets and contractual aftermarket rights

TotalCare net assets increased in 2016 by £230m (2015: £406m) to £2.44bn reflecting accounting for new linked engines of £432m (2015: £521m), contract accounting adjustments taken in the year of £90m (2015: £222m) offset by the cash inflows and net other items of £(292)m (2015: £(337)m). It should be noted that the £230m net asset increase is different from the £246m used in the trading cash flow above because of foreign exchange effects on evaluating TotalCare net debtor balance movements.

The CARs balance increased by £169m (2015: increase of £156m) to £574m reflecting higher sales of unlinked Trent XWB engines partly offset by engine cost improvements.

## Investment and business development

Order intake of £14.1bn in 2016 for Civil Aerospace was £1.3bn higher than the previous year. The order book closed at £71.4bn, up £4.4bn or 7% from 2015, which included a £2.1bn benefit from the change in the long-term planning foreign exchange rate discussed previously. Excluding this, the order book was up 3%.

Significant orders in 2016 included a US\$2.7bn order from Norwegian for Trent 1000 engines, an order from Garuda Indonesia worth \$1.2bn for Trent 7000 engines and a \$900m order from Virgin Atlantic for Trent XWB. All of these include the provision of long-term TotalCare engine services.

### Foundations for future growth are built from our investment in engineering excellence

During the year, we committed resources in order to ensure we made significant

## CIVIL AEROSPACE | REVENUE SEGMENTATION

	2015		Underlying change	Underlying change %	Foreign exchange £m	2016	
	£m	% of total				£m	% of total
<b>Original equipment</b>	<b>3,258</b>	<b>48%</b>	<b>14</b>	—	<b>85</b>	<b>48%</b>	<b>3,357</b>
Large engine: linked and other	1,570	23%	32	+2%	2	23%	1,604
Large engine: unlinked installed	504	7%	237	+47%	1	10%	742
Business aviation	903	14%	(228)	-25%	82	11%	757
V2500	281	4%	(27)	-10%	—	4%	254
<b>Service</b>	<b>3,675</b>	<b>52%</b>	<b>(41)</b>	<b>-1%</b>	<b>76</b>	<b>52%</b>	<b>3,710</b>
Large engine	2,371	34%	(84)	-4%	2	32%	2,289
Business aviation	425	6%	(13)	-3%	40	6%	452
Regional	360	5%	(52)	-14%	34	5%	342
V2500	519	7%	108	+21%	—	9%	627

## CIVIL AEROSPACE | TRADING CASH FLOW

£m	2016	2015	Change
<b>Underlying profit before financing</b>	<b>367</b>	<b>812</b>	<b>(445)</b>
Depreciation and amortisation	491	410	81
<b>Sub-total</b>	<b>858</b>	<b>1,222</b>	<b>(364)</b>
CARs additions	(208)	(161)	(47)
Property, plant, equipment and other intangibles	(739)	(502)	(237)
Other timing differences*	111	(75)	186
<b>Trading cash flow pre-working capital movements</b>	<b>22</b>	<b>484</b>	<b>(462)</b>
Net long-term contract debtor movements	(246)	(406)	160
Other working capital movements	267	(78)	345
<b>Trading cash flow**</b>	<b>43</b>	—	<b>43</b>

\* Includes timing differences between underlying profit before financing and cash associated with: joint venture profits less dividends received; provision charges higher /lower than cash payments; non-underlying cash and profit timing differences (including restructuring); and financial assets and liabilities movements including the effect of foreign exchange movements on non-cash balances.

\*\*Trading cash flow is cash flow before: deficit contributions to the pension fund; taxes; payments to shareholders; foreign exchange on cash balances; and acquisitions and disposals.

progress across all key engineering programmes in 2016. The Trent 1000 TEN engine undertook its first test flight in March and received its European Aviation Safety Agency (EASA) certification on 11 July. The Trent 1000 TEN will power all variants of the Boeing 787 Dreamliner family and will power the first flight of the 787-10 in 2017.

In November, the latest version of the Trent XWB, the higher thrust -97 engine, successfully powered the first flight of the Airbus A350-1000 in Toulouse. The Trent 7000 engine, which will exclusively power the Airbus A330neo, undertook ground testing for the first time and we started assembly of the first flight test engines.

In respect of future technologies, the Advance3 large engine demonstrator is proceeding well. The engine will test the new core architecture for future engine families and other key technologies such as lean burn combustion, ceramic matrix composites (CMC), CastBond (specialist turbine manufacturing) plus additive layer manufacturing (or 3D printing). It is currently in development at our Bristol, UK, facility with all core modules advancing well.

In September, we successfully ran the world's most powerful aerospace gearbox for the first time under the joint venture Aerospace Transmission Technologies (ATT). The gearbox is designed to reach up to 100,000 horsepower and is a significant step in the development of the new UltraFan engine technology.

Supporting our commitment to research and development, we also announced a US\$30m expansion into a new facility in Cypress, California, that will be dedicated to research and development of ceramic matrix composite materials and processes for use in next generation aircraft engine components.

#### **Investing in new aerospace supply chain capabilities to help drive operational excellence**

In January 2016, we announced plans to invest more than £30m at our site in Washington, Tyne & Wear, UK, creating a new facility to manufacture a range of aerospace discs for in-service engines. The new facility is expected to be fully operational in 2018 and will have the capacity to manufacture well over 1,500 fan and turbine discs a year for use in a wide range of existing engines.

The construction of a £50m extension to our wide-chord fan blade facility in Barnoldswick, UK, started in December. The expanded facility will be able to manufacture 6,000 large Trent fan blades a year, almost twice its current capacity. We also announced the creation of a centre of excellence in structures & transmissions at the same site. The new centre, supported by £20m of investment, will manufacture many of the complex structures that feature in all Rolls-Royce aero engines.

#### **Good progress strengthening our aerospace aftermarket service offering**

We have continued to invest in our service capabilities to support our customers with state-of-the-art facilities and relevant products and services, particularly within our portfolio of TotalCare offerings.

During the year, we completed changes to three Approved Maintenance Centre (AMC) joint ventures. This included investing £154m to increase our stake in both Hong Kong Aero Engine Services Limited (HAESL) and Singapore Aero Engine Services Pte Limited (SAESL) to 50%. These AMCs support our strategy to offer a competitive, capable and flexible Trent service network to meet the changing needs of customers across the lifecycle of engines and to support the growing Trent engine fleet.

Additionally, we announced further details of a new AMC in Abu Dhabi with Mubadala Development Company, the emirate-based investment and development organisation. This purpose-built facility will carry out work on the Trent XWB.

We also announced that we are further expanding our global network of Authorised Service Centres (ASC) for business aviation aircraft under our CorporateCare® service provision for customers. Rolls-Royce now has 62 ASCs in place with key maintenance providers worldwide.

Following the launch of SelectCare in 2016, we secured our first agreement for Trent 800 engines as part of a wide-ranging deal with Delta Airlines.

#### **Civil Aerospace outlook**

On a constant currency basis, our Civil Aerospace business should deliver modest growth in revenue and profit in 2017, supported by large engine aftermarket

growth, further lifecycle cost reductions and a higher level of R&D capitalisation. Business jet demand is expected to weaken further, as will the demand for aftermarket services to support Rolls-Royce powered regional aircraft. After a better year for trading cash flow in 2016, we now expect this to be broadly unchanged year-on-year reflecting higher volumes of cash-loss-making engines offsetting the positive effects of higher aftermarket cash revenues.

We expect the TotalCare net asset to peak in the next 12 months at between £2.5bn and £2.7bn, reflecting further targeted lifecycle cost improvements and other timing differences between cost and cash.

#### **Positive market developments continue to drive long-term growth in Civil Aerospace**

The long-term positive market trends for our leading power and propulsion systems remain unchanged despite some near-term uncertainties in Civil Aerospace that continue to impact business jet engine production volumes and service activity on older large engines. The long-term trends driving demand for growth in large passenger aircraft, business jets, power systems and maritime activity remain strong; in particular a growing aspirational and mobile middle-class, particularly in Asia, and globalisation in business, trade and tourism.

While recent political and economic developments have added some uncertainty to near-term utilisation, we continue to expect that strong widebody airframe demand – driven by the need for newer, more fuel-efficient aircraft – should provide resilience to manufacturing schedules over the next few years as the industry undergoes a strong replacement cycle.

#### **New airframe growth and transitions are in line with expectations**

Preparations for the transition of the Airbus A330ceo to A330neo models are also progressing well and once the transition is completed we will benefit from an exclusive position with the new Trent 7000 on the A330neo.

The roll-out of new engines, including the Trent XWB for the highly successful Airbus A350 family, will significantly grow our market share and the installed base of new engines that will deliver strong aftermarket revenues for decades to come.

## Market review

Rolls-Royce is one of the world's leading civil aero-engine manufacturers with particular strengths in engines for civil widebody aircraft and large business jets, underpinned by our strength and continued investment in technology.

We have a strong market position on widebody aircraft produced by the world's two major aircraft manufacturers: Airbus and Boeing, who are broadly consistent in forecasting air traffic growth (revenue passenger kilometres) of approximately 5% compound annual growth rate over the next 20 years. In the engine market for narrowbody aircraft, we continue to supply some parts and services for the IAE V2500 engine family.

We are market leaders in the large business jet fleet market powering aircraft from most of the main aircraft manufacturers.

## Key Rolls-Royce differentiators

-  Barriers to entry are extremely high. We invest heavily to maintain market-leading technologies and system level integration capabilities to deliver the best engine performance for our customers. We offer a wide range of aftermarket services which provide flexible and cost-effective options to our customers and build long-term relationships.

## Market dynamics

- Overall there has been a slowdown in all major geographical markets for new aircraft orders after a period of higher than normal order placement for new airframe products in recent years (principally Airbus A350 XWB and A330neo, and Boeing 787 and 777X).
- Long-term growth in the number of widebody aircraft in the global fleet has historically been strongly correlated to global GDP growth and disposable income.
- Historically, growth has recovered quickly following major economic shocks. The geographic spread of our installed base and wide customer base spreads our risk and reduces our exposure to any one shock.
- Our current share in the widebody engine market is at 32% of the installed passenger fleet and is expected to exceed 50% early in the next decade.
- Older widebody aircraft are experiencing reduced utilisation by certain airlines.
- Trent-powered aircraft are starting to transition from their original operators to other operators as the fleet matures. This year, 46 Trent-powered aircraft transitioned, 13 of which were Trent 800-powered Boeing 777 aircraft.
- Over 90% of the Rolls-Royce widebody engine fleet is covered by our TotalCare service agreements.
- Over 65% of Rolls-Royce business jet engines are covered by our CorporateCare service agreements.
- Long-term demand for large business jets is related to global economic growth and increases in the number of high net worth individuals; the sector has historically been fairly resilient to financial shocks.
- The business jet market is slowly recovering in the US (our largest market), but is currently going through a slowdown elsewhere due to political tensions and customer anticipation of new models about to enter into service.
- Aftermarket demand for engines on 50-70 seat aircraft is reducing in line with expectations.

## Competition

- GE is the main competitor supplying engines in the widebody sector. In 2016, deliveries of engines for widebody passenger aircraft were split Rolls-Royce 38%, GE 54%, Engine Alliance 6% and Pratt & Whitney 2%.
- Rolls-Royce is well positioned on all Airbus widebody airliner programmes and competes with GE on the Boeing 787 family.
- Rolls-Royce is the sole engine provider on the Airbus A350 XWB family where 810 aircraft have been ordered so far.
- GE is the sole engine provider on the Boeing 777X aircraft, scheduled to enter into service in 2020 where 306 have been ordered so far.
- In large business jets, the main competition is GE, Pratt & Whitney and Safran.
- Rolls-Royce has 3,100 powered business jets flying, representing 55% market share of the large/very large business jet fleet.

## Business risks

- If we experience a major product failure in service, then this could result in significant adverse financial and reputational consequences and potential litigation.
- If an external event or severe economic downturn significantly reduces air travel and thereby reduces engine flying hours and demand for aircraft, then our financial performance may be impacted.
- If our aircraft manufacturer customers significantly delay their production rates, then our financial performance may be impacted.
- If we fail to achieve cost reductions at the necessary pace, then our ability to invest in future programmes and technology may be reduced.
- If we experience significant pricing pressure from increased competitor challenge in our key markets, then our financial performance may be impacted.
- If we suffer a major disruption in our supply chain, then our delivery schedules may be delayed, damaging our financial performance and reputation.
- If there are significant changes to the regulatory environment for the airline industry, then our market position may be impacted.



## Trent XWB

The latest version of the Rolls-Royce Trent XWB, the most efficient large aero engine flying in the world today, has powered the Airbus A350-1000 aircraft to the skies for the first time. The Trent XWB-97 is the sole powerplant for the

longer range A350-1000, which will enter service in 2017.

The first test flight, which took place in November at Toulouse, France, marked another milestone for the Trent XWB, our largest Civil Aerospace programme.

The Trent XWB-84 has already delivered outstanding performance and reliability

since it first went into service in January 2015, powering the A350-800 and A350-900. The Trent XWB, specifically designed for the A350 XWB, is the fastest-selling widebody engine ever, with more than 1,600 already sold or on order.

[READ MORE AT WWW.ROLLS-ROYCE.COM](http://WWW.ROLLS-ROYCE.COM)

## Opportunities

- Our position and long-term prospects in the widebody sector are strong across our Trent family.
- We continue to invest in our technology demonstrator programmes which underpin our Advance and UltraFan engine programmes. We are well positioned for future aircraft requirements, while also delivering technologies to enhance our existing product portfolio.

- The Trent XWB has now been in service for two years, with 64 Airbus A350s delivered to ten airlines and one lessor. In November, the A350-1000 successfully completed its first flight.
- Rolls-Royce is the sole supplier of engines for the new Airbus A330neo. The Trent 7000 engine is in development, and the first flight is expected in 2017.
- The new Trent 1000 TEN for the Boeing 787 is scheduled to enter service in 2017, which will deliver significant fuel efficiency improvement and an opportunity for greater market capture.

- China's COMAC is also planning a joint programme with Russia's UAC to develop a widebody aircraft, targeting entry into service around 2025. We remain in close dialogue with COMAC and UAC to understand their plans and whether their widebody programme presents an opportunity for Rolls-Royce.
- Our business jet market share is likely to fall in the medium term with the success of new entrants into the large/very large sector, but the market remains attractive and we will continue to invest to improve our position and retain leadership.



### Summary

We are a leading engine maker for the military transport and patrol market and the second largest provider of defence aero-engine products and services globally. Rolls-Royce has 16,000 defence engines in service with 160 customers in over 100 countries.

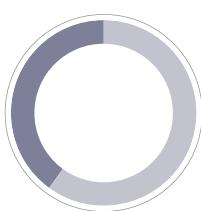
### Key highlights

- Underlying revenue up slightly; modest growth in OE.
- Underlying profit before financing down 8%; reflecting adverse product mix and costs related to the TP400 programme, partially offset by through-life cost-savings on a major EJ200 contract.
- Investing to enhance manufacturing, aftermarket service and closer proximity to core customers.
- 2017 outlook: revenue steady; margin and profit expected to soften from recent levels.



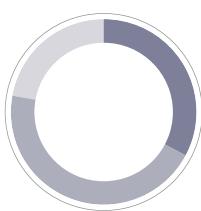
The F-35 Lightning II employing the Rolls-Royce LiftSystem®, demonstrated its vertical landing capabilities in the UK for the first time in 2016.

UNDERLYING REVENUE MIX



OE revenue	40%
Services revenue	60%

UNDERLYING REVENUE BY SECTOR



Combat	33%
Transport and patrol	45%
Other	22%

## DEFENCE AEROSPACE

### Operational review

#### Financial overview

Underlying revenue of £2,209m was up slightly on the prior year. Higher volumes for TP400 production, together with increased Adour engine deliveries, helped original equipment (OE) revenues increase 3%. Service revenues were stable, with lower demand for spare parts offset by increased revenues from long-term Eurofighter Typhoon and C-130J service contracts.

Gross margin declined by £49m, reflecting lower sales of spare parts, an adverse change in OE product mix, additional expenditure of £31m on the TP400 programme and higher payroll costs. Retrospective contract margin improvements totalled £82m, £5m lower than prior year, but ahead of early expectations. Of this, around half relates to delivering significant cost saving benefits on the largest Eurofighter Typhoon contract, which triggered a cost-saving incentive award.

While overall R&D costs were slightly lower than the prior year, the business continued to invest in future programme development and the Indianapolis transformation.

Restructuring costs were lower due to reduced level of severance costs and reversal of a provision for the closure of the defence facility at Ansty, UK, through better cost recovery than expected. Underlying commercial and administrative costs and other costs were similar to prior year.

Profit before financing of £384m was 8% lower than the prior period, driven by the lower gross margin.

## Investment and business development

Order intake for 2016 was £1.5bn (2015: £1.7bn), reflecting significant follow-on export orders being delayed to 2017.

Significant activities in 2016 included: winning orders for the F-35B LiftSystem™; increased MRTT engines for A330 aircraft; and contract renewals for services.

Deliveries of engines were slightly higher in 2016, driven by increased units for TP400 and Adour export. Services revenues were steady, reflecting higher flying hours from newer EJ200, F405 Adour and AE 2100 powered aircraft in the UK, North America and the Middle East.

The first T56 Series 3.5 technology insertion kits delivered to the US Air Force (USAF) for its legacy Hercules C-130 fleet have validated the expected fuel saving and performance benefits, prompting growing interest in the upgrade.

The UK and French Governments also committed to the €2bn UK-France Unmanned Combat Air System (FCAS) unmanned combat air system programme in December, enabling progress through to the demonstrator phase of the programme in 2017. Our LibertyWorks development unit was selected to provide the vertical lift propulsion for the new DARPA VTOL X-Plane. The unit also launched an infrared footprint suppression module, reflecting our diverse and cutting-edge technology capability.

Within the Services portfolio, the support contract for the US C-130J transport fleet was renewed and we signed a memorandum of understanding with Pratt & Whitney to extend support for the UK's new F-35B Lightning fleet beyond the Rolls-Royce LiftSystem.

This strategy of strengthening our service offerings closer to our major customers saw the opening of new on-base Service Delivery Centres in the UK (at RAF Brize Norton) and in the US (at Kingsville, Texas), as well as a new joint engine support facility for the USAF Global Hawk fleet.

## ORDER BOOK

# £3.9bn

As part of the TP400 consortium, the focus was on delivering solutions to improve the on-wing reliability of the GE-Avio gearbox. This included an on-wing exchange procedure which has greatly helped to reduce the service time and backlog.

Transformation milestones were achieved as planned, including completion of the first production cell as part of the investment activity in Indianapolis. Further manufacturing changes are due to come on stream in the first half of 2017.

## Defence Aerospace outlook

While revenues should remain steady, margins are expected to come under pressure from the essential investments in efficiency and long-term growth. These reflect important product development and manufacturing transformation initiatives as the business looks to capitalise on its strong positions, particularly in combat and transport & patrol, and the absence of significant incentive arrangements under remaining long-term service agreements. As a result, margins and profits are expected to soften from the recent levels.

## DEFENCE AEROSPACE | KEY FINANCIAL DATA

£m	2015	Underlying change	Foreign exchange*	2016
<b>Order book</b>	<b>4,316</b>	<b>(391)</b>	<b>1</b>	<b>3,926</b>
<b>Engine deliveries</b>	<b>649</b>	<b>12</b>	<b>–</b>	<b>661</b>
<b>Underlying revenue</b>	<b>2,035</b>	<b>17</b>	<b>157</b>	<b>2,209</b>
<i>Change</i>		+1%	+8%	+9%
Underlying OE revenue	801	22	67	890
<i>Change</i>		+3%	+8%	+11%
Underlying services revenue	1,234	(5)	90	1,319
<i>Change</i>		–	+7%	+7%
<b>Underlying gross margin</b>	<b>579</b>	<b>(49)</b>	<b>34</b>	<b>564</b>
Gross margin %	28.5%	-260bps		25.5%
Commercial and administrative costs	(124)	(3)	(7)	(134)
Restructuring	(8)	18	–	10
Research and development costs	(73)	5	(3)	(71)
Joint ventures and associates	19	(4)	–	15
<b>Underlying profit before financing</b>	<b>393</b>	<b>(33)</b>	<b>24</b>	<b>384</b>
<i>Change</i>		-8%	+6%	-2%
<b>Underlying operating margin</b>	<b>19.3%</b>	<b>-180bps</b>		<b>17.4%</b>

\* Translational foreign exchange impact.

## Market review

Rolls-Royce is a market leader in defence aero engines for military transport and patrol aircraft and has strong positions in other sectors, including combat aircraft, trainer aircraft and helicopters. We are pursuing new opportunities emerging in Asia and the Middle East to mitigate flat defence budgets in the established North American and European markets.

## Key Rolls-Royce differentiators

- + We are investing heavily in technology, integration capabilities and facility modernisation to deliver capable, affordable engines for our customers. Additionally, we leverage our large installed base and strong services capabilities to provide superior and affordable service solutions.

## Market dynamics

- Defence budgets are expected to show modest growth, flat in real terms in the US and UK, partially offset by growth in other emerging markets.
- Western customers are seeking to reduce and minimise costs by delaying or deferring purchase, improving asset availability and extending lifecycles of aircraft/engines.
- Increasing levels of economic affluence and political tension in the Asia Pacific and Middle East regions are leading to increases in both OE and services spend.
- Revenue has historically been broadly balanced between OE sales and aftermarket services, biased towards the latter.

## Business risks

- If we experience a major product failure in service, then this could result in loss of life and have a major, negative impact on our reputation.
- If global defence spending experiences a further downturn, then our financial performance may be impacted.
- If we do not continue to invest to improve the performance and cost of our products, then we may lose market share.
- If we suffer a major disruption in our supply chain, then our delivery schedules may be delayed, damaging our financial performance and reputation.
- If we do not secure new applications, then our capabilities may be eroded in the long term.

## Competition

- GE, Pratt & Whitney, Honeywell, and Safran are our main competitors in our sectors.
- In Europe, large defence programmes tend to be addressed by consortia of two or more companies due to the political environment. Examples include our collaboration with ITP, MTU and Safran on the TP400 engine for the Airbus A400M and with GE Avio, ITP and MTU on the EJ200 engine for the Eurofighter Typhoon.
- We work with our EJ200 engine partners on campaigns for Eurofighter Typhoon export sales opportunities as well as new indigenous combat programmes.
- Barriers to entry are high and we do not envisage the competitive landscape changing significantly in the near future.

## Opportunities

- The UK's commitment to the next phase of the FCAS programme presents a next-generation combat development opportunity for Rolls-Royce.
- Our LiftFan system for the F-35B is just entering service and we expect to deliver over 400 systems in the next 20 years.
- Developing markets, such as India and Turkey, are inviting bids on new combat aircraft. We estimate a potential of over 300 aircraft for these programmes.
- In transport, we believe the Airbus A400M transport aircraft and V-22 Osprey have overseas sales opportunities.
- We see strong growth potential for increased service provision to the military and we are well positioned with programmes such as MissionCare®.

## Improving fuel efficiency



Technical advances for our T56 engines on legacy Lockheed Martin C-130 and P-3 aircraft have led to significant improvements in fuel economy. The US National Oceanic and Atmospheric Administration (NOAA) was the launch customer and installed T56 engine upgrade kits, known as the Series 3.5, on its two 'Hurricane Hunter' P-3 aircraft. The result: fuel economy improvement of 12% on average after more than 3,000 engine flight hours through and around hurricanes. The USAF completed a Series 3.5 installation on the first of its fleet of C-130H aircraft and early flights showed similar results. The USAF will roll out the upgrades into C-130s operated by USAF Reserve and Air National Guard units, leading the way for installation of the Series 3.5 kits into the global fleet of hundreds of transport aircraft flown by other customers around the world.

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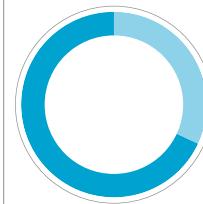
## Summary

Power Systems is a leading provider of high-speed and medium-speed reciprocating engines, complete propulsion systems and distributed energy solutions as well as key engine components including fuel injection systems and turbochargers. The business serves the marine, defence, power generation and industrial markets through its core brands MTU, MTU Onsite Energy and L'Orange.

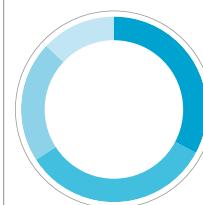
## Key highlights

- Underlying revenue 1% lower; growth in power generation and industrial markets offset by reduction in commodity and oil price driven sales.
- Underlying profit before financing 14% lower; volume reduction and adverse product mix.
- Good start to transformation with new leadership in place to drive further performance improvement.
- 2017 outlook: steady, healthy order book in key segments offsetting some challenging markets.

### UNDERLYING REVENUE MIX



### UNDERLYING REVENUE BY SECTOR



A 20-cylinder MTU Series 4000 engine powers a Liebherr mining truck.

## POWER SYSTEMS

### Operational review

#### Financial overview

Underlying revenue of £2,655m was 1% lower at constant currency (11% higher including the impact of translational foreign exchange). Overall original equipment (OE) revenue declined 1%. Growth in sales of diesel and gas products to power generation and industrial customers offset reductions within markets where demand is linked to low oil and commodity prices, and reduced activity in naval markets.

Service revenues reduced 2%, largely reflecting weaker marine medium-speed markets, once again reflecting low oil prices.

Gross margin reduced by £28m in absolute terms and by 90 basis points, to 26.6% (2015: 27.5%) with good progress on cost reduction generated from transformation activity offsetting some of the impact of volume reduction, adverse changes in product mix and a reduction in the discount rate applied to the warranty provision.

Overall, underlying profit declined £27m or 14%, led by the reduction in gross margin. Costs below gross margin remained broadly unchanged on an underlying basis. The £9m increase in commercial and

administrative costs was offset by a £5m reduction in R&D reflecting a more focused approach to future product development activity together with reduced underlying restructuring costs. An exceptional charge of £45m has been taken for restructuring activity.

### Investment and business development

Power Systems' customers span a range of markets from power generation and defence to marine, industrial and construction markets. This end-market diversity has enabled the business to mitigate some of the weak market environments and as a result, the order book ended the year at £1.8bn (2015: £1.9bn).

2016 order intake of £2.4bn (2015: £2.5bn) was 2% down at constant currency, with the year-on-year reduction being mainly in oil & gas and commodity-related markets including marine, together with lower government project orders. This was offset by improvements within power generation, agricultural and industrial markets.

Within power generation markets, we delivered 200 gensets (a package of engine and generator) to the Asian VPower Group, one of our strategic partners in the region. We have continued to strengthen our position in the growing market for back-up power for larger mission-critical applications.

Order intake later in the year was healthy for solutions to support data systems in both Europe and the US and also for independent power customers. We have also agreed to establish a 50/50 joint venture with Yuchai Machinery Company Ltd for the production under licence of MTU Series 4000 diesel engines in China, targeting the Chinese off-highway market.

Demand for our marine products remained good. Naval orders included gensets for the UK Royal Navy's Type 26 Global Combat Ship and a supply contract for the Italian Navy relating to a new multi-purpose ocean-going patrol vessel. Within the land defence markets, there was a follow-up order for use in a German armoured vehicle.

In other areas, we continued to attract new customers in new regional markets including Japanese high-tech crane producer Kato. We also made progress within the rail market in both Europe and Asia. This included a notable order from Hitachi Rail Europe for over 100 MTU PowerPacks® for use in the UK and an order to remanufacture (an in-house process, known as Reman, to refurbish and extend the life of existing systems) around 400 MTU PowerPacks for Transdev Group in Germany.

Innovation was again strong with some notable new products coming to market in the year. We launched new advanced diesel and gas propulsion systems which meet new IMO and EPA emissions standards.

### ORDER BOOK

# £1.8bn

At the same time, we launched advanced propulsion systems for the construction and industrial markets which satisfy new emission standards in those industries. Finally, we launched a hybrid power pack and energy pack battery system for the rail market.

Power Systems also made progress with the transformation programme, targeting reductions in product costs as well as strengthening sales and service resources and leveraging digital capabilities to develop value adding services.

### Power Systems outlook

The outlook for Power Systems remains steady. The business finished the year with a strong order book for several of its key markets. Whilst some markets, particularly those impacted by oil and commodity prices, remain difficult, we expect the business to deliver modest growth in revenue and profit in 2017.

### POWER SYSTEMS | KEY FINANCIAL DATA

£m	2015*	Underlying change	Foreign exchange**	2016
<b>Order book</b>	<b>1,928</b>	<b>(113)</b>	<b>—</b>	<b>1,815</b>
<b>Underlying revenue</b>	<b>2,385</b>	<b>(25)</b>	<b>295</b>	<b>2,655</b>
<i>Change</i>		-1%	+12%	+11%
Underlying OE revenue	1,618	(9)	201	1,810
<i>Change</i>		-1%	+12%	+12%
Underlying services revenue	767	(16)	94	845
<i>Change</i>		-2%	+12%	+10%
<b>Underlying gross margin</b>	<b>656</b>	<b>(28)</b>	<b>79</b>	<b>707</b>
Gross margin %	27.5%	-90bps		26.6%
Commercial and administrative costs	(296)	(9)	(35)	(340)
Restructuring	(4)	4	—	—
Research and development costs	(162)	5	(20)	(177)
Joint ventures and associates	—	1	—	1
<b>Underlying profit before financing</b>	<b>194</b>	<b>(27)</b>	<b>24</b>	<b>191</b>
<i>Change</i>		-14%	+12%	-2%
<b>Underlying operating margin</b>	<b>8.1%</b>	<b>-110bps</b>		<b>7.2%</b>

\* 2015 figures have been restated as a result of costs previously reported in 'cost of sales', being reclassified as 'other commercial and administrative costs' to ensure consistent treatment with 2016.

\*\*Translational foreign exchange impact.

## Market review

The markets served by Power Systems are driven by long-term global trends such as increasing population growth, rising demand for energy, natural resources and food as well as stricter emissions legislation. Despite an unprecedented downturn in commodity prices in recent years, the utilisation rates in the exploration and production industry are showing some early signs of recovery. Demand for high-specification system solutions such as power for data centres and rail power packs has proved robust. We remain confident of long-term growth in our principal markets. Power Systems continues to invest in new technology, improved customer solutions and aftermarket services to address market developments and new requirements.

## Key Rolls-Royce differentiators

- + Technology leadership and reputation with market-leading performance and system solutions; new product innovation (eg. hybrid/e-drive and mobile gas solutions); and high level of customisation.

## Market dynamics

- Population growth and increasing urbanisation are driving demand for clean, efficient power and infrastructure investments.
- Global GDP development with particular growth in Asia and Africa.
- Increasing global and regional trade and transport of goods.
- Geopolitics and migration are driving modest defence budget growth (1-2%) in NATO countries with higher growth in emerging markets and the Middle East.
- Increasing focus on renewable energy sources requires decentralised and clean energy solutions (eg. back-up power).
- Increasing environmental legislation and efficiency requirements help drive emission and efficiency technologies.
- Current weak environment in certain end markets (eg. oil & gas and mining), due to current low oil and commodity price levels.

## Business risks

- Economic: some of our markets, especially oil & gas and mining, continue to be impacted by low commodity prices – this has been partially offset by a resilient performance in other sectors (eg. power generation and rail).
- Political: increasing political tensions and uncertainties, and remaining sanctions limit levels of global trade and customer access in certain regions.
- Competitive: increasing activities of Asian competitors and new market entrants in our core power range of MTU Series 4000 engines potentially influence volumes and margins.
- Technological: emerging new technologies with falling costs (eg. battery and solar) might influence existing solutions such as back-up power generators.

## Competition

- Fragmented competitor landscape in off-highway engine markets which varies depending on specific market segments – multiple players although a few dominate.
- Continuing industry consolidation results in strong, large-scale and integrated players.
- Expansion of western competitors in our specific core engine markets.
- Competition from Asia increasingly focusing on higher power ranges where MTU operates.
- While traditional competition has been limited to engine suppliers, solution providers are becoming more relevant.

## Opportunities

- Regional growth, especially in China, India and South East Asia.
- Leveraging partnerships to expand geographical reach and extend product scope in core market segments.
- Stricter global emission legislation strengthens demand for emission and efficiency technologies (eg. exhaust after treatment).
- Enhancement of system competence and solutions to create customer value through optimised total system functionality and performance.
- Growth in service and digital offerings to serve complete lifecycle solutions and improve customer operations.
- Growth through extended key engine component offering, including turbochargers.
- Leveraging trend towards increasing electrification through strengthening electric capabilities (eg. hybrid and diesel-electric propulsion systems).

## MTU drives for key British railway projects



The Intercity Express Programme (IEP) is one of the biggest transport projects in the UK: 122 new high-speed trains built by Hitachi Rail Europe are scheduled to go into service on the East Coast Main Line and Great West Main Line routes from 2017.

Rolls-Royce is supplying more than 330 MTU PowerPacks each producing up to 700 kilowatts for these super express trains. At the heart of the drive system is the state-of-the-art, fuel efficient MTU 12V 1600 R80L engine, which meets the stringent EU Stage IIIB emission standard thanks to an integrated selective catalytic reduction system. MTU will maintain and guarantee the availability of the engines throughout the entire 27-year lifetime of Hitachi's contract for IEP.

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## Summary

Marine is a leading provider of propulsion and handling solutions for the maritime offshore, merchant and naval markets. The offerings range from standalone products to complex integrated systems including ship design. The business has more than 4,000 customers, with 70 naval forces and over 30,000 commercial vessels using our equipment.

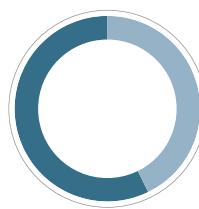
## Key highlights

- Underlying revenue down 24%; weak offshore markets impacting both OE and service revenues.
- Underlying profit before financing negative; lower volumes and reduced overhead absorption.
- Net restructuring benefits from current and legacy programmes starting to improve performance.
- £200m impairment of goodwill reflecting a more cautious outlook; further weakness in offshore oil & gas markets offset by ongoing cost improvements as we refocus the business.



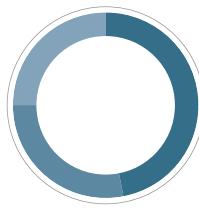
The Bergensfjord, a ferry operating between Norway and Denmark, has won awards for environmental performance thanks to four Bergen pure gas engines and a Rolls-Royce propulsion and steering system.

### UNDERLYING REVENUE MIX



OE revenue	<b>57%</b>
Services revenue	<b>43%</b>

### UNDERLYING REVENUE BY SECTOR



Offshore	<b>47%</b>
Merchant	<b>28%</b>
Naval	<b>25%</b>

## MARINE

### Operational review

#### Financial overview

Underlying revenue of £1,114m was 24% lower on a constant currency basis. Within this, original equipment (OE) and services revenues were 26% and 21% lower respectively. This reflected continued weakness in offshore and merchant, as ship owners deferred overhaul and maintenance on the back of reduced utilisation of their vessels.

Gross margin was £236m, an improvement of 170 basis points versus 2015, but £(44)m lower in absolute terms, as a result of the lower volume. The improved gross margin percentage partly resulted from cost reduction actions. Overall this resulted in a net loss of £27m.

The announcement in December 2016 of further organisational changes and headcount reduction in 2017 has led to an exceptional £5m restructuring charge. In addition, £200m of the Group impairment of goodwill was in Marine and mainly related to the acquisition of Vickers in 1999.

## Investment and business development

Overall, the Marine order book declined 29% during the year at constant currency, reflecting adjustments for a number of postponed or cancelled orders and very weak offshore markets. Orders for new vessels, projects and services were all sharply lower than 2015 and, as a result, order intake was only £715m, 29% down on the previous year at constant currency.

The offshore market was extremely challenging, driven by a low oil price and reduced capital expenditure within the upstream oil exploration and related services sectors. Several merchant segments were also subdued, reflecting generally weak conditions in the global marine industry. The business focused on using its strengths as a system integrator to leverage across adjacencies, including designing and equipping the UK's new polar research ship, RSS Sir David Attenborough. It also landed a major deal to design and equip Hurtigruten's new explorer cruise ships, along with battery solutions to make full electric propulsion possible.

The business announced a contract to supply the world's first automatic crossing system to ferry operator, Fjord 1, and also launched our new Azipull Carbon thruster with yacht builder Benetti, reflecting the increasing importance of newer technologies. The fishing segment remained strong, with contracts won

for a range of vessels. The naval business was focused on further development work and supporting customers across Asia, Europe and the US. These included supporting successful sea-trials for the US Navy's most advanced warship the USS Zumwalt, further MT30 orders for new Italian helicopter landing craft and selection by the New Zealand Navy for ship design of its MSC programme.

The Marine business continues to lower its cost base and build flexibility into the organisation, particularly across back-office and operational activities. The restructuring programmes announced in 2015 have led to a reduction of around 1,100 headcount with £65m of annual savings recognised from 2017.

Reflecting the ongoing subdued and increasingly cost-conscious market environment, in December further restructuring to take place in early 2017 was announced, targeting annualised savings of around £50m. This included a further headcount reduction of around 800 across operations and back-office functions as the business continues to shrink footprint, reduce indirect headcount, and consolidate manufacturing activity.

At the same time, investments were made in the strategic enablers of the future, including upgrading our azimuth thruster production facility in Rauma, Finland. The £44m project will create a state-of-the-art production facility for one of our most important product groups.

## ORDER BOOK

# £905m

The pace of technology change in the sector is accelerating, and we continue to invest in pioneering research into ship intelligence technologies focused on data-driven, value-added services that facilitate full ship automation in the long term.

## Marine outlook

Overall, the outlook for Marine remains cautious. We expect that the market will continue to feel the impact of low oil prices, and the general overcapacity in several segments will take time to reach equilibrium. This will impact the demand for our products and services. We will sustain our active cost reduction programmes, focusing on manufacturing, supply chain and overhead costs, in order to drive a more competitive business adapted to the current market conditions.

## MARINE | KEY FINANCIAL DATA

£m	2015	Underlying change	Foreign exchange*	2016
<b>Order book</b>	<b>1,164</b>	<b>(337)</b>	<b>78</b>	<b>905</b>
<b>Underlying revenue</b>	<b>1,324</b>	<b>(312)</b>	<b>102</b>	<b>1,114</b>
<i>Change</i>		-24%	+8%	-16%
Underlying OE revenue	773	(198)	56	631
<i>Change</i>		-26%	+7%	-18%
Underlying services revenue	551	(114)	46	483
<i>Change</i>		-21%	+8%	-12%
<b>Underlying gross margin</b>	<b>260</b>	<b>(44)</b>	<b>20</b>	<b>236</b>
Gross margin %	19.6%	+170bps		21.2%
Commercial and administrative costs	(201)	(6)	(17)	(224)
Restructuring	(16)	19	(1)	2
Research and development costs	(28)	(11)	(2)	(41)
<b>Underlying profit before financing</b>	<b>15</b>	<b>(42)</b>	—	<b>(27)</b>
<i>Change</i>		-280%		-280%
<b>Underlying operating margin</b>	<b>1.1%</b>	<b>-380bps</b>		<b>-2.4%</b>

\* Translational foreign exchange impact.

## Market review

We forecast long-term growth opportunities across our commercial and naval market segments. Short-term performance will continue to be impacted by the weakness in offshore oil & gas exploration.

### Key Rolls-Royce differentiators

-  Unique domain knowledge, portfolio of products with overlaying levels of systems integration; joint value proposition within naval markets with Power Systems; continuous maritime innovation and technology leadership, and leadership in emerging digital marine markets.



### Stealth power

The commissioning of the world's most advanced naval ship, USS Zumwalt, took place in October. Powered by two Rolls-Royce MT30 main gas turbine generators and two auxiliary turbine generators, and driven by two fixed pitch Rolls-Royce propellers, the USS Zumwalt is an all-electric ship at the cutting edge of naval technology.

Rolls-Royce technicians joined the ship throughout an extensive period of sea trials to ensure a successful entry into service.

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### Market dynamics

- We operate in three key markets – offshore, merchant and naval – with growth fundamentally driven by GDP, trade, oil price and defence spending.
- Population growth, urbanisation and industrialisation support growth in demand for energy and trade, in turn driving demand for offshore and merchant vessels.
- Exploration and production spending cuts result in the offshore segment experiencing very low fleet utilisation, declining charter rates, lay up of vessels (impacting services revenue) and increased scrapping.
- We expect exploration activity to return to growth over time to compensate for the depletion rate of current wells. However, there is unlikely to be a positive impact in 2017.
- Merchant segment facing overcapacity and weak earnings in most cargo segments; however, good opportunities in cruise and passenger vessels, and a stable tug and workboat market.
- Expect strong efficiency and cost focus when merchant and offshore markets rebound.
- Naval market is forecast to remain stable as defence expenditure remains consistent.
- Overcapacity in shipbuilding and vessel fleets leading to consolidation at customer level.
- Asian yards are expected to continue playing a major role in shipbuilding with further increased regional vessel ownership, particularly in China.
- Continuing trend of supply chain moving east to where the majority of ships are built.

### Business risks

- Markets: continuing low oil price results in sustained pressure in the offshore market with customer groups reducing costs and capital commitments, thereby delaying market recovery.
- Competition: competitors react to a depressed market by cutting costs, pricing aggressively and partnering with other players.
- Contracting: order delays and cancellations impact our revenue, cash and profit but also put our supply chain under financial stress.
- Customer and supply chain financial pressure: continuing market downturn leaves some customers and suppliers exposed to consolidation and/or market exit.

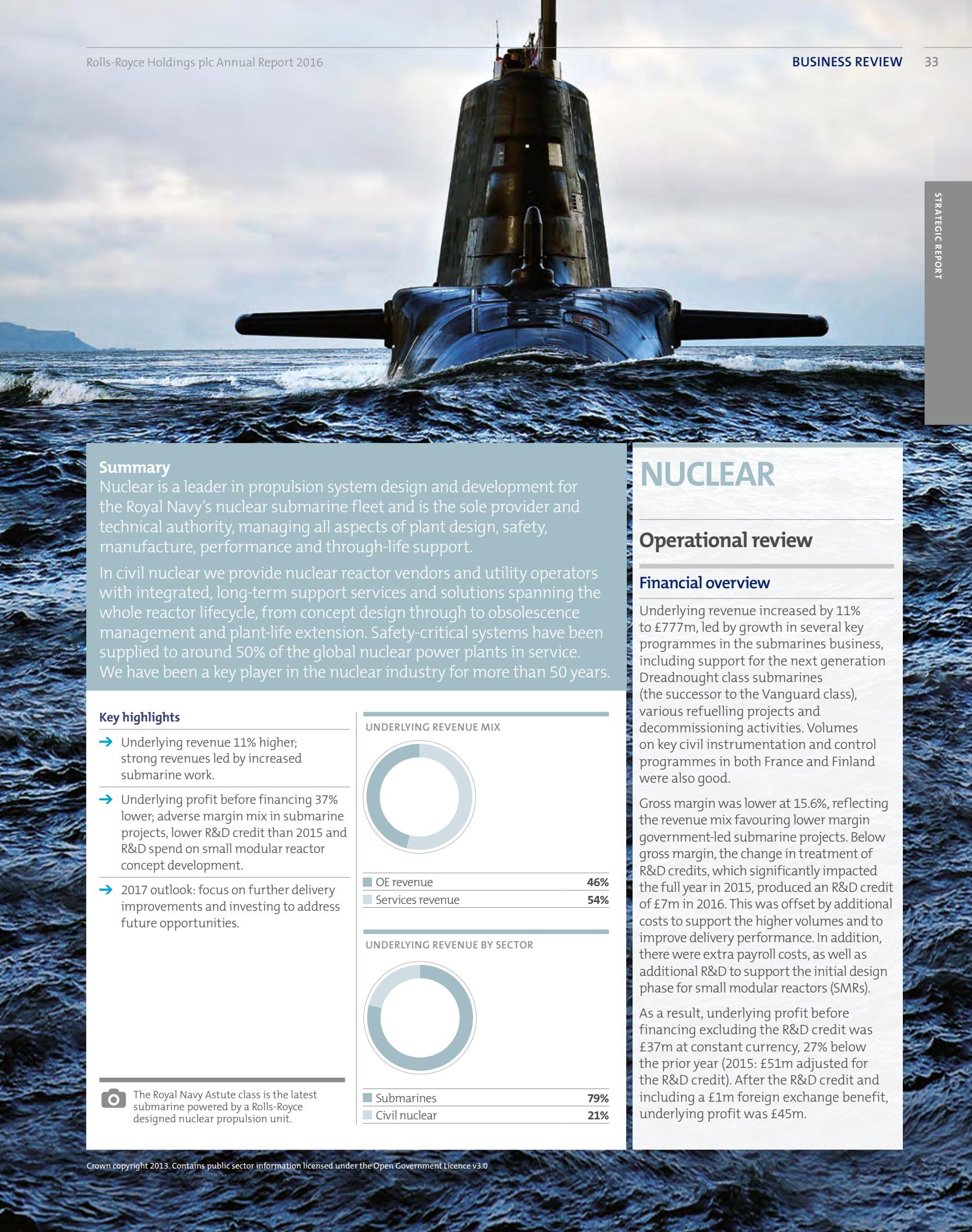
- Technology: failure to invest in the right technologies to meet customer future demand.
- Product failure: risk of failure in the field resulting in the need for intervention to rectify the issue with financial and/or reputational consequences.

### Competition

- Array of competitors is diverse but falls generally into two main groups: systems integrators with broad portfolios and specialists in narrow product categories.
- Competitors reacting to current market dynamics with cost reduction programmes.
- Cross-industry electrical specialists increasingly active in several vessel segments to capitalise on marine vessel electrification trend.
- Key competitors looking to grow into digital offerings with investment and niche acquisitions.
- Increased pricing pressure with competition for fewer orders in challenging market.

### Opportunities

- Continue growth in merchant segments (eg. ferries, tugs and short-sea cargo) and adjacent offshore markets (eg. special purpose and offshore wind) with more advanced offerings.
- Continue to leverage the joint value proposition in naval markets together with Power Systems.
- Leverage local partnerships to generate regional growth in Asia, especially China.
- Owners are increasingly interested in solutions to improve efficiency and environmental impact as well as safety in more diverse and complex operations.
- Increasing role of data and analytics in optimising asset operations and reducing costs.
- Growth in intelligent shipping with greater integration of propulsion and electric systems.
- Increased modularisation and standardisation as well as advanced manufacturing methods.
- Increased uptake of long-term service agreements to create greater value within the market.



## Investment and business developments

Order intake of £385m was 8% higher than 2015. Notwithstanding, the closing order book of £1.8bn was 17% below 2015, reflecting the business working through the large multi-year orders, particularly in submarines, received in prior years.

Submarine activities focused on continuing our support to the Royal Navy's current operational fleet of nuclear-powered submarines, as well as delivery of propulsion systems for the remaining Astute class submarines and for the Dreadnought programme. As well as implementing a range of performance improvement initiatives during the year, we also completed delivery of the nuclear propulsion system for the fourth (of seven) Astute class submarine and have made good progress both in the preparation for the refuelling programme of HMS Vanguard and for decommissioning the Naval Reactor Test Establishment in Scotland. In conjunction with the UK's Ministry of Defence and BAE Systems, we have also advanced discussions around a long-term alliance framework for the Dreadnought programme. Once concluded, this new framework should ensure that the delivery structure and commercial benefits are clarified for all key partners in this £31bn investment programme.

The civil nuclear business successfully concluded the first phase of its major instrumentation and control modernisation programme at Fortum's Loviisa plant in Finland, using our Spinline® technology. It also continued with its upgrade programme across the French civil nuclear fleet as part of a multi-year contract.

The UK government announced final approval for the Hinkley Point C nuclear power station in September, where our Nuclear business was awarded preferred bidder status for contracts covering waste treatment systems, heat exchangers and diesel generators.

The business also announced the strengthening of the strategic collaboration, started in 2014, with the China National Nuclear Corporation, including engineering and training services. The Chinese market is expected to sustain strong growth and we are well positioned with relevant technology.

During the year we started an R&D programme, together with a number of partners, to scope out the initial design phase for SMRs. These smaller, more flexible nuclear power generation units offer the potential for a more flexible power generation in future decades and directly build on the knowledge and specialist skills of our Nuclear business. Any significant further development work will be dependent on government support for this technology.

## ORDER BOOK

# £1.8bn

## Nuclear outlook

The long-term outlook for Nuclear remains positive, supported by confirmation from the UK Government of the ongoing investment in the Dreadnought class submarines. Together with renewed activities in the civil market, particularly in the UK and China, these provide encouraging growth opportunities.

Performance in 2017 will be impacted by the loss of R&D credits on investments and further modest increases in the investment in SMR technology. As a result, profit is expected to be around half that achieved in 2016.

## NUCLEAR | KEY FINANCIAL DATA

	2015	Underlying change	Foreign exchange*	2016
£m				
<b>Order book</b>	<b>2,168</b>	<b>(379)</b>	<b>1</b>	<b>1,790</b>
<b>Underlying revenue</b>	<b>687</b>	<b>74</b>	<b>16</b>	<b>777</b>
<i>Change</i>		+11%	+2%	+13%
Underlying OE revenue	251	95	8	354
<i>Change</i>		+38%	+3%	+41%
Underlying services revenue	436	(21)	8	423
<i>Change</i>		-5%	+2%	-3%
<b>Underlying gross margin</b>	<b>111</b>	<b>6</b>	<b>4</b>	<b>121</b>
Gross margin %	16.2%	-80bps		15.6%
Commercial and administrative costs	(53)	(14)	(3)	(70)
Restructuring	(2)	2	-	-
Research and development costs	14	(20)	-	(6)
<b>Underlying profit before financing</b>	<b>70</b>	<b>(26)</b>	<b>1</b>	<b>45</b>
<i>Change</i>		-37%	+1%	-36%
<b>Underlying operating margin</b>	<b>10.2%</b>	<b>-440bps</b>		<b>5.8%</b>

\* Translational foreign exchange impact.

## Market review

Respected global energy forecasts continue to predict that nuclear power will play a significant role in providing low-carbon, continuous, secure power. More than 80% of today's civil nuclear capacity is in the Organisation for Economic Co-operation and Development (OECD) member countries; however non-OECD countries, including some new to nuclear, will account for the bulk of growth whilst mature markets will focus on current operations and life extension.

### Key Rolls-Royce differentiators

- + Unique key technology capability in defence and civil nuclear with substantial credibility (more than 50 years' experience); broad mix of offerings over the whole lifecycle; reactor independent portfolio; capable of global reach.

## Small modular reactors



### Market dynamics

- Population growth and improved living standards in emerging markets are driving a rise in demand for electricity.
- Within the future energy mix, low-carbon energy is expected to increase, with nuclear energy accounting for a significant share.
- In the US, lower energy prices are putting nuclear operating costs under pressure.
- Market conditions have changed, notably the slowdown in western new build programmes. China and Russia dominate large reactor new build projects.

### Business risks

- If we experience a major product failure in service, then this could result in loss of life and significant damage to our reputation.
- Delivery: failure to meet customer expectations or regulatory requirements.
- Markets: if civil nuclear markets do not grow as anticipated due to political or other external events then business will be diminished.
- Customer strategy: if programmes are cancelled as a result of strategic decisions, or vertical integration by reactor vendors, then future revenues will be diminished.
- If we suffer a major disruption in our supply chain, then our delivery schedules may be delayed, damaging our financial performance and reputation.

### Competition

- In civil nuclear the competitor landscape is fragmented and comprises reactor vendors, original equipment manufacturers, diversified industrial companies and nuclear operators in service.
- Plant operators increasingly outsource service activities.
- Key competitors and independent data service providers are investing and acquiring capabilities to further enhance their digital offerings.

### Opportunities

- Increasing the pace of growth of the civil nuclear business.
- Focusing on growth regions beyond current core markets.
- Strengthening our position with the rapidly growing importance of China in the civil nuclear market.
- Capturing a higher share of the nuclear service market through extension of our geographic reach.
- Exploiting our historical data acquisition coupled with digital investment to launch a digital service portfolio that enables growth into asset management.
- Our capabilities in nuclear can be applied to the development of SMRs for civil power stations.

SMRs can provide safe, reliable and affordable low-carbon electricity. An SMR programme presents the opportunity to create a UK nuclear plant through the design phase, to construction and delivery; establishing a sustainable skills base and supply chain capability that demonstrates the UK's overall nuclear excellence to international export markets. Compared with current large-scale reactors, SMRs can deliver significant programme risk reduction through controlled offsite modular manufacturing, compact passive safety systems and easier financing.

With our unique position and over 50 years' experience in developing nuclear technologies, Rolls-Royce has the capability to develop proprietary SMR nuclear reactor technology and bring together its UK industrial and academic partners to deliver an SMR plant solution which will offer lower build, through-life and decommissioning costs, as well as increased regulatory and programme certainty.

A Rolls-Royce led UK consortium offers a significant opportunity to position the UK as a global leader in innovative nuclear technologies.

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# Financial review

## UNDERLYING INCOME STATEMENT

Year to 31 December £m	2016	2015*	Change
<b>Revenue – 2015 exchange rates</b>	<b>13,058</b>	13,354	-296
Translation to 2016 exchange rates	725		
<b>Revenue</b>	<b>13,783</b>	13,354	+429
Gross profit	2,626	3,203	-577
Commercial and administrative costs	(1,096)	(1,025)	-71
Restructuring	2	(39)	+41
Research and development costs	(812)	(765)	-47
Share of results of joint ventures and associates	107	118	-11
<b>Profit before financing at 2015 exchange rates</b>	<b>827</b>	1,492	-665
Translation to 2016 exchange rates	88		
<b>Profit before financing</b>	<b>915</b>	1,492	-577
Net financing	(102)	(60)	-42
<b>Profit before tax</b>	<b>813</b>	1,432	-619
Tax	(261)	(351)	+90
<b>Profit for the year</b>	<b>552</b>	1,081	-529
Earnings per share (EPS)	30.13p	58.73p	-28.60p
Payment to shareholders	11.70p	16.37p	-4.67p
Gross R&D expenditure	(1,331)	(1,240)	-91
Net R&D charge	(862)	(765)	-97

## SEGMENTAL ANALYSIS

Year to 31 December £m	Revenue			Gross profit			Profit before financing		
	2016	2015	Change	2016	2015	Change	2016	2015	Change
Civil Aerospace	6,906	6,933	-27	1,129	1,526	-397	326	812	-486
Defence Aerospace	2,052	2,035	+17	530	579	-49	360	393	-33
Power Systems	2,360	2,385	-25	628	656	-28	167	194	-27
Marine	1,012	1,324	-312	216	260	-44	(27)	15	-42
Nuclear	761	687	+74	117	111	+6	44	70	-26
Other	35	96	-61	6	64	-58	1	52	-51
Intra-segment	(68)	(106)	+38	–	7	-7	–	7	-7
Central costs							(44)	(51)	+7
<b>Group at 2015 exchange rates</b>	<b>13,058</b>	13,354	-296	<b>2,626</b>	3,203	-577	<b>827</b>	1,492	-665
Translation to 2016 exchange rates	725			422			88		
<b>Group</b>	<b>13,783</b>	13,354	+429	<b>3,048</b>	3,203	-155	<b>915</b>	1,492	-577

\* 2015 figures have been restated as a result of £21m of costs previously reported in 'cost of sales', being reclassified as 'other commercial and administrative costs' to ensure consistent treatment with 2016.

**Underlying revenue and underlying profit before financing** are discussed in the Review of 2016 (page 7), the Financial summary (page 16) and the Business reviews (pages 18 to 35).

**Underlying financing costs** increased by £42m to £102m. Net interest payable increased by £4m to £63m. Other underlying financing costs increased by £38m to £39m,

principally due to the non-recurrence of an underlying foreign exchange gain recognised in 2015, which arose from the realised gains on foreign exchange contracts settled to translate overseas dividends into sterling.

**Underlying taxation** was £261m (2015: £351m), an underlying rate of 32.1% compared with 24.5% in 2015. The primary

reasons for the increase are the non-recognition of deferred tax assets on losses in Norway, which reflects the current uncertainty in the oil & gas market, and a different profit mix with more profits arising in countries with higher tax rates.

**Underlying EPS** decreased 49% to 30.13p, reflecting the reduction in profit for the year.

At the Annual General Meeting on 4 May 2017, the Directors will recommend an issue of 71 C Shares with a total nominal value of 7.1 pence for each ordinary share. Together with the interim issue on 4 January 2017 of 46 C Shares for each ordinary share with a total nominal value of 4.6 pence, this is the equivalent of a total annual **payment to ordinary shareholders** of 11.7 pence for each ordinary share. Further details are included on page 186.

## Reported results

The changes in 2016 resulting from underlying trading are described in the previous sections.

Consistent with past practice and IFRS, we provide both reported and underlying figures. As the Group does not hedge account in accordance with IAS 39 *Financial Instruments*, we believe underlying figures are more representative of the trading performance, by excluding the impact of year-end mark-to-market adjustments, principally the USD:GBP hedge book, which has had a significant impact on the reported results in 2016 as the USD:GBP rate has fallen from 1.48 to 1.23 and the EUR:GBP has fallen from 1.36 to 1.17. The adjustments between the underlying income statement and the reported income statement are set out in note 2 to the Consolidated financial

## REPORTED INCOME STATEMENT

Year to 31 December	2016	2015 <sup>1</sup>
£m		
<b>Revenue</b>	<b>14,955</b>	13,725
Gross profit	3,048	3,277
Other operating income	5	10
Commercial and administrative costs <sup>2</sup>	(2,208)	(1,070)
Research and development costs	(918)	(818)
Share of results of joint ventures and associates	117	100
<b>Operating profit</b>	<b>44</b>	1,499
(Loss)/profit on disposal of businesses	(3)	2
<b>Profit before financing</b>	<b>41</b>	1,501
Net financing	(4,677)	(1,341)
<b>(Loss)/profit before tax</b>	<b>(4,636)</b>	160
Tax	604	(76)
<b>(Loss)/profit for the year</b>	<b>(4,032)</b>	84
Earnings per share (EPS)	(220.08)p	4.51p

<sup>1</sup> 2015 figures have been restated as a result of £11m costs previously reported in 'cost of sales', being reclassified as 'commercial and administrative costs' to ensure consistent treatment with 2016.

<sup>2</sup> In 2016, 'commercial and administrative costs' include £671m for financial penalties from agreements with investigating bodies and £306m for the restructuring of the UK pension schemes.

statements. This basis of presentation has been applied consistently.

The most significant items included in the reported income statement, but not in underlying, are summarised below.

### Profit before financing

The impact of measuring revenues and costs at spot rates rather than rates achieved on hedging transactions. This increased revenues by £1,172m (2015: £371m) and

increased profit before financing by £570m (2015: £265m).

The effects of acquisition accounting £115m (2015: £124m), principally relating to the amortisation of intangible assets arising on the acquisition of Power Systems in 2013.

The impairment of goodwill of £219m (2015: £75m), principally relating to the Marine business as a result of the continued weakness in the oil & gas market (see note 9).

## RECONCILIATION BETWEEN UNDERLYING AND REPORTED RESULTS

Year to 31 December	Revenue		Profit before financing		Financing		(Loss)/profit before tax	
	2016	2015	2016	2015	2016	2015	2016	2015
<b>Underlying</b>	<b>13,783</b>	13,354	<b>915</b>	1,492	(102)	(60)	<b>813</b>	1,432
Revenue recognised at exchange rate on date of transaction	1,172	371	—	—	—	—	—	—
Mark-to-market adjustments on derivatives	—	—	—	(9)	(4,420)	(1,306)	(4,420)	(1,315)
Related foreign exchange adjustments	—	—	570	265	(151)	(15)	419	250
Movements on other financial instruments	—	—	—	—	(8)	8	(8)	8
Effects of acquisition accounting	—	—	(115)	(124)	—	—	(115)	(124)
Impairment of goodwill	—	—	(219)	(75)	—	—	(219)	(75)
Exceptional restructuring	—	—	(129)	(49)	—	—	(129)	(49)
Acquisitions and disposals	—	—	(3)	2	—	—	(3)	2
Financial penalties	—	—	(671)	—	—	—	(671)	—
Post-retirement schemes	—	—	(306)	—	3	32	(303)	32
Other	—	—	(1)	(1)	1	—	—	(1)
<b>Reported</b>	<b>14,955</b>	13,725	<b>41</b>	1,501	(4,677)	(1,341)	(4,636)	160

**SUMMARY BALANCE SHEET**

At 31 December £m	2016	2015
Intangible assets	5,080	4,645
Property, plant and equipment	4,114	3,490
Joint ventures and associates	844	576
Net working capital <sup>1</sup>	(1,553)	(501)
Net funds <sup>2</sup>	(225)	(111)
Provisions	(759)	(640)
Net post-retirement scheme deficits	(29)	(77)
Net financial assets and liabilities <sup>2</sup>	(5,751)	(1,883)
Other net assets and liabilities <sup>3</sup>	143	(483)
<b>Net assets</b>	<b>1,864</b>	<b>5,016</b>
Other items		
US\$ hedge book (US\$bn)	37.8	28.8
TotalCare assets	3,348	2,994
TotalCare liabilities	(907)	(783)
Net TotalCare assets	2,441	2,211
Gross customer finance commitments	238	269
Net customer finance commitments	61	54

<sup>1</sup> Net working capital includes inventories, trade and other receivables, trade and other payables and current tax assets and liabilities.

<sup>2</sup> Net funds includes £358m (2015 £13m) of the fair value of financial instruments which are held to hedge the fair value of borrowings.

<sup>3</sup> Other includes other investments and deferred tax assets and liabilities.

Exceptional restructuring costs of £129m (2015: £49m). These are costs associated with the substantial closure or exit of a site, facility or activity and increased as a result of the ongoing transformation programme.

Financial penalties of £671m from agreements with investigating bodies (see page 8).

Costs of restructuring the UK pension schemes in 2016 of £306m, principally a settlement charge on the transfer of the Vickers Group Pension Scheme to an insurance company (see note 19).

**Financing and taxation**

The mark-to-market adjustments on the Group's hedge book of £4,420m (2015: £1,306m). These reflect: the large hedge book held by the Group (eg. US\$38bn); and the weakening of sterling, particularly against the US dollar and the euro, as noted above. At each year end, our foreign exchange hedge book is included in the balance sheet at fair value (mark-to-market) and the movement in the year included in reported financing costs.

Appropriate tax rates are applied to these additional items included in the reported results, leading to an additional tax credit of £865m (2015: £275m), largely as a result of the mark-to-market adjustments.

**Balance sheet**

**Intangible assets** (note 9) increased by £435m mainly due to exchange differences of £438m. Additions of £631m (including £154m of certification and participation fees, £100m of development costs and £208m of contractual aftermarket rights) were largely offset by amortisation of £406m and impairment of £222m (including £200m on Marine goodwill).

The carrying values of the intangible assets are assessed for impairment against the present value of forecast cash flows generated by the intangible asset. The principal risks remain: reductions in assumed market share; programme timings; increases in unit cost assumptions; and adverse movements in discount rates.

**Property, plant and equipment** (note 10) increased by £624m, around half of which was caused by exchange differences of £330m. Additions of £701m (including £75m of TotalCare Flex engines) were offset by depreciation of £424m and £41m was added from the reclassification of joint ventures to joint operations.

**Investments in joint ventures and associates** (note 11) increased by £268m, including an increase of £154m in the

Group's share of authorised maintenance centre joint ventures. The other main movements were: exchange gains of £107m; and the Group's share of retained profit of £43m; offset by a £57m reclassification of certain joint ventures to joint operations.

Movements in **net funds** are shown opposite.

**Net working capital** reduced by £1,052m, including a £671m accrual for financial penalties, £134m increased deposits and £265m of foreign exchange movements. This was partially offset by higher inventory of £194m.

**Provisions** (note 18) largely relate to warranties and guarantees provided to secure the sale of OE and services. The increase of £119m includes reclassifications from accruals of £92m, following a review of accounting consistency during the period. The remaining increase of £27m includes net additional charges of £271m (including £147m for warranties and guarantees), and foreign exchange movements of £75m, offset by utilisation of £227m.

**Net post-retirement scheme deficits** (note 19) have reduced by £48m.

In the UK (increase in surplus of £293m), changes in actuarial estimates increased the value of the obligations £1.8bn, largely due to the discount rate reducing from 3.6% to 2.7%. This was more than offset by returns (in excess of those assumed) on the scheme assets of £2.3bn. This return is largely due to the liability-driven investment policy of the assets being invested to match changes in value of the obligations (on a proxy solvency basis, which is more onerous than the accounting valuation). The net increase in surplus was reduced by the recognition of a settlement charge of £301m on the insurance buy-out of the Vickers Group Pension Scheme.

The principal movements in overseas schemes (increase in deficit of £245m) were exchange differences of £208m.

**Net financial assets and liabilities** (note 17) principally relate to the fair value of foreign exchange, commodity and interest rate contracts. All contracts continue to be held for hedging purposes. The fair value of foreign exchange derivatives is a net financial liability of £5.6bn, an increase of £3.9bn in the period, mainly a result of the

weakening of sterling against the US dollar and euro.

The US\$ hedge book increased by 31% to US\$37.8bn. This represents around 5½ years of net exposure and has an average book rate of £1 to US\$1.55.

Net TotalCare assets relate to long-term service agreement (LTSA) contracts in the Civil Aerospace business, including the flagship services product TotalCare. These assets represent the timing difference between the recognition of income and costs in the income statement and cash receipts and payments.

**Customer financing** facilitates the sale of OE and services by providing financing support to certain customers. Where such support is provided by the Group, it is generally to customers of the Civil Aerospace business and takes the form of various types of credit and asset value guarantees. These exposures produce contingent liabilities that are outlined in note 23. The contingent liabilities represent the maximum aggregate discounted gross and net exposure in respect of delivered aircraft, regardless of the point in time at which such exposures may arise. The reduction in gross exposures is a result of guarantees expiring.

## Funds flow

**Movement in working capital** – the £55m increase in working capital includes an increase in inventory, partially offset by a net reduction in financial working capital. These movements are largely driven by the increased sales volumes during 2016.

**Expenditure on property, plant and equipment and intangibles** – the major increases are: £98m higher PPE expenditure as we build the supply chain; £37m software costs relating to systems development; £81m certification costs driven by the Trent XWB-97 programme; £45m capitalised development costs largely relating to the Trent 1000 TEN; and £46m higher contractual aftermarket rights, mainly on Trent XWB sales.

**Pensions** – the increase in pension contributions in excess of the underlying income statement largely reflects changes in net past service costs of £13m.

**Shareholder payments** – the change in shareholder payments reflects the difference between the 2014 and 2015 payments, which are paid in the following year.

**Acquisitions and disposals** include the £154m increase in stake in joint ventures described on the opposite page.

## FREE CASH FLOW

**£100m**

	2015	2014 exc	2014 inc	2013	2012
	179	447	254	781	548
Incl Energy					
exc Energy					
2016					

## NET (DEBT)/FUNDS

**£(225)m**

	2015	2014	2013	2012	2016
	(111)	666			
		666			
			1,939		
				1,317	

## SUMMARY FUNDS FLOW STATEMENT<sup>1</sup>

Year to 31 December  
£m

	2016	2015	Change
<b>Opening net (debt)/funds</b>	(111)	666	
<b>Closing net debt</b>	(225)	(111)	
<b>Change in net (debt)/funds</b>	(114)	(777)	
Underlying profit before tax	813	1,432	-619
Depreciation and amortisation	720	613	+107
Movement in net working capital	(55)	(544)	+489
Expenditure on property, plant and equipment and intangible assets	(1,201)	(887)	-314
Other	47	(229)	+276
<b>Trading cash flow</b>	324	385	-61
Contributions to defined benefit pensions in excess of underlying PBT charge	(67)	(46)	-21
Taxation paid	(157)	(160)	+3
<b>Free cash flow</b>	100	179	-79
Shareholder payments	(301)	(421)	+120
Share buyback	–	(414)	+414
Acquisitions and disposals	(153)	(3)	-150
Discontinued operations	–	(121)	+121
Foreign exchange	240	3	+237
<b>Change in net debt</b>	(114)	(777)	

<sup>1</sup> The derivation of the summary funds flow statement above from the reported cash flow statement is included in note 26 of the condensed consolidated financial statements.

# A sustainable business

We continue to invest in the resources and capabilities which underpin our future success as we transform the business.

## THROUGH ENGINEERING AND INNOVATION

In 2016, we spent over £1.3bn on gross R&D to develop the technology we embed in our products and deliver to market. As a result, we applied for 672 patents in the year, a Rolls-Royce record.

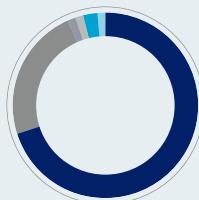
PATENTS FILED

**672**

Over two-thirds of our R&D expenditure is dedicated to improving the environmental performance of our products, helping our customers do more using less and minimising the environmental impact of our engines.

2016 GROSS R&D EXPENDITURE

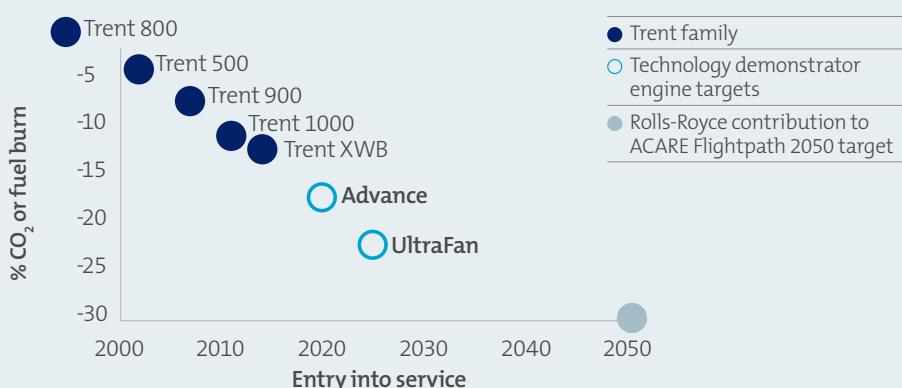
**£1.3bn**



Our investments in world-class technology, research and engineers are essential for sustaining our competitive advantages and creating new growth opportunities. Ultimately, our innovations deliver the differentiated high-technology products and services that attract our customers.

### ACARE flightpath 2050 goals

We continue to meet the environmental performance targets for 2050 set by the Advisory Council for Aviation Research and Innovation in Europe (ACARE).



### RSS Sir David Attenborough

Rolls-Royce has designed the UK's future polar research ship, the RSS Sir David Attenborough, one of the most advanced scientific maritime vessels ever constructed. It will be equipped with highly efficient Bergen B33:45 engines, running on low sulphur fuel, and a supporting electrical system that will reduce the vessel's fuel consumption, emissions, noise and vibration, minimising the impact in the sensitive polar environment.



## Research partnerships

For over 25 years, Rolls-Royce has been co-ordinating research with leading academic institutions and industry partners to harness the knowledge of renowned experts and gain the best value from our investments.

### University Technology Centres (UTCs)

This global network of university research partners advances our understanding of specialist science and technologies which are core to our next-generation products.

### Advanced Manufacturing Research Centres (AMRCs)

These collaborative public/private partnerships help us to bridge the gap between early research and industrial application, with a focus on developing new manufacturing processes and technologies.



## Engineering expertise

We seek to attract the best and brightest engineers by providing them with world-class projects, tools and processes.

We have a culture of developing our people within the Group through opportunities such as our Specialist Academy and the Rolls-Royce Fellowship programmes. We value professional development and work closely with a number of institutes and external organisations to encourage our engineers to earn professional recognition.

In 2016, we invested £21m to enhance our digital engineering toolset across all our businesses. These developments include:

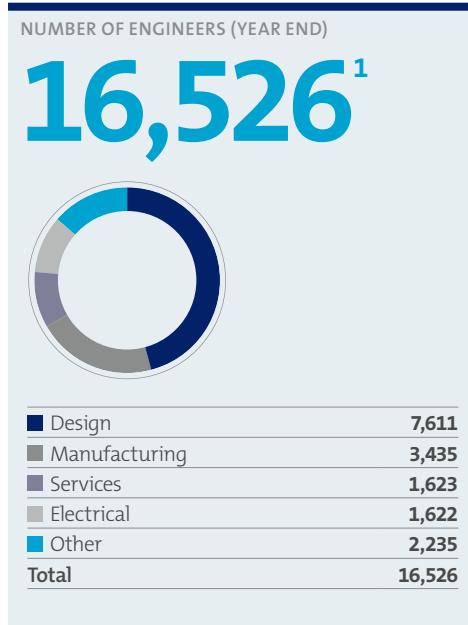
- **DaVinci**

This new software enables our engineers to create and test whole engine models virtually. This reduces costs, improves our designs and removes expensive physical hardware tests as we develop new products.

- **High performance computing**

We have continued investing in upgrades to our high performance computing infrastructure to enable our engineers to make the most of the software tools we have available.

We are also growing our in-house capabilities to capitalise on emerging opportunities. In 2016, we established our digital business to leverage decades of data-driven in-service product knowledge to develop new customer services, and we are leading the way in the development of intelligent ships.



### Inspiring future generations of engineers

We aim to reach six million people through our science, technology, engineering and mathematics (STEM) education outreach programmes by 2020. Our activities are designed to demonstrate the life-long opportunities that STEM careers can offer, helping to secure a future talent pipeline for ourselves and the wider industry. In 2016, we reached 1.2 million people<sup>2</sup>, 68% of whom were actively engaged in our programmes. Since launching in 2014, we are now 47% towards our 2020 target.



<sup>2</sup>External assurance over STEM, Energy, GHG and TRI rate data provided by Bureau Veritas. See page 183 for the sustainability assurance statement.

<sup>1</sup> Our total number of engineers rose slightly from 15,564 in 2015. This is primarily due to reclassification of 517 roles in Power Systems, and the recruitment of around 270 roles at the new engineering campus in Bangalore, India.

## THROUGH OUR PEOPLE

The skills, knowledge and passion of our workforce are key enablers to our transformation programme. We are embedding a high performance culture across the organisation that encourages pace and simplicity.

As part of our people transformation we have simplified the organisation through management restructuring and leadership change. This has included a reduction of around 700 management positions in 2016 to drive accountability, simplicity and pace through the organisation and improve decision making. In addition, we have continued to make changes to our headcount mix to align with our markets and associated challenges. This has affected our Marine business in particular.

Our transformation is underpinned by our ongoing commitment to maintain the highest standards of ethics, safety and human rights.

In 2016, 97% of Rolls-Royce employees completed annual ethics training, focused on dealing with ethical dilemmas. We are committed to having an environment where anyone can ask questions or raise concerns without fear of retaliation, anonymously if required.

PERCENTAGE OF EMPLOYEES WHO COMPLETED ANNUAL ETHICS TRAINING

**97%**

TOTAL REPORTABLE INJURY RATE (PER 100 EMPLOYEES)<sup>2</sup>

**0.60**

We continue to develop our employee base, ensuring we have the right skills for our business today and the right capabilities for the future.

During the year, all of our management population completed Global Code of Conduct certification. We also introduced an ethics e-learning module for new employees to help familiarise them with our approach and expectations. In 2016, 99% of new employees who joined us during the year completed this course within the first three months of their employment.

We regard the health and safety of our employees and those working on our premises, or on our behalf, as paramount.

In 2016, there were no fatalities in the Group, and our Total Reportable Injury (TRI) rate was 0.60 per 100 employees<sup>2</sup>. This represents a 6% improvement since 2014.

We continue to concentrate on global improvement programmes aligned to our risk profile. Electrical safety and process safety programmes concluded this year and have now transitioned to form part of our ongoing Group assurance activity.

For more information see the Safety & Ethics Committee report, on pages 103 to 109.



We remain committed to protecting and preserving the human rights of our employees, those working in our global supply chain and those who may be impacted by our operations. Our Global Code of Conduct and global human rights policy set out this commitment. More information on our approach can be found in our 2016 anti-human trafficking and modern slavery statement, available at [www.rolls-royce.com](http://www.rolls-royce.com).

### Headcount by business unit<sup>1,2,3</sup>

	2015	2016
Civil Aerospace	23,100	23,800
Defence Aerospace	6,300	6,000
Power Systems	10,600	10,300
Marine	6,000	5,300
Nuclear	4,100	4,300
Other businesses and corporate	400	200
<b>Total</b>	<b>50,500</b>	<b>49,900</b>

### Headcount by location<sup>1,3</sup>

	2015	2016
UK	23,200	22,300
US	6,400	6,300
Canada	1,100	1,000
Germany	10,700	10,700
Nordic countries	3,800	3,400
Rest of world	5,300	6,200
<b>Total</b>	<b>50,500</b>	<b>49,900</b>

<sup>2</sup>External assurance over STEM, Energy, GHG and TRI rate data provided by Bureau Veritas. See page 183 for the sustainability assurance statement.

<sup>1</sup> Headcount data is calculated in terms of average full-time employees.

<sup>2</sup> Other businesses and corporate includes Energy businesses not sold into Siemens in 2014 and corporate employees who do not provide a shared service to the segments. Where corporate functions provide such a service, employees have been allocated on an appropriate basis. 2015 figures have been restated on this basis.

<sup>3</sup> Certain joint ventures have been reclassified as joint operations from 1 January 2016. This has increased the Group reported headcount by 800 employees.

Our early career development programmes continue to attract large numbers of high-quality graduates and apprentices, providing a pipeline of talent into finance, HS&E, operations, HR and engineering.

Our programmes include technical and practical engineering, specialist sciences and corporate function programmes including accountancy, supply chain management and project management.

GRADUATES RECRUITED IN 2016

**274**

PERCENTAGE OF OUR GRADUATES WHO ENTERED ENGINEERING DEVELOPMENT PROGRAMMES

**60%**

APPRENTICES RECRUITED IN 2016

**327**

PERCENTAGE OF OUR APPRENTICES WHO JOINED HIGHER APPRENTICESHIP PROGRAMMES

**33%**

OUR APPRENTICE SCHEME HAS BEEN RUNNING FOR OVER

**100 years**

Our training programmes have helped employees to embrace and drive change. In 2016, we invested over £32m in employee learning and development, delivering over one million hours of employee training.

- **High Performance Culture (HPC)**

HPC is our flagship cultural change programme. It is designed to provide insights and tools to help our people operate and collaborate with pace, simplicity and accountability. More than 80% of employees have been engaged in the programme to date.

- **Columbus Academy**

The Columbus Academy is our principal executive development programme, run in partnership with Oxford Said Business School. It challenges our leadership teams to consider larger, strategic issues as we continue to transform our business. All our senior leaders have attended the course.

As part of our cultural change programme, we have introduced assessments of individuals' alignment to our values and behaviours into our performance management approach for all employees.

Maintaining employee engagement is critical during times of change and transformation. More than 30,000 employees took part in our employee opinion survey this year, our highest participation rate to date.

Our sustainable employee engagement index score declined slightly from 81 in 2015 to 75 in 2016, six points below the high performance norm.

We consider a subset of the results of our employee opinion survey when calculating our non-financial KPIs, recognising that an engaged workforce is a key measure of success. For more information see page 47.

We provide a variety of channels to communicate with employees and encourage participation and engagement. Our community investment and education outreach programmes are a key component of our employee involvement activities. We invested £9.5m in supporting communities in 2016, including £5.6m in cash contributions and £3.9m in employee time equivalent.

We are committed to creating an environment where every employee can reach his or her full potential, by encouraging diversity, wellbeing and development. We have employee resource groups in our UK, US and Germany operations. These bring together employees who share similar characteristics or experiences.

More information on our approach to diversity and gender distribution can be found in the Nominations & Governance Committee report, on pages 67 and 69.



## THROUGH OUR OPERATIONS AND FACILITIES

We continue to develop world-class production capabilities while optimising our operational footprint.



### Derby Campus, UK

As part of our commitment to retain manufacturing and engineering capability in the UK, we launched a five-year investment programme to redevelop our Derby Campus.

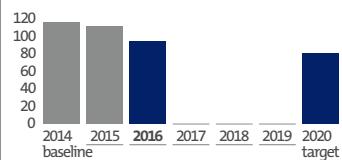
- Over 10,000 employees, including 7,500 engineers
- Future product development programmes
- Final assembly of our Trent XWB and Trent 1000 engines
- Our corporate functions

INVESTMENT IN ENERGY EFFICIENCY IMPROVEMENT PROJECTS

**£10m**

In 2016, we invested £50m in improvements to existing facilities and £184m in the development of new facilities, while at the same time reducing our global operational footprint by 2%.

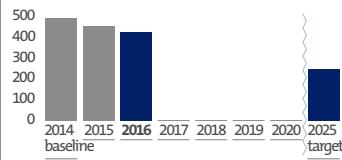
ENERGY USE (MWH/£M)<sup>◻</sup>



Target: reduce energy use in our operations and facilities by 30%, normalised by revenue, by 2020. (excluding product test and development)

Our total energy consumption for 2016, excluding product test, was 95 MWH/£m, which represents a 17% reduction since 2014. This has been driven by continued investment in energy efficiency improvement projects, including upgrading lighting and heating systems, and building management systems. Our expenditure for 2016 totalled £10m, our highest annual investment to date.

ABSOLUTE GHG EMISSIONS (KTCO<sub>2</sub>E)<sup>◻†</sup>

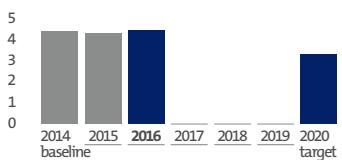


Target: reduce greenhouse gas (GHG) emissions in our operations and facilities by 50%, absolute, by 2025. (excluding product test and development)

Our total GHG emissions for 2016, excluding product test, was 424 ktCO<sub>2</sub>e. This represents a 13% reduction since 2014. This has been achieved by investing in a number of low carbon and renewable energy projects across our global facilities, including completing two large solar power installations at our Singapore and Bristol, UK manufacturing sites.

Our investments in state-of-the-art facilities also enable us to reduce the environmental impacts of our operations.

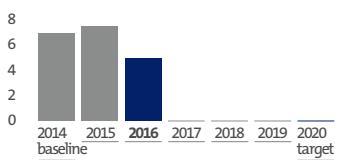
TOTAL SOLID AND LIQUID WASTE (T/£M)<sup>§</sup>



Target: reduce total solid and liquid waste in our operations and facilities by 25%, normalised by revenue, by 2020.

Our total solid and liquid waste production in 2016 was 4.48 t/£m, a 2% increase from 2014. This is largely driven by improved data collection and validation, particularly in Power Systems. We continue to focus on opportunities to prevent and reduce the amount of waste we generate. We expect waste reduction activity to be accelerated in 2017 through a global waste action programme.

WASTE TO LANDFILL (000 TONNES)<sup>§</sup>



Target: zero waste to landfill in our operations and facilities, by 2020. (excluding hazardous waste)

The amount of waste sent to landfill has decreased by 28% from 6,700 tonnes in 2014 to 4,800 tonnes in 2016, with particularly good progress in our Defence Aerospace and Power Systems businesses. This has been accelerated in 2016 by a reduction in output from our two major foundries. We continue to work closely with our waste management partners to identify recycling and recovery alternatives to landfill across a variety of waste streams.

<sup>†</sup> Regulatory greenhouse gas (GHG) emissions data details on page 188.

<sup>◻</sup> External assurance over STEM, Energy, GHG and TRI rate data provided by Bureau Veritas. See page 183 for the sustainability assurance statement.

<sup>§</sup> Waste data for 2016 is calculated in accordance with our basis of reporting, as set out on [www.rolls-royce.com/sustainability](http://www.rolls-royce.com/sustainability). Whilst we were able to determine the total waste production and waste to landfill for 2016, we maintain a limited degree of uncertainty in the waste categorisation and quantities which may impact our reported numbers. We will continue to review historical and source data and if a material impact is identified will restate in accordance with our basis of reporting.

## THROUGH OUR SUPPLIER AND CUSTOMER RELATIONSHIPS

We pride ourselves on being trusted partners to suppliers and customers in more than 150 countries worldwide. Our long-term relationships provide insights and capabilities which enable us to deliver world-class products and services.

### Our external suppliers

Rolls-Royce spends over £7bn annually with suppliers. We invest significant resources to ensure this complex supply chain is resilient, efficient and able to consistently deliver to Rolls-Royce standards. Our supply chain is built on long-term relationships, frequently based on shared investments and capability.

We also invest in developing new supplier relationships as we move into new technologies, new customer markets and geographies, particularly in the Asia Pacific region.

At the same time, we are rationalising our supply base as we continue to streamline our product portfolio and operational footprint, particularly in our Marine business where we have reduced the number of OE suppliers by 40% since 2013.

We engage collaboratively with key suppliers to drive out cost and enhance value, underpinned by full transparency and agreed joint improvement plans. Over 65% of our spend is managed through mature and collaborative supplier engagement programmes.

We remain committed to maintaining the highest levels of ethical behaviour across our supply chain. At the end of 2016, 99% of our suppliers had contractually agreed to adhere to our Global Supplier Code of Conduct. We have also introduced risk-based compliance monitoring; 22% of our prioritised suppliers have completed this assessment, covering business ethics, labour practices, anti-bribery and human rights.

ANNUAL SPEND WITH OUR SUPPLIERS

>£7bn

SUPPLIERS CONTRACTUALLY AGREED TO ADHERE TO OUR GLOBAL SUPPLIER CODE OF CONDUCT

99%

### Our customers

Our customers expect outstanding product performance and reliability. They operate our products for decades, frequently in combination with aftermarket services. This leads to a deep understanding of their needs which we apply to the development of new technologies and products.

The quality of our customer relationships is based on mutual trust, as well as our engineering expertise. As a steering committee member of the International Forum on Business Ethical Conduct for the Aerospace and Defence Industry (IFBEC), we strive to implement best practice ethical business standards and continue to apply a zero tolerance approach to bribery and corruption.

In addition, we have introduced a customer delivery metric into our remuneration policy to ensure continued focus on the delivery of our commitments to customers. For more information see page 47.

#### 50-year partnership with the Royal Navy

Rolls-Royce is a world-leader in nuclear submarine systems and support services incorporating design, procurement and operation. For the past 50 years, we have been the Technical Authority for the UK Nuclear Steam Raising Plant, responsible for powering the UK's Royal Navy submarine fleet.



#### A superior supplier to the US Air Force

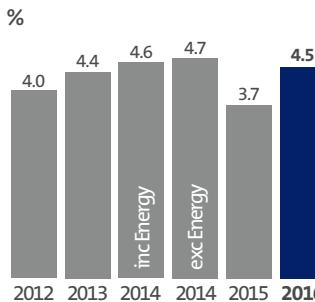
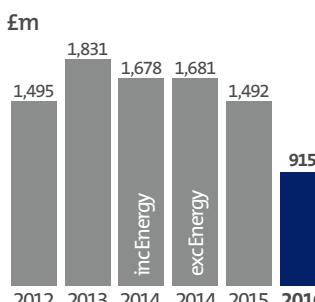
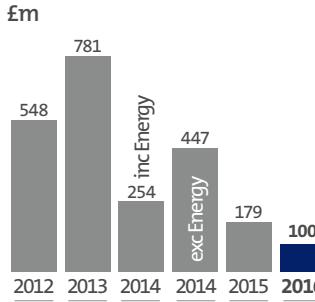
In September 2016, the USAF recognised Rolls-Royce as a Superior Supplier. We are the only engine manufacturer to be recognised by the USAF as a Tier 1 Superior Supplier three years in a row.



# Key performance indicators

Our key financial and non-financial performance indicators are shown below. The areas of focus of the Board and its committees are described on pages 58 to 112, and other non-financial performance indicators are shown in the Sustainable business section on pages 40 to 45 and the Safety & Ethics Committee report on pages 103 to 109.

Description	Why we measure it	How we have performed
<b>Order book £79.8bn</b>	We measure our order book in line with industry practice and believe it is an indicator of future business; however, its value may not be reflective of future revenue. We measure it at our long-term planning exchange rate (LTPR) and list prices and include both firm and announced orders. In Civil Aerospace, it is common for a customer to take options for future orders in addition to firm orders placed. Such options are excluded from the order book. In Defence Aerospace, long-term programmes are often ordered for only one year at a time. In such circumstances, even though there may be no alternative engine choice available to the customer, only the contracted business is included in the order book. Conservatively, we only include the first seven years' revenue of long-term aftermarket contracts.	The order book grew by £3.4bn. An increase of £4.4bn in Civil Aerospace (including £2.1bn from a five cent improvement in the LTPR) was offset by a reduction in the other segments, reflecting the current weak market conditions, particularly in oil & gas markets.  £bn
<b>Order intake £19.1bn</b>	Order intake is a measure of new business secured during the year and represents new firm orders, adjusted for the movement in the announced order book between the start and end of the period. Any orders which were recorded in previous periods and which are subsequently cancelled, reducing the order book, are included as a reduction to intake. We measure order intake at constant exchange rates and list prices and, consistent with the order book policy of recording the first seven years' revenue of long-term aftermarket contracts, include the addition of the following year of revenue on long-term aftermarket contracts.	An increase of £1.3bn in Civil Aerospace order intake was offset by weaker intake in Defence Aerospace and Marine.  £bn
<b>Underlying revenue £13,783m</b>	Monitoring of revenue provides a measure of business growth. Underlying revenue is used as it reflects the impact of our FX hedging policy by valuing foreign currency revenue at the actual exchange rates achieved as a result of settling foreign exchange (FX) contracts in the year. This provides a clearer measure of the year-on-year trend.	At constant exchange rates, revenue was broadly stable except in Marine where it fell by 24%. Improved achieved rates on currency hedging increased underlying revenues by £0.7bn.  £m
<b>Net R&amp;D expenditure as a proportion of underlying revenue 6.8%</b>	This measure reflects the need to generate current returns as well as to invest for the future. We measure R&D as the self-funded expenditure before both amounts capitalised in the year and amortisation of previously-capitalised balances. We expect to spend approximately 5% of underlying revenue on R&D although this proportion will fluctuate depending on the stage of development of current programmes. We expect this proportion will reduce modestly over the medium term.	The increase is largely due to increased expenditure on three large engine programmes, Trent 1000 TEN, Trent XWB-97 and Trent 7000, as they approach entry into service.  %

Description	Why we measure it	How we have performed
<b>Capital expenditure as a proportion of underlying revenue 4.5%</b>	To deliver on its commitments to customers, the Group invests significant amounts in its infrastructure. All proposed investments are subject to rigorous review to ensure that they are consistent with forecast activity and will provide value for money. We measure annual capital expenditure as the cost of property, plant and equipment acquired during the period and, over the medium term, expect a proportion of around 4%. (Capital expenditure excludes additions arising from TotalCare Flex arrangements.)	Expenditure increased to £626m (2015: £494m) principally reflecting the major investment in aerospace footprint and capacity. 
<b>Underlying profit before financing £915m</b>	We measure underlying profit before financing on a basis that shows the economic substance of the Group's hedging strategies in respect of the transactional exchange rate and commodity price movements. In particular: (a) revenues and costs denominated in US dollars and euros are presented on the basis of the exchange rates achieved during the year; (b) similar adjustments are made in respect of commodity derivatives; and (c) consequential adjustments are made to reflect the impact of exchange rates on trading assets and liabilities, and long-term contracts, on a consistent basis.	The reduction is predominantly in Civil Aerospace reflecting reductions in: volume and margin on link accounted Trent 700 engines; business jet original equipment volumes; large engine aftermarket utilisation; and increased technical costs for large engines. In addition, 2015 benefited from changes in risk assessments, partially offset by strong lifecycle cost improvements and provision releases. 
<b>Free cash flow £100m</b>	In a business requiring significant investment, we monitor cash flow to ensure that profitability is converted into cash generation, both for future investment and as a return to shareholders. We measure free cash flow as the movement in net debt/funds during the year, before movements arising from payments to shareholders, acquisitions and disposals, and FX.	The reduction reflects lower profits and increased capital expenditure offset by improvements in net working capital. 

### Non-financial key performance indicators\*

Description	Why we measure it	How we have performed
<b>Customer delivery 88%</b>	To deliver on our commitments to our customers we measure the percentage of 'on-time to purchase order' including new equipment, spare parts, equipment repair and overhaul. This is tracked Group-wide in our scheduling and order fulfilment system.	As we continue to ramp up our delivery of Trent Engines, the challenge to improve on-time delivery remains a priority. The 2016 score of 88% fell slightly short of our target of 90%.
<b>Employee engagement 75</b>	This is measured through our long-standing employee opinion survey which produces a composite engagement score. The targets are based on absolute scores for six key questions within the overall survey.	Our employee engagement score achieved our target of 75 in 2016. This was the same score as in 2015 and the target reflected the significant impact of the transformation programme on our employees in 2016.

\* 2016 is the first year that we have included these non-financial performance indicators in our remuneration structure.

# Principal risks

## Risk management

Risk management is built into our daily activities and is an integral part of how we work: from our engineering design, through to engine production, servicing and how we run our operations.

The Board is responsible for the Group's risk management and internal control systems and reviews their effectiveness. These systems are designed to identify and manage, rather than eliminate, the risk of failure to achieve business objectives and to provide reasonable, but not absolute, assurance against material misstatement or loss.

More information about our internal control system can be found in the Audit Committee report on pages 100 and 101.

## Our risk management system

Our risk management system (RMS) helps us make better decisions and to deal with problems if they occur. It is implemented through a Group-wide framework mandated in the Group risk management policy and a network of trained risk management facilitators. It is supported through the use of risk software.

Businesses and functions are accountable for identifying and managing risks in line with the Group risk management policy. Business continuity plans are in place to mitigate continuity risks and this year there has been more regular testing of the adequacy of these plans through exercises with the businesses.

The Group's enterprise risk team, led by the Director of Risk, is responsible for disseminating the risk policy and processes and co-ordinating the effective operation of the RMS. Progress of actions to mitigate risks and the adequacy of risk controls are regularly reviewed by the sector audit committees.

Joint ventures constitute a large part of the Group's activities. Responsibility for risk and internal control in joint ventures lies with the managers of those operations. We seek to exert influence over such joint ventures through board representation. Management and internal audit regularly review the activities of these joint ventures.

In 2016, we continued to embed enhancements to our RMS throughout the Group, including strengthening risk governance and building improvements to our risk operating model, reporting, infrastructure and assurance processes.

### Examples of enhancements implemented in 2016 include:

- Launching a new risk policy which was mandated as part of the governance framework and supported by improved risk management training, which is mandatory for new employees.
- Adopting a risk visualisation tool for use at the Board, Executive Leadership Team (ELT) and in the businesses to bring risk discussions to life and enable better interrogation of risk information.
- Holding more regular ELT risk committee meetings (quarterly) to conduct deep

dives into specific risks, in particular their mitigation plans and controls, and to consider systemic issues and common root causes.

- Building much closer links to strategic and business financial planning and forecasting processes to develop risk scenarios used to support our viability statement.
- Updating the way we monitor and measure the effectiveness of the RMS, including the use of incident information to drive learning and continuous improvement of our risk mitigation activities.

The Board is aware that the effectiveness of risk management is highly dependent on behaviours, as a good process does not automatically lead to a good outcome. The roll-out of the Group's High Performance Culture programme will continue to strengthen risk management as part of our culture. In addition, the emphasis in our ethics and compliance programme of providing a culture of speaking up, reinforces the values and behaviours required for an effective RMS.

In 2017, we will continue to look for opportunities to strengthen our RMS and our corporate culture by focusing on embedding risk content in leadership training programmes, discussing our principal risks in employee communications and regularly evaluating the effectiveness of our risk management activities.

## Management of principal risks

Our risk framework ensures that risks are identified, managed and communicated throughout the Group.



## Principal risks

Our RMS is designed so that principal risks can be identified from multiple sources. Key bottom-up risks are identified by businesses and functions and the detail of risks that meet the Group threshold are subject to review and challenge by the ELT and the Board during their risk reviews.

These include monitoring the status of mitigation actions, adequacy of controls and any incidents that have occurred since the last review. Risks captured during the strategy and business planning activities also inform the development of the principal risks.

The Board, assisted by the ELT, has carried out a robust assessment of, and reviewed our appetite for, the principal risks facing the Group. These include those principal risks that threaten the business model, future performance, solvency and liquidity of the Group. These reviews have been informed by the financial evaluation of severe but plausible scenarios of our principal risks which has also been used to support our viability statement on page 53.

During the year, the Board and ELT reviews have involved: discussing changes to the risks; reviewing the risk indicators for principal risks; understanding any unplanned incidents that have occurred to support the Board's consideration of our risk appetite; and, discussing with management about how risks will be managed.

The Board, or the most appropriate Board committee, undertakes in-depth reviews (deep dives) of our principal risks in which it assesses our material controls and the effectiveness of our risk management and mitigation activities. These reviews are

supported by the ELT risk committee performing deep dives of related bottom-up key risks and the actions and controls in place to manage them. During the year, the Board or the most appropriate Board committee has undertaken a deep dive on all of the Group's principal risks. The Board has also conducted a review of our strategic risks as part of its annual strategy review.

This ongoing review of risks has resulted in a further principal risk being added this year: Disruptive technologies and business models. This risk has been added to reflect the increasing importance of transformative technologies and new ways of doing business, not least digitisation of processes, products and services, that if not properly managed, could impact our future growth and profitability. This risk will be overseen by the Science & Technology Committee and was subject to a deep dive by the ELT at its meeting in December 2016.

The principal risks are also used to help select scenarios to exercise our Group crisis management team (CMT). This year an appropriate scenario was developed based on the IT vulnerability principal risk. This provided an opportunity for the CMT to understand the nature and complexity of cyber threats and to test the Group's response procedures and identify where our plan can be further strengthened.

The Board gave initial consideration to the implications of Brexit for the Group, and due to the prevailing uncertainty of timing and impact set up a steering group to monitor developments and report back to the Board. Rolls-Royce is headquartered in the UK but across continental Europe the Group has significant infrastructure, a large workforce, many business units and a very important customer and supplier base. Whilst the

details of Brexit are still unclear, we are working with the UK government and others to ensure the implications of leaving the EU are understood and mitigated if possible. We recognise we have an obligation to look after our people in the UK, Europe and beyond, and to ensure that we take the necessary steps to position the Group to address both the opportunities and threats presented so that we can continue to do business effectively in and with Europe and the rest of the world with minimal disruption.

Additionally, Rolls-Royce has significant operations, a substantial employee base, and important customers in North America, where the new US administration has signalled broad policy changes. Some of these changes in policy with regard to trade, tax and defence and infrastructure spending could affect the industries which we serve. The North America leadership team is actively monitoring these developments to mitigate risk and position us advantageously in this new environment.

## Risk management enables our strategy

**1** Engineering excellence

**2** Operational excellence

**3** Capturing aftermarket value

→ PRIORITIES FOR 2017 ON PAGE 13

### Change in risk level

↑ Increased

↓ Decreased

↔ Static

N New risk

Risk or uncertainty and potential impact	How we manage it	Key controls	Change in risk level	Strategic priorities
<b>Disruptive technologies and business models</b> Disruptive technologies, new entrants with alternative business models or disruptions to key markets or customers could reduce our ability to win sustainable future business, achieve operating results and realise future growth opportunities.	<ul style="list-style-type: none"> <li>Horizon and emerging technology scanning, and understanding our competitors, including patent searches.</li> <li>Investing in innovation and new technologies (see page 9).</li> <li>Focusing on enhancing our skills and capabilities to maintain our technology leadership (see page 41).</li> <li>Forming strategic partnerships and conducting joint research programmes.</li> <li>Establishing our digital business.</li> </ul> <p>This principal risk is subject to review by the Science &amp; Technology Committee.</p>	<ul style="list-style-type: none"> <li>Strategic planning process</li> <li>Investment review committee</li> <li>Digital board</li> <li>Research &amp; technology board</li> </ul>	<span style="color: #0070C0;">N</span>	<span style="background-color: #D9D9D9; border: 1px solid black; padding: 2px 5px;">1</span> <span style="background-color: #003366; color: white; border: 1px solid black; padding: 2px 5px;">2</span> <span style="background-color: #5B82BD; border: 1px solid black; padding: 2px 5px;">3</span>
<b>Product failure</b> Product not meeting safety expectations, or causing significant impact to customers or the environment through failure in quality control.	<ul style="list-style-type: none"> <li>Ensuring a culture that puts safety first.</li> <li>Applying our engineering design and validation process from initial design, through production and into service.</li> <li>Reviewing the scope and effectiveness of the Group's product safety policies to ensure that they operate to the highest industry standards.</li> <li>Operating a safety management system (SMS), governed by the product safety review board, and subject to continual improvement based on experience and industry best practice. Product safety training is an integral part of our SMS (see pages 104 and 107).</li> <li>Improving our supply chain quality.</li> </ul> <p>This principal risk is subject to review by the Safety &amp; Ethics Committee.</p>	<ul style="list-style-type: none"> <li>Product safety review board</li> <li>Quality compliance audit</li> <li>Engineering technical audit</li> <li>Crisis management team</li> </ul>	<span style="color: #0070C0;">↔</span>	<span style="background-color: #D9D9D9; border: 1px solid black; padding: 2px 5px;">1</span> <span style="background-color: #003366; color: white; border: 1px solid black; padding: 2px 5px;">2</span> <span style="background-color: #5B82BD; border: 1px solid black; padding: 2px 5px;">3</span>
<b>Business continuity</b> Breakdown of external supply chain or internal facilities that could be caused by destruction of key facilities, natural disaster, regional conflict, financial insolvency of a critical supplier or scarcity of materials which would reduce the ability to meet customer commitments, win future business or achieve operational results.	<ul style="list-style-type: none"> <li>Continuing our investment in adequate capacity and modern equipment and facilities (see page 21).</li> <li>Identifying and assessing points of weakness in our internal and external supply chain, our IT systems and the skills of our people.</li> <li>Selecting stronger suppliers, developing dual sources or dual capability (see page 45).</li> <li>Developing and testing site-level incident management and business recovery plans.</li> <li>Providing improved response to supply chain disruption through customer excellence centres.</li> <li>Understanding potential changes to supply chain responsiveness and resilience resulting from Brexit and change to the US administration (eg. due to logistics delays).</li> </ul> <p>This principal risk is subject to review by the Audit Committee.</p>	<ul style="list-style-type: none"> <li>Crisis management team</li> <li>Major incidents board</li> <li>Quality board and process councils</li> <li>Operations and IT executive teams</li> <li>Supplier audit</li> </ul>	<span style="color: #0070C0;">↔</span>	<span style="background-color: #D9D9D9; border: 1px solid black; padding: 2px 5px;">2</span> <span style="background-color: #5B82BD; border: 1px solid black; padding: 2px 5px;">3</span>
<b>IT vulnerability</b> Breach of IT security causing controlled or critical data to be lost, made inaccessible, corrupted or accessed by unauthorised users.	<ul style="list-style-type: none"> <li>Implementing 'defence in depth' through deployment of multiple layers of software and processes including web gateways, filtering, firewalls, intrusion, advanced persistent threat detectors and integrated reporting (see page 100).</li> <li>Running security and network operations centres.</li> <li>Actively sharing IT security information through industry, government and security forums.</li> </ul> <p>This principal risk is subject to review by the Audit Committee.</p>	<ul style="list-style-type: none"> <li>Operations and IT executive teams</li> <li>IT security management</li> <li>Crisis management team</li> </ul>	<span style="color: #0070C0;">↔</span>	<span style="background-color: #D9D9D9; border: 1px solid black; padding: 2px 5px;">1</span> <span style="background-color: #003366; color: white; border: 1px solid black; padding: 2px 5px;">2</span>

Risk or uncertainty and potential impact	How we manage it	Key controls	Change in risk level	Strategic priorities
<b>Competitive position</b> The presence of large, financially strong competitors in the majority of our markets means that the Group is susceptible to significant price pressure for original equipment or services even where our markets are mature or the competitors few. Our main competitors have access to significant government funding programmes as well as the ability to invest heavily in technology and industrial capability.	<ul style="list-style-type: none"> <li>Accessing and developing key technologies and service offerings which differentiate us competitively (see page 40).</li> <li>Focusing on being responsive to our customers and improving the quality, delivery and reliability of our products and services.</li> <li>Partnering with others effectively.</li> <li>Driving down cost and improving margins (see page 10).</li> <li>Protecting credit lines.</li> <li>Investing in innovation, manufacturing and production, and continuing governance of technology programmes (see pages 111 and 112).</li> <li>Maintaining a healthy balance sheet to enable access to cost-effective sources of third-party funding.</li> <li>Understanding our competitors.</li> <li>Understanding the potential implications on our competitiveness resulting from Brexit and change to the US administration.</li> </ul> <p>This principal risk is subject to review by the Board.</p>	<ul style="list-style-type: none"> <li>Financial performance review</li> <li>Strategic planning process</li> <li>Investment review committee</li> <li>Science &amp; Technology Committee</li> <li>Research &amp; technology board</li> </ul>		1 2 3
<b>Political risk</b> Geopolitical factors that lead to an unfavourable business climate and significant tensions between major trading parties or blocs which could impact the Group's operations. For example: explicit trade protectionism, differing tax or regulatory regimes, potential for conflict; or broader political issues.	<ul style="list-style-type: none"> <li>Where possible, locating our facilities and supply chain in countries with a low level of political risk and/or ensuring that we maintain dual capability.</li> <li>Diversifying global operations to avoid excessive concentration of risks in particular areas.</li> <li>The Group's international network and its businesses proactively monitoring local situations.</li> <li>Maintaining a balanced business portfolio with high barriers to entry and a diverse customer base (see page 14).</li> <li>Proactively influencing regulation where it affects us.</li> <li>Steering committee, chaired by Group President, to co-ordinate activities across the Group and minimise the impact of Brexit.</li> <li>Monitoring the potential impact of changes following the change to the US administration, relating to tax policy, trade and relationships with the UK government.</li> </ul> <p>This principal risk is subject to review by the Board.</p>	<ul style="list-style-type: none"> <li>Government relations and Group tax teams</li> <li>Strategic planning process</li> <li>Supplier audit</li> </ul>		2
<b>Major programme delivery</b> Failure to deliver a major programme on time, within budget, to specification, or technical performance falling significantly short of customer expectations, or not delivering the planned business benefits, would have potentially significant adverse financial and reputational consequences, including the risk of impairment of the carrying value of the Group's intangible assets and the impact of potential litigation.	<ul style="list-style-type: none"> <li>Major programmes are subject to Board approval (see page 185).</li> <li>Reviewing major programmes at levels and frequencies appropriate to their criticality and performance, against key financial and non-financial deliverables and potential risks throughout the programmes lifecycles (see page 185).</li> <li>Conducting technical audits at pre-defined points which are performed by a team that is independent from the programme.</li> <li>Requiring programmes to address the actions arising from reviews, and audits and then monitoring and controlling progress through to closure.</li> <li>Applying knowledge management principles to provide benefit to current and future programmes.</li> </ul> <p>This principal risk is subject to review by the Board.</p>	<ul style="list-style-type: none"> <li>Rolls-Royce management system</li> <li>Operational performance review</li> <li>Project assurance</li> <li>Gated business and technical reviews</li> <li>Quality compliance audit</li> </ul>		1 2

Risk or uncertainty and potential impact	How we manage it	Key controls	Change in risk level	Strategic priorities
<b>Compliance</b> Non-compliance by the Group with legislation or other regulatory requirements in the heavily regulated environments in which it operates (eg. export controls; use of controlled chemicals and substances; and anti-bribery and corruption legislation) compromising the ability to conduct business in certain jurisdictions and exposing the Group to potential: reputational damage; financial penalties; debarment from government contracts for a period of time; and/or suspension of export privileges (including export credit financing), each of which could have a material adverse effect.	<ul style="list-style-type: none"> <li>Taking an uncompromising approach to compliance.</li> <li>Operating an extensive compliance programme. This programme and the Global Code of Conduct are disseminated throughout the Group and are updated from time to time to ensure their continued relevance, and to ensure that they are complied with, both in spirit and to the letter. The Global Code of Conduct and the Group's compliance programme are supported by appropriate training (see page 105).</li> <li>Strengthening of the ethics, anti-bribery and corruption, compliance and export control teams.</li> <li>A legal team is in place to manage regulatory investigations.</li> <li>Engaging with external regulatory authorities.</li> <li>Implementing a comprehensive Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) compliance programme. This includes establishing appropriate data systems and processes, working with our suppliers, customers and trade associations and conducting research on alternative materials.</li> </ul> <p>This principal risk is subject to review by the Safety &amp; Ethics Committee.</p>	<ul style="list-style-type: none"> <li>Corporate governance framework</li> <li>Compliance and export control teams</li> <li>Group Secretariat</li> <li>Legal teams</li> </ul>		<b>2</b>
<b>Market and financial shock</b> The Group is exposed to a number of market risks, some of which are of a macro-economic nature (eg. oil price, exchange rates) and some of which are more specific to the Group (eg. liquidity and credit risks, credit rating, profitability post IFRS 15, reduction in air travel or disruption to other customer operations). Significant extraneous market events could also materially damage the Group's competitiveness and/or creditworthiness.  This would affect operational results or the outcomes of financial transactions.	<ul style="list-style-type: none"> <li>Maintaining a healthy balance sheet, through managing cash balances and debt levels and maturities (see page 17).</li> <li>Providing financial flexibility by maintaining high levels of liquidity and an investment grade credit rating.</li> <li>Sustaining a balanced portfolio through earning revenue both from the sale of original equipment and aftermarket services, providing a broad product range and addressing diverse markets that have differing business cycles (see page 18).</li> <li>Deciding where and what currencies to source in, and where and how much credit risk is extended or taken. The Group has a number of treasury policies that are designed to hedge residual risks using financial derivatives (foreign exchange, interest rates and commodity price risk – see page 185).</li> <li>Review debt financing and hedging in light of volatility in external financial markets caused by external events, such as Brexit and change of US administration.</li> </ul> <p>This principal risk is subject to review by the Audit Committee.</p>	<ul style="list-style-type: none"> <li>Financial performance review</li> <li>Financial risk committee</li> <li>Operational performance review</li> <li>Group finance, treasury and taxation teams</li> </ul>		<b>2</b> <b>3</b>
<b>Talent and capability</b> Inability to attract and retain the critical capabilities and skills needed in sufficient numbers and to effectively organise, deploy and incentivise our people to deliver our strategy, business plan and projects.	<ul style="list-style-type: none"> <li>Attracting, rewarding and retaining the right people with the right skills globally in a planned and targeted way, including regular benchmarking of remuneration (see pages 70 and 72).</li> <li>Developing and enhancing organisational, leadership, technical and functional capability to deliver global programmes and transformational change.</li> <li>Continuing a strong focus on individual development and succession planning (see page 58).</li> <li>Proactively monitoring retirement in key areas and actively managing the development and career paths of our people with a special focus on employees with the highest potential.</li> <li>Embedding a lean, agile high performance culture that tightly aligns Group strategy with individual and team objectives.</li> <li>Retaining, incentivising and effectively deploying the critical capabilities, skills and people needed to deliver our strategic priorities, plans and projects whilst implementing the Group's major programme to transform its business, to be resilient and to act with pace and simplicity.</li> <li>Tracking engagement through our annual employee opinion survey and a commitment to drive year-on-year improvement to the employee experience and communications (see page 43).</li> <li>Reviewing employee mobility as part of Brexit steering committee.</li> </ul> <p>This principal risk is subject to review by the Nominations &amp; Governance Committee.</p>	<ul style="list-style-type: none"> <li>Remuneration Committee</li> <li>ELT</li> <li>HR executive team</li> </ul>		<b>1</b> <b>2</b> <b>3</b>

# Going concern and viability statements

## Introduction

Rolls-Royce operates an annual planning process which includes strategic (greater than five years), medium-term (five year) and short-term (one year) financial forecasts, based on the inputs from each of the businesses. These plans and risks to their achievement are reviewed by the Board as part of its strategy review and budget approval processes. Once approved these plans are cascaded throughout the Group and are used as the basis for monitoring our performance, incentivising employees and providing external guidance to our shareholders. These were updated to reflect the impact of the financial penalties from agreements with investigating bodies.

The processes for identifying and managing the principal risks are described on pages 48 and 49. As also described there, the risk management process, and in consequence the going concern and viability statements, are designed to provide reasonable, but not absolute, assurance.

## Going concern

The going concern assessment considers whether it is appropriate to prepare the financial statements on a going concern basis.

As described on page 185, the Group meets its funding requirements through a mixture of shareholders' funds, bank borrowings, bonds and notes. At 31 December 2016, the Group had borrowing facilities of £5.3bn and total liquidity of £5.1bn, including cash and cash equivalents of £2.8bn and undrawn facilities of £2.3bn. £170m of the facilities mature in 2017.

The Group's forecasts and projections, taking into account reasonably possible changes in trading performance, show that the Group has sufficient financial resources. The Directors have reasonable expectations that the Company and the Group are well placed to manage business risks and to continue in operational existence for the

foreseeable future (which accounting standards require to be at least a year from the date of this report) and have not identified any material uncertainties to the Company's and the Group's ability to do so.

On the basis described above, the Directors consider it appropriate to adopt the going concern basis in preparing the consolidated financial statements (in accordance with the *Guidance on Risk Management, Internal Control and Related Financial and Business Reporting* published by the Financial Reporting Council in September 2014).

## Viability

The viability assessment considers solvency and liquidity over a longer period than for the purposes of the going concern assessment above. Inevitably, the degree of certainty reduces over this longer period.

In making the assessment, severe but plausible scenarios have been considered that estimate the potential impact of the principal risks arising over the assessment period, for example: the loss of a key element of the supply chain; the impact on aircraft travel of a global pandemic; or a failure to achieve planned cost reductions.

The scenarios assume an appropriate management response to the specific event, but not broader mitigating actions which could be undertaken, which were considered separately. The impacts of these scenarios were overlaid on the medium-term forecast to assess how the Group's liquidity and solvency would be affected.

The assessment took account of the Group's current funding, forecast requirements and existing committed borrowing facilities. It assumed that existing facilities could be refinanced as they mature. There are modest maturities over the first two years of the medium-term forecast with more significant maturities in 2019 and 2021.

On the basis described above, the Board confirms that it has a reasonable expectation that the Company will be able

to continue in operation and meet its liabilities as they fall due over the next five years, consistent with the period of the medium-term forecast.

In making this statement, the Directors have made the following key assumptions:

- That maturing facilities will be refinanced. The Group currently has access to global debt markets and expects to be able to refinance these facilities on commercially-acceptable terms. The Group's medium-term and long-term financing plans are designed to allow for periods of adverse conditions in world capital markets but not a prolonged (say 12 month) period where debt markets were effectively closed to the Group.
- That in the event of a single risk or multiple lesser risks occurring which have a particularly severe effect on the Group, all potential actions, such as constraining capital spending and reducing or suspending payments to shareholders, would be taken on a timely basis. The Group believes it has the early warning mechanisms to identify the need for such actions and the ability to implement them on a timely basis if necessary.
- That implausible scenarios, whether involving multiple risks occurring at the same time or the impact of individual risks occurring that cannot be mitigated by management actions to the degree assumed, do not occur. For instance, whilst the Directors have considered a scenario where cost reductions are not achieved and a major programme is delayed, they have not considered it plausible that any other of the key risks would crystallise in a way that would create a worse outcome over the five-year assessment period.

Signed on behalf of the Board

**Warren East**  
**Chief Executive**  
13 February 2017

# Board of Directors



**Ian Davis**  
Chairman

NG

**Appointed to the Board in March 2013 and as Chairman in May 2013**

**Career, skills and experience**

Ian is senior partner emeritus of McKinsey & Company. He was a partner at McKinsey for 31 years until 2010 and served as chairman and worldwide managing director of McKinsey between 2003 and 2009.

He brings significant financial and strategic experience to the Board.

He has worked with and advised global organisations and companies in a wide variety of sectors as well as in the public sector, enabling him to draw on knowledge of diverse issues and outcomes to assist the Board.

His role in the Cabinet Office, from which he stepped down in March 2016, gives him a unique perspective on government affairs.

**Other current principal roles**

- BP p.l.c., non-executive director
- Johnson & Johnson Inc., director
- Teach for All Inc., director
- Majid Al Futtaim Holding LLC, director
- McKinsey & Company, senior partner emeritus



**Warren East CBE**  
Chief Executive

**Appointed as an independent Non-executive Director in January 2014, Warren became Chief Executive in July 2015**

**Career, skills and experience**

Warren is an engineer by training and had an outstanding record at ARM Holdings plc which he joined in 1994 and where he was CEO from 2001 until 2013. He has a deep understanding of technology and of developing long-term partnerships and has proven strategic and leadership skills in a global business with a strong record of value creation – all of which are relevant to Rolls-Royce particularly as it undergoes a period of transformation.

He is a fellow of the The Institution of Engineering and Technology, a fellow of the Royal Academy of Engineering and a distinguished fellow of BCS, the Chartered Institute for IT. He was awarded a CBE in 2014 for services to the technology industry.

**Other current principal roles**

- Dyson James Group Limited, director
- The Institution of Engineering and Technology, trustee



**David Smith**  
Chief Financial Officer

**Appointed in November 2014**

**Career, skills and experience**

David has extensive industrial experience having worked for over 25 years with Ford and Jaguar Land Rover and latterly with Edwards Group Limited, a major manufacturer of industrial vacuum products. He joined Rolls-Royce as Chief Financial Officer for the Aerospace Division in January 2014 before being appointed as CFO to the Group. David's skills in developing systems have particular benefit to Rolls-Royce where he has introduced a new management information and forecasting system. He is a member of the Chartered Institute of Management Accountants' Advisory Panel. David has resigned from Rolls-Royce and will leave the Group following the appointment of Stephen Daintith, whose biography is shown on page 57.

**Other current principal roles**

- Motability Operations Group plc, non-executive director



**Colin Smith CBE**  
Group President

**Appointed in July 2005**

**Career, skills and experience**

Colin joined Rolls-Royce in 1974. He has held a variety of key positions within the Group including Director – Research & Technology, Director of Engineering & Technology – Civil Aerospace, and Group Director – Engineering & Technology before being appointed as Group President in January 2016. Colin is a fellow of the Royal Society, the Royal Academy of Engineering, the Royal Aeronautical Society and the Institute of Mechanical Engineers. In June 2012, he was awarded a CBE for services to UK engineering.

Colin will step down from the Board at the 2017 AGM.

**Other current principal roles**

- Council for Science and Technology, member

**Composition of Board committees**

	NG	R	A	SE	ST
Ian Davis	C				
Lewis Booth	•		C		•
Ruth Cairnie	•	C			•
Sir Frank Chapman	•	•		C	
Irene Dorner	•		•	•	
Lee Hsien Yang	•		•	•	
John McAdam	•	•		•	
Bradley Singer					•
Sir Kevin Smith	•	•			C
Jasmin Staiblin	•				•

C Denotes chairman of committee

**Committee membership**

**NG** Nominations & Governance Committee

**R** Remuneration Committee

**A** Audit Committee

**SE** Safety & Ethics Committee

**ST** Science & Technology Committee

**Denotes chairman of committee**



**Lewis Booth CBE**  
Independent  
Non-executive Director

A  
NG  
ST



**Ruth Cairnie**  
Independent  
Non-executive Director

R  
NG  
ST



**Sir Frank Chapman**  
Independent  
Non-executive Director

SE  
NG  
R



**Irene Dorner**  
Independent  
Non-executive Director

NG  
A  
SE

#### Appointed in May 2011

##### Career, skills and experience

Lewis has considerable financial expertise and experience, having been the former executive vice president and chief financial officer for Ford Motor Company. He brings an international perspective, having worked in Europe, Asia, Africa and the US during his 34-year career in the motor industry. After gaining a bachelor of engineering degree with honours in mechanical engineering, Lewis began his career with British Leyland before joining Ford in 1978. He was awarded a CBE in 2012 for services to the UK automotive and manufacturing industries.

##### Other current principal roles

- Mondelez International, Inc., director
- Gentherm Inc., director

#### Appointed in September 2014

##### Career, skills and experience

A physicist by background, Ruth has strong strategic and commercial experience gained at Royal Dutch Shell Plc where she held a number of senior international roles, most recently as executive vice president strategy and planning, before her retirement in 2014.

Ruth also has significant remuneration committee experience having chaired the remuneration committee at Keller Group plc since April 2012 and as a member of the remuneration committee at Associated British Foods plc. She chairs the POWERful Women initiative, supporting the progression of women to senior positions in the energy sector, and is a strong supporter of our diversity and inclusion initiatives.

##### Other current principal roles

- Associated British Foods plc, non-executive director
- Keller Group plc, non-executive director
- POWERful Women, chairman

#### Appointed in November 2011

##### Career, skills and experience

Sir Frank has significant industrial and safety experience, having worked in the oil & gas industry for 38 years including appointments within Royal Dutch Shell plc and BP p.l.c. He has a life-long passion for engineering and innovation and a deep understanding of technology, together with an outstanding record of business achievement. He was chief executive of BG Group plc for 12 years until 2012 and chairman of Golar LNG Ltd from 2014 to 2015. Sir Frank is a fellow of the Royal Academy of Engineering, the Institute of Mechanical Engineers and the Energy Institute. He was knighted in 2011 for services to the oil & gas industry.

##### Other current principal roles

- Myeloma UK, vice chairman

#### Appointed in July 2015

##### Career, skills and experience

Irene has a strong background in risk management and is very familiar with regulatory requirements. She was chief executive officer and president of HSBC, US, until December 2014. Her background in risk management played a key role in strengthening the financial institution's risk processes and she brings this insight as part of her role on our Audit Committee. During a 29-year career at HSBC, she held a number of international roles including leading HSBC in Malaysia and launching its Islamic banking unit. Irene is a passionate advocate of diversity and inclusion and an active supporter of our employee resource groups.

Irene was a consultant at PricewaterhouseCoopers until February 2016. She is also an honorary fellow of St Anne's College, Oxford.

##### Other current principal roles

- AXA SA, director
- Control Risks International Limited, non-executive director
- OUTLeadership Advisory Board, member



**Lee Hsien Yang**  
Independent  
Non-executive Director

NG  
A  
SE

Appointed in January 2014

**Career, skills and experience**  
A Singaporean, Hsien Yang was formerly a member of our International Advisory Board and combines a strong background in engineering with extensive international business experience in our most important growth markets. He was chief executive of Singapore Telecommunications Limited for 12 years until 2007. He served as chairman and non-executive director of Fraser and Neave Limited from 2007 to February 2013. He has significant industrial and financial skills.

#### Other current principal roles

- Civil Aviation Authority of Singapore, chairman
- The Islamic Bank of Asia Private Limited, chairman
- The Australian and New Zealand Banking Group Limited, director
- General Atlantic LLC and associated funds, special adviser
- Lee Kuan Yew School of Public Policy, member of the board of governors
- INSEAD SE Asia Council, president



**John McAdam**  
Independent  
Non-executive Director

NG  
R  
SE

Appointed in February 2008

**Career, skills and experience**  
John has extensive international and industrial experience. He was appointed to the board of ICI plc in 1999 and became chief executive in 2003, a position he held until 2008. He held a number of senior positions at Unilever, within its Birds Eye Walls, Quest International and Unichema International businesses. He is a former non-executive director of Severn Trent plc and Sara Lee Corporation and stepped down as senior independent director of J Sainsbury plc in 2016.

#### Other current principal roles

- Rentokil Initial plc, chairman
- United Utilities Group PLC, chairman
- Electra Private Equity PLC, director



**Bradley Singer**  
Non-independent  
Non-executive Director

ST

Appointed in March 2016

**Career, skills and experience**  
Brad has an outstanding record as a business leader in the US. He brings with him experience of public companies during periods of change, growth and significant financial outperformance, particularly in the US where Rolls-Royce has important business interests and a significant shareholder base. He has been senior executive vice president and chief financial officer of Discovery Communications, Inc. and chief financial officer and treasurer of American Tower Corp. Before these appointments, he worked as an investment banker at Goldman Sachs. He is a former director of Martha Stewart Living, Omnimedia, Inc., Citizens Communications Corp and Motorola Solutions Inc.

#### Other current principal roles

- ValueAct Capital Master Fund P.L., partner and chief operating officer
- Posse Foundation, director
- McIntire School Foundation, University of Virginia, trustee



**Sir Kevin Smith CBE**  
Senior Independent  
Non-executive Director

ST  
NG  
R

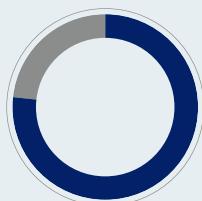
Appointed in November 2015

**Career, skills and experience**  
Sir Kevin has extensive industrial leadership experience and a deep knowledge of global engineering and manufacturing businesses, as well as the aerospace industry. He was chief executive officer of GKN plc for nine years until 31 December 2011. Before joining GKN, he spent nearly 20 years with BAE Systems where he held a number of senior executive positions. He joined Unitas Capital in 2012 and served as partner and chairman of its operating advisor group until October 2015, based in Hong Kong. His private equity experience in operation- intensive businesses with Unitas is extremely valuable to Rolls-Royce. He served as a non-executive director of SSE plc between June 2004 and July 2008. He has an honorary fellowship doctorate from Cranfield University, is an honorary fellow of the University of Central Lancashire and a fellow of the Royal Aeronautical Society. He was awarded a CBE in 1997 and was knighted in 2006 for services to industry.

#### Other current principal roles

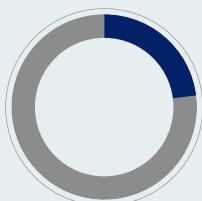
- Unitas Capital, senior adviser
- LEK Consulting, European advisory board member
- University of Central Lancashire, industry steering group member

#### BOARD MEMBERS BY GENDER



Female

#### BALANCE OF THE BOARD



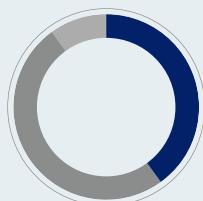
Executive Directors

3

Non-executive Directors

10

#### NON-EXECUTIVE DIRECTORS' TENURE



0–3 years

4

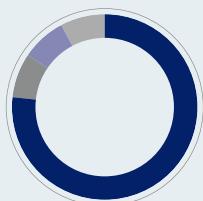
3–6 years

5

6–9 years

1

#### NATIONALITIES OF DIRECTORS\*



British

10

German

1

Singaporean

1

US

1

\* According to the Company's Articles of Association, at least 50% of its Directors must be British citizens.



**Jasmin Staiblin**  
Independent  
Non-executive Director

NG  
ST



**Pamela Coles**  
Company Secretary

#### Appointed in May 2012

##### Career, skills and experience

A German national, Jasmin combines a strong background in advanced engineering and deep technology knowledge with extensive international business experience, having worked in Switzerland, Sweden and Australia. She has been the chief executive officer of Alpiq Holding AG since 2013. She held a number of senior positions in the ABB Group becoming chief executive officer of ABB Switzerland from 2006 to December 2012.

##### Other current principal roles

- Alpiq Holding AG, chief executive officer
- Georg Fischer AG, board member

#### Appointed in October 2014

##### Career, skills and experience

Pamela is an expert in corporate governance and company law. She has been a fellow of the ICSA: The Governance Institute since 1997. She has held a variety of company secretary roles throughout her career. She joined Rolls-Royce from Centrica plc, where she was head of secretariat. Pamela's previous roles also include group company secretary and a member of the executive committee at The Rank Group plc and company secretary & head of legal at RAC plc.

##### Other current principal roles

- None

#### Stephen Daintith

#### Expected to be appointed as Chief Financial Officer in Spring 2017

##### Career, skills and experience

Stephen will join Rolls-Royce from Daily Mail and General Trust plc where he has served on its board of directors since 2011. He was a member of the Euromoney Institutional Investor plc audit committee, and a non-executive director of Zoopla Property Group plc, both of which are associated companies of Daily Mail and General Trust plc. Stephen is a chartered accountant and has held a number of senior positions at News Corporation, British American Tobacco, Forte, the Civil Aviation Authority and PricewaterhouseCoopers. He is currently a non-executive director of 3i Group plc.

Stephen has extensive experience of strategic financial management and he has a deep understanding of international business. His record of achievement in change management is particularly relevant to Rolls-Royce.

#### International Advisory Board (IAB)

The IAB meets annually with the Board in order to provide perspective and to guide strategy development through discussions on the geo-political and global economic landscape. The members of the IAB during the year were as follows:

##### **Lord Powell of Bayswater** **(Chairman of the IAB)**

Former Foreign Affairs and Defence Adviser to Prime Ministers Baroness Thatcher and Sir John Major.

##### **Vladimír Dlouhý**

International advisor to Goldman Sachs for Central and Eastern Europe, European deputy chairman of the Trilateral Commission, president, Czech Chamber of Commerce and a former member of the Czech Government.

##### **Sir Rod Eddington**

Chairman of JP Morgan (Australia & New Zealand) and former chief executive of British Airways Plc.

##### **Dr Fan Gang**

Professor at China's Academy of Social Sciences and director of National Economic Research Institute, China.

##### **Dr Pedro Sampaio Malan**

Chairman of Itaú Unibanco's international advisory board and a member of the boards of EDP – Energias do Brasil, Souza Cruz,

Brazil, Mills Engenharia, a director of Thomson Reuters Founders Share Company and a member of the Temasek international panel.

##### **Akio Mimura**

Senior advisor, honorary chairman Nippon Steel & Sumitomo Metal Corporation, Japan, and chairman of The Japan Chamber of Commerce and Industry.

##### **Lubna Olayan**

CEO and deputy chairperson of the Olayan Financing Company, Saudi Arabia.

##### **Ratan Tata**

Interim chairman of Tata Sons Limited, India.

##### **Ambassador Robert B Zoellick**

Chairman of Goldman Sachs International Advisors, senior fellow at the Belfer Center at Harvard University, former president of World Bank Group, US Trade Representative and US Deputy Secretary of State.

##### **Murad Bayar**

Board member and CEO of CCN Investment Holdings.

#### BOARD SKILLS AND EXPERIENCE



Chairman, CEO or CFO experience	10
Engineering/technology	4
Related industry/operational	4
Safety/regulatory/risk	3
Financial	2
Remuneration/HR	2

# Chairman's introduction



**Ian Davis**  
Chairman

2016 was a year of significant organisational transformation, market headwinds and operational challenges for the Group, including managing a number of new product introduction programmes. In January 2017, after lengthy regulatory investigations with which we co-operated fully, we concluded deferred prosecution and leniency agreements with the UK Serious Fraud Office, US Department of Justice and the Brazilian authority, MPF.

It is times such as these when the importance of corporate governance comes sharply into focus. It serves to ensure valuable oversight, guidance and experienced support to management as it balances risks and opportunities and navigate difficult and complex issues at a time of significant change. The Board's oversight and engagement on the critical issues ensured that decisions were taken in the Group's best interests and in pursuit of its strategic, financial and operational objectives and transformation milestones.

To facilitate more regular oversight, reporting and interaction with management we added Board calls to our annual schedule, in April and October. We held a number of other ad-hoc Board and committee meetings outside of our annual cycle to deal with matters that required attention between our regular scheduled meetings. Some of the Non-executive Directors also spent time during the year with the business and finance leadership teams outside of formal meetings to gain deeper insight into the operational challenges at a programme and business level. This combination allowed us to understand better, and more closely track, the progress being made by the Group on its transformation agenda and priorities throughout the year, so that we could focus on the right areas.

In 2016, as part of the simpler governance workstream of the transformation programme, we continued to strengthen aspects of our governance arrangements, building on the work undertaken in 2015. We complemented this by increasing focus on talent and succession planning, including

supporting Warren East as he reshaped his Executive Leadership Team (ELT).

The 2015 Board effectiveness review conducted by Independent Audit highlighted a need to improve the quality of information presented to the Board. During the year, the Company Secretary led a major piece of governance improvement work to provide tools, templates and training to help management write more effective and relevant papers. This has resulted in significant improvements in the content, length and insightfulness of our Board and committee packs, which in turn prompts more informed discussion and better decision making. In parallel, new management information dashboards developed during 2016 have enabled 'at a glance' views of the status of key programmes and business performance.

One of the most important responsibilities I have as Chairman is to ensure the right balance of skills, experience, independence and knowledge on the Board to provide effective support and challenge to management. There were a number of Board and ELT changes announced during the year, which you can read about in more detail in the Nominations & Governance Committee report on pages 67 to 71.

In March, we welcomed Brad Singer as a new member of the Board and the Science & Technology Committee. Brad is chief operating officer of ValueAct, a major shareholder.

Our relationship with ValueAct has been, and remains, thoughtful and productive. We have a relationship agreement in place which, although less usual in the UK, is fairly standard practice in the US.

In May, Sir Kevin Smith was appointed as Senior Independent Director.

In September, we announced the appointment to the Board of Stephen Daintith as Chief Financial Officer to succeed David Smith. Stephen will take up his new post in Spring 2017.

Colin Smith will also be stepping down from the Board at the 2017 AGM after a

distinguished career with the Group spanning over 40 years. We are indebted to Colin for his exemplary contribution to engineering.

In May, Dame Helen Alexander stepped down from the Board having completed her nine-year term. Dame Helen has shown dedication and valued insight throughout her tenure, including in her leadership of the Remuneration Committee. On behalf of the Board, I would like to thank Dame Helen for her contribution and commitment.

In November 2016, I accepted Alan Davies' resignation from the Board. Alan was appointed as a Non-executive Director one year previously and his contribution, expertise and perspectives were highly valued by his colleagues during his period in office.

The Board resolved in December to propose to shareholders the appointment of PwC as auditor with effect from the 2018 AGM. Details of the tender process are contained in the Audit Committee report on page 102.

We consulted with major shareholders during the year on the proposed changes to our remuneration policy. Further details of the consultation and the new policy are in the Directors' remuneration report on pages 72 to 82. We also held our first governance event in the UK and a governance roadshow for major investors in the US. Further details of these events can be found in the Corporate governance report on page 66.

We note with interest the government's green paper on UK corporate governance. The Board is considering the level of interaction with stakeholders, particularly employees. We are planning to hold an 'AGM for employees' in 2017, and Irene Dorner will take the lead at looking at how we can strengthen our links between the boardroom and our employees.

I look forward to reporting our progress on corporate governance in our Annual Report next year.

**Ian Davis**  
**Chairman**  
13 February 2017

# Corporate governance

## The Board

<b>The role of the Board</b>	<ul style="list-style-type: none"> <li>→ Providing leadership, knowledge and experience to support and guide the ELT.</li> <li>→ Setting Group strategy and objectives after considering recommendations from the ELT.</li> </ul>	<ul style="list-style-type: none"> <li>→ Overseeing and monitoring business performance, internal controls, governance and risk management.</li> <li>→ Shareholder engagement.</li> <li>→ Oversight of principal risks – competitive position, political risk, programme delivery.</li> </ul>
<b>Chairman</b> Ian Davis	<ul style="list-style-type: none"> <li>→ Effective running of the Board and its committees in accordance with the highest standards of corporate governance.</li> <li>→ Setting the Board agenda.</li> </ul>	<ul style="list-style-type: none"> <li>→ Managing the Board to ensure adequate time for discussion of all agenda items.</li> <li>→ Ensuring the Board receives accurate, timely and clear information.</li> </ul>
<b>Senior Independent Director</b> Sir Kevin Smith	<ul style="list-style-type: none"> <li>→ Being available to major shareholders if they have concerns which have not been resolved through the normal channels of the Chairman, Chief Executive or other Executive Directors.</li> </ul>	<ul style="list-style-type: none"> <li>→ Conducting an annual review of the performance of the Chairman.</li> <li>→ Providing a sounding board for the Chairman.</li> </ul>
<b>Other Non-executive Directors</b>	<ul style="list-style-type: none"> <li>→ Providing skills and external experience to support the Chairman and management.</li> </ul>	
<b>Chief Executive</b> Warren East	<ul style="list-style-type: none"> <li>→ Overseeing the day-to-day operation of the Group's business.</li> <li>→ Developing and implementing the Group's strategy as approved by the Board.</li> </ul>	<ul style="list-style-type: none"> <li>→ Establishing and maintaining formal and appropriate delegations of authority.</li> <li>→ Maintaining a close working relationship with the Chairman.</li> </ul>
<b>Other Executive Directors</b>	<ul style="list-style-type: none"> <li>→ Providing management perspective to support the Board's decision making.</li> </ul>	
<b>Company Secretary</b> Pamela Coles	<ul style="list-style-type: none"> <li>→ Overseeing the design and effectiveness of the Group's governance arrangements.</li> <li>→ Acting as Secretary to the Board and its committees, ensuring compliance with Board procedures and corporate governance requirements.</li> </ul>	<ul style="list-style-type: none"> <li>→ Providing governance, advisory and administrative support to all Directors.</li> <li>→ Assisting the Nominations &amp; Governance Committee with plans for Directors' induction and ongoing training.</li> </ul>

## The Board committees

Nominations & Governance Committee	Remuneration Committee	Audit Committee	Safety & Ethics Committee	Science & Technology Committee
Board composition	Remuneration policy	Financial reporting	S&E governance framework	R&T/R&D strategy
Succession planning	Incentive design and setting of targets	Internal controls	S&E policies and practices	E&T processes
Board nominations	Executive remuneration review	Risk management	S&E training	Technology capabilities and skills
Board evaluation		Internal audit	S&E risk management	R&D investments
Corporate governance		External auditor	S&E investigations	Technology trends and risks
Oversight of principal risk – talent & capability		Oversight of principal risks – IT vulnerability, business continuity, market & financial shock	Sustainability	Oversight of principal risk – disruptive technologies & business models

## The Board and its committees

The Board is ultimately responsible to shareholders for the direction, management and performance of the Company.

Details of the Board are set out on pages 54 to 57. Details of the Executive Directors' service contracts and the Non-executive Directors' letters of appointment are on pages 91 and 92. Details of their remuneration and share interests are set out in the Directors' remuneration report on pages 83 to 95.

The Board has a schedule of matters reserved for its approval, generally being those items which affect the shape, risk profile or strategic direction of the Group, as well as the key financial items. The Board reviewed the schedule of matters during the year.

The Board has established certain principal committees to provide dedicated focus on particular areas, as set out on the previous page. The chairman of each committee reports to the Board on the committee's activities after each committee meeting.

In addition to the Board's principal committees, it has established a sub-committee of Directors who each hold an appropriate level of UK national security clearance for the purpose of receiving and considering, on behalf of the Board, any UK classified information relating to the Group's programmes and activities.

Matters that are not reserved to shareholders, the Board or one of its committees are the responsibility of the Chief Executive who has established and maintains a schedule of delegations of authority to members of the ELT and other management.

### Key matters reserved to the Board:

- The Group's long-term objectives, strategy and risk appetite.
- Shareholder engagement and general meetings.
- Overall corporate governance arrangements including Board and committee composition, committee terms of reference, and Directors' independence and conflicts of interest.
- Internal controls, governance and risk management frameworks.
- Changes to the corporate or capital structure of the Company.
- Annual report and accounts, and financial and regulatory announcements.
- Significant changes in accounting policies or practices.
- Policy on, and declarations of, payments to shareholders.
- Annual budgets and financial expenditure and commitments above levels set by the Board.
- Remuneration policy and remuneration of Directors and senior executives.
- New share incentive or pension plans or major changes to existing plans.

The way in which principles of the UK Corporate Governance Code (the Code) are applied, including the role of the Board and the Chairman, Chief Executive, Senior Independent Director and

Company Secretary, the matters reserved to the Board, the terms of reference of each of the Board committees, and details of Directors' induction and training have been agreed by the Board and are set out in our Board governance document available on the corporate governance pages of the Group's website [www.rolls-royce.com](http://www.rolls-royce.com).

## Appointments and re-appointments

The Board was advised by the Nominations & Governance Committee regarding all Board changes. Details of the appointment process, and the changes made during the course of the year, are set out in the Nominations & Governance Committee report on pages 67 to 71.

## Independence of the Non-executive Directors

The Board conducts a review of the independence of the Non-executive Directors every year, based on the criteria in the Code and following consideration by the Nominations & Governance Committee as detailed on pages 70 and 71. This review was undertaken in November 2016 and the Board concluded that all the Non-executive Directors, with the exception of Brad Singer, remained independent in character and judgement.

Brad Singer is a partner and the chief operating officer of ValueAct, a major shareholder, and therefore not considered to be an independent Non-executive Director under the provisions set out in the Code. The Company has in place a relationship agreement to manage any conflicts of interest that arise from his connection to ValueAct. A summary of the relationship agreement is on the corporate governance pages of the Group's website.

The Code does not consider the test of independence to be appropriate to the chairman of a company. However, Ian Davis did meet the Code's independence criteria upon his appointment as Chairman in May 2013. His other external commitments are described on page 54.

## Directors' indemnities and insurance

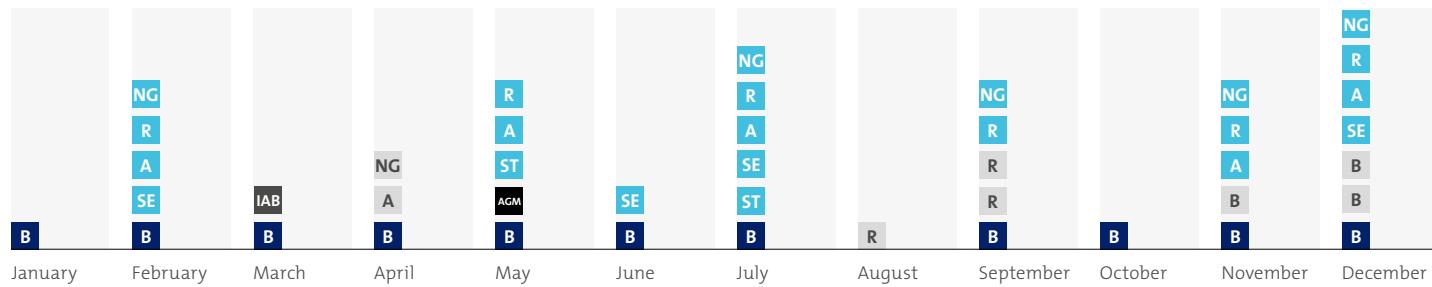
In accordance with the Articles, and to the extent permitted by law, the Company has entered into separate deeds of indemnity with its Directors, which were in force during the financial year and remain in force at the date of this report. The Company also maintains directors' and officers' liability insurance cover which also extends to directors of subsidiary companies.

## Compliance with the UK Corporate Governance Code

The Company is subject to the principles and provisions of the Code, a copy of which can be found on the Financial Reporting Council's (FRC) website, [www.frc.org.uk](http://www.frc.org.uk).

The Board considers that the Company complied in all material respects with the Code for the whole of the year to 31 December 2016. The Board has agreed that arrangements by which staff may raise concerns in confidence are considered and reviewed by the Safety & Ethics Committee. Any matters relating to financial reporting, the integrity of financial management or fraud are also reported to the Audit Committee.

### Board and committee meetings held in 2016



#### Committee meetings

**NG** Nominations & Governance Committee

**R** Remuneration Committee

**A** Audit Committee

**SE** Safety & Ethics Committee

**ST** Science & Technology Committee

Denotes unscheduled meeting

#### Other meetings

**B** Board

**IAB** International Advisory Board

**AGM** Annual General Meeting

The unscheduled meetings of the Board in November and December were held to consider progress towards reaching agreements with investigating authorities in UK, US and Brazil.

The unscheduled meeting of the Nominations & Governance Committee held in April was to consider the appointment of Sir Kevin Smith as Senior Independent Director.

The unscheduled meeting of the Audit Committee in April was to consider the audit tender process and the potential consequences of IFRS 15 for the Group's accounting.

The unscheduled meetings of the Remuneration Committee held in August and September were to consider:

- Remuneration packages for the new Chief Financial Officer and Chief Operating Officer.
- Feedback from the initial shareholder consultation on remuneration policy proposals.

Some of the Directors were unable to participate in the unscheduled meetings of the Nominations & Governance Committee held in April and of the Remuneration Committee held in September as these meetings were called on short notice.

### BOARD AND COMMITTEE ATTENDANCE AT SCHEDULED MEETINGS

Directors as at 31 December 2016	Board (11 meetings)	Nominations & Governance (5 meetings)	Remuneration (6 meetings)	Audit (5 meetings)	Safety & Ethics (4 meetings)	Science & Technology (2 meetings)
Ian Davis	11/11	5/5	—	—	—	—
Warren East	11/11	—	—	—	—	—
Lewis Booth	11/11	5/5	—	5/5	—	2/2
Ruth Cairnie	11/11	5/5	6/6	—	—	2/2
Sir Frank Chapman <sup>1</sup>	10/11	4/5	5/6	—	4/4	—
Irene Dorner	11/11	5/5	—	5/5	4/4	—
Lee Hsien Yang	11/11	5/5	—	5/5	4/4	—
John McAdam <sup>2</sup>	11/11	5/5	6/6	—	3/4	—
Bradley Singer (appointed 2 March 2016)	8/8	—	—	—	—	2/2
Colin Smith	11/11	—	—	—	—	—
David Smith	11/11	—	—	—	—	—
Sir Kevin Smith	11/11	5/5	6/6	—	—	2/2
Jasmin Staiblin <sup>3</sup>	10/11	4/5	—	—	—	1/2
<b>Former Directors</b>						
Dame Helen Alexander (left 5 May 2016)	5/5	1/1	2/2	—	1/1	—
Alan Davies (left 18 November 2016)	8/10	3/4	—	3/4	—	—

<sup>1</sup> Sir Frank Chapman missed the meetings of the Board, Nominations & Governance Committee and Remuneration Committee in November for medical reasons.

<sup>2</sup> John McAdam missed the meeting of the Safety & Ethics Committee in December due to an unavoidable diary clash with a Board meeting of Rentokil Initial plc where he is Chairman.

<sup>3</sup> Jasmin Staiblin missed the meeting of the Nominations & Governance Committee in July and the Board meeting in December due to needing to attend to urgent business at Alpiq Holding AG, where she is CEO. She also missed the meeting of the Science & Technology Committee in May due to unavoidable last-minute travel disruptions.

## The Board's areas of focus

Matters considered	Outcome	Key areas of focus for 2017
<b>Strategy and risk</b>		
Progress with the transformation programme.	Significant senior management headcount reductions, tracked to underlying cost base.	Continued oversight of execution of transformation plans to deliver targeted benefits.
Board priorities and financial assumptions over the timeframes of three, five and ten years, including key risks, assumptions and sensitivities.	Strategic options clarified. Update of strategic priorities underway to evaluate the best way to deliver enhanced shareholder value in the long term.	The Group's vision, values and culture. Execution of strategic priorities.
Put option exercised by SENER regarding ITP joint venture.	Agreed valuation for acquisition of remaining stake in ITP.	Execution of transaction and integration of ITP into the Group.
Progress with regulatory investigations, with increased oversight as potential deferred prosecution agreements (DPAs) were being discussed with the authorities.	Full co-operation with investigating authorities, leading to agreements with UK, US and Brazilian authorities in January 2017. Lord Gold continued to attend Audit and Safety & Ethics Committee meetings to oversee progress on the ethics and compliance improvement programme.	Monitoring of compliance with the terms of the DPAs and leniency agreement. Considering the conclusions and recommendations in Lord Gold's latest report, and oversight of actions required.
Principal risks including changes to those risks, the underlying principal risk indicators and risks related to the transformation programme.	The Board added a further principal risk: disruptive technologies and business models. With this addition the Board confirmed that the principal risks remained appropriate.  More focus on talent and succession risks and increased Board time dedicated to updates on major programmes.	Principal risks will be kept under review, and all will be the subject of 'deep dives' by the Board or a Board committee during 2017.
EU referendum preparations and outcome.	A steering group was set up to monitor developments and report back to the Board.	Further planning and preparations for Britain's exit from the EU.
Coming into force of EU Market Abuse Regulations (MAR).	The Group took appropriate steps, including updating its policies and procedures, to ensure compliance with MAR.	Monitoring of market best practice and any updates or guidance issued.
<b>Succession and leadership</b>		
Board and ELT composition.	Key appointments made including Chief Financial Officer, Chief Operating Officer and Strategy & Marketing Director. Appointments of Sir Kevin Smith as Senior Independent Director and Brad Singer as Non-independent Non-executive Director.	Search for at least one new Non-executive Director to replace Alan Davies who resigned in December 2016 and John McAdam who will step down in 2017.
Diversity and inclusion.	Increasing diversity retained as a key priority for the Group and as a critical part of the transformation programme.	Continued Board oversight and sponsorship of diversity and inclusion within the Group.
Effectiveness of the Board, Chairman and Chief Executive.	The Board and its committees operated effectively in 2016. The Chairman and Chief Executive received constructive feedback on their respective performance and the Board supported their continuation in office.	Implementing recommendations made by Independent Audit as part of Board effectiveness review. See page 65 for more details.
<b>Shareholder engagement and governance</b>		
Terms of a relationship agreement with ValueAct following its acquisition of a significant shareholding and the appointment of Brad Singer to the Board.	Relationship agreement in place.	Continuing constructive engagement with ValueAct and other significant shareholders on appropriate matters.
Investor communications, feedback and governance events and roadshows in the UK and US.	Increased transparency in investor briefings. The governance events were well-received with good input from investors.	Continue shareholder engagement to build investor confidence. A further governance event will be held in 2017.
Private meetings with institutional shareholders to discuss particular areas of interest to them.	Directors met with several institutional shareholders upon request during the year. Topics included sustainability and our ethics and compliance improvement programme.	We will maintain an active shareholder engagement programme in 2017.

Matters considered	Outcome	Key areas of focus for 2017
<b>US governance under Special Security Agreement (SSA)</b>		
Arrangements with the Rolls-Royce North America (RRNA) board, whose members are appointed with the approval of the US Department of Defense to oversee and ensure compliance with laws and regulations concerning security and technology controls.	Following the retirement of James Guyette in 2015, the role of President & CEO of RRNA is no longer a Board position. However, arrangements with the RRNA board continue to be effective. These arrangements permit the Group, under the SSA, to operate US security-cleared facilities and participate in classified technology development and production programs.	Maintaining a good dialogue with, and support to, the RRNA board as required.
<b>Financial performance</b>		
Financial performance and outlook, liquidity and funding including discussions with credit rating agencies.	Regular reports on financial performance and outlook received throughout the year. Group liquidity and funding kept under review considering strategic priorities, the Company's credit ratings and contingencies.	Regular oversight of financial performance against 2017 budget, and of funding plans against strategic priorities and liquidity needs.
IFRS 15 impact.	The Board was briefed on the impact of IFRS 15 on the Group's accounting for revenue and profit, by reference to a notional restatement of 2015 results which was shared with investors at the Group's capital markets' event in November 2016.	Ongoing oversight of preparations for introduction of IFRS 15 in 2018.
The Group's management information (MI) and forecasting project.	A progress update on the project was provided, including a demonstration of the new MI system and KPI dashboard being used by management.	Progress on further improvements will be monitored in 2017.
Financial support for critical supplier.	Reviewed and approved a package of financial support to a key supplier to ensure continuity of materials supply for some of the Group's programmes.	The Group's risk management measures to ensure continuity of supply of critical components and materials will remain an area of Audit Committee review as part of its oversight of the business continuity principal risk.
Audit tender.	The Board resolved to recommend to shareholders the appointment of PwC as the Company's auditor with effect from the 2018 AGM, following recommendations from the Audit Committee.	Not applicable.
Review of the Group's pension arrangements.	A merger of four of the Group's pension schemes and the transfer of one scheme to an insurer.	The level of funding of the remaining schemes will remain under review.
<b>Operational performance</b>		
Civil large engine programmes.	The Board undertook detailed reviews of several of the Group's civil large engine programmes with the Civil Aerospace executive team to understand management's plans to address operational challenges faced.	More detailed Board oversight will continue in 2017 as the business moves through key milestones in its new product introduction programmes and transformation activities.
Product incidents in service and HS&E.	Received reports from the Chairman of the Safety & Ethics Committee and executive management on product-related incidents in service and HS&E matters.	Continued 'tone from the top' emphasising the paramount importance of product and people safety, particularly during a period of transformation.
Sustainability targets.	Overall score in the Dow Jones Sustainability Index improved in 2016.	Progress towards published targets for 2020 will be monitored in 2017.
<b>Payments to shareholders</b>		
The Group's policy on shareholder payments.	Agreed to maintain payments at the level established in early 2016.	Policy to be kept under review in balancing the near-term strategic and operational funding needs with the desire to return in future to a position of year-on-year progressive growth in payments to shareholders.

## Information included in the Directors' report

Certain additional information that fulfils the requirements of the Corporate governance statement can be found in the Other statutory information section on pages 186 to 189 and is incorporated into, and forms part of, this Corporate governance report by reference.

## Board induction and development

Newly-appointed Directors follow a tailored induction programme, facilitated by the Company Secretary, which includes dedicated time with Group executives and scheduled trips to a variety of business operations. All Directors are encouraged to undertake additional training and to visit the Group's facilities. Details are set out in the Nominations & Governance Committee report on page 70.



### Board visit to Indianapolis

The Board meeting in September was held in Indianapolis, US, where the Board visited a number of our key sites in the area and met the local management teams, the RRNA board and US-based employee resource groups. They also reviewed progress with the programme to transform and revitalise our legacy plant and took the opportunity to celebrate the opening of the new Rolls-Royce Development Centre building. The Science & Technology Committee met the teams working on our advanced technology programmes and received detailed briefings and practical demonstrations. You can read more on this in the Science & Technology Committee report on pages 110 to 112.

## EXECUTIVE LEADERSHIP TEAM

**Chris Barkey**  
Group Director – Engineering & Technology  
**Marion Blakey**  
President & CEO Rolls-Royce North America  
**Chris Cholerton**  
President – Defence Aerospace  
**Warren East CBE**  
Chief Executive

## Internal control and risk management

In developing our internal governance framework (see page 70) we looked at how the Group's risk management and internal control systems work together. You can read about our risk management system on page 48 and details of our internal control system are in the Audit Committee report on pages 100 and 101. As noted on page 48, these systems are designed to manage, rather than eliminate, the risk of failure to achieve objectives and so can only provide reasonable and not absolute assurance against material misstatement or loss. The Board, with the advice of the Audit Committee, has reviewed the effectiveness of the risk management and internal control systems, including controls in relation to the financial reporting process, for the year under review and to the date of this report. The Board confirms that the Group continues to be compliant with the standards in the Code and with the Financial Conduct Authority's Disclosure Guidance and Transparency Rules in this regard.

## Financial reporting

The Group has a comprehensive budgeting system with an annual budget approved by the Board. Revised forecasts for the year are reported at least quarterly. Actual results, at both a business and a Group level, are reported monthly against budget and variances are kept under scrutiny.

Financial managers are required to acknowledge in writing that their routine financial reporting is based on reliable data and that results are properly stated in accordance with Group requirements. In addition, for annual reporting, business presidents and finance directors are required to confirm that their business has complied with the Group's finance manual. This contains the Group's key accounting policies.

## Executive Leadership Team (ELT)

The ELT is an executive-level forum of the Group's most senior leaders, chaired by the Chief Executive. It comes together to communicate, review and agree on issues and actions of Group-wide significance. It helps to develop, implement and monitor strategic and operational plans, considers the continuing applicability, appropriateness and impact of risks, leads the Group's culture and aids the decision-making of the Chief Executive in managing the business in the performance of his duties.

**Mark Gregory**  
General Counsel  
**Harry Holt**  
President – Nuclear  
**Mary Humiston**  
Group Human Resources Director  
**Simon Kirby**  
Chief Operating Officer  
**Mikael Mäkinen**  
President – Marine

**Andreas Schell**  
CEO – Power Systems  
**Eric Schulz**  
President – Civil Aerospace  
**Colin Smith CBE**  
Group President (until 4 May 2017)  
**David Smith**  
Chief Financial Officer (until 28 February 2017)  
**Ben Story**  
Strategy & Marketing Director

**Stephen Daintith**  
Chief Financial Officer (from Spring 2017)

## Board evaluation

The Board and its committees undertake an annual evaluation of their effectiveness. In 2016, Independent Audit was again asked to conduct an external evaluation, following up from its reviews in 2014, when first appointed, and 2015. Independent Audit also supported the Audit Committee in the assessment of KPMG as external auditor for 2015. It does not have any other connection to the Company.

The evaluation included a review of Board and committee papers and interviews with the Directors and the Company Secretary. Interviews were also held with other senior managers who interact regularly with the Board and its committees including the General

Counsel, Director of Internal Audit and the Director of Compliance and Risk.

The 2015 review specifically focused on strategically important questions and challenges for the Board. The 2016 review noted that improvements had been made on the provision of information, although more could be done to ensure greater clarity on the medium- to long-term development plans. The review recommended that more time be spent on culture and behaviours, while noting that the Board was better informed on talent and succession.

Having gone through the effectiveness review described above, the Directors are satisfied that the Board and each of its committees operated effectively during 2016.

## PROGRESS ON KEY AREAS IDENTIFIED

Key areas identified in 2015	Progress in 2016	Focus for 2017
<b>Focusing Board debate and improving Board processes</b>	The Board gave more focus to the transformation agenda and to the near-term strategy with detailed discussions on cash, cost reductions, status of key engine programmes and operational performance.	More focus is needed on the main drivers, levers and challenges faced.
	The Company Secretary's office worked with the ELT and other Board paper authors, providing training, tools and templates which resulted in more effective and relevant papers for the Board and committees. Less time was dedicated to presentations and more to debate and discussion on presented topics.	The work during the year on Board papers has resulted in welcome improvements in their content, length and insightfulness. However, more work is needed to show, with more quantification and detail, progress against well-defined priorities.
<b>Transformation and principal risks</b>	Particular discussion was held around risks to the transformation programme identified in the 2015 evaluation. However, it was agreed that these risks were covered in the principal risks relating to major programme delivery and competitive position.	More time will be spent discussing the culture and behavioural aspects of the transformation programme.
	Disruptive technologies and business models was added as a further principal risk during the year, to reflect the increasing importance of transformative technologies.	Disruptive technologies and business models will be an area of focus for the Science & Technology Committee.
<b>Talent and succession</b>	The Board held a deep dive on succession planning in March 2016 and the Nominations & Governance Committee carried out further reviews and worked with the Chief Executive to support his work refreshing the ELT. The Board also took opportunities to meet with senior managers below ELT level and greater participation by senior managers was encouraged in Board meetings. Further details can be found in the Nominations & Governance Committee report on page 70.	The Board has been better informed on senior personnel issues and changes. Work should continue to strengthen lower management levels.
<b>Management information (MI)</b>	The development of new MI dashboards during the year has helped to provide the Board and management with 'at a glance' indicators of the status of key programmes and business and function performance.	The output from the MI dashboards will help support the further improvements identified for Board paper content.

## Shareholder engagement

The Board recognises and values the importance of building strong investor relations through a proactive communication programme. Having strengthened the investor relations department in mid-2015, various initiatives were implemented in 2016 to improve further investors' understanding of the business. This included enhancing disclosure and transparency through improved reporting and engagement, particularly over the forthcoming adoption of IFRS 15 from January 2018.

Our investor relations department plays a key role in building stronger, clearer discussions with current and potential investors and the sell-side analysts that help inform them. During the year, the team has undertaken an extensive investor relations programme involving formal events, site visits, smaller group and one-to-one investor meetings. The purpose of the larger events is to highlight particular issues, themes or announcements that the Group believes develop a better understanding of the business or which warrant further explanation or clarification. One-to-one meetings requested by investors focus on areas of particular interest to them, which in 2016 included our approach to sustainability and our ethics and compliance improvement programme. These events also provide opportunities for shareholders to meet members of the senior management team.

Notable events in 2016 included the capital markets' event held in November with updates from the Chief Executive on transformation progress and strategic priorities and the Chief Financial Officer on the impact of IFRS 15 in particular. The business leaders each presented the market position of their segments, and examples of progress being made were discussed in breakout sessions. The team also hosted a significant number of investors and analysts at the Farnborough air show and undertook a number of site visits to facilities both in the UK and Singapore.

The one-to-one and group meetings provide an opportunity for investors to ask more detailed questions that can improve individual knowledge or clarify areas of misunderstanding. This is a critical process in ensuring market participants make decisions based on a consistent understanding of the information available. In this way, shareholders should be able to appropriately and fairly value the Group's businesses.

We have held over 600 one-to-one and group meetings, led by the Chief Executive, Chief Financial Officer, the Director of Investor Relations or members of the investor relations team. The team has also published five newsletters throughout the year which provide a summary of the core news flow from around the Group, updates on future investor relations events and questions and answers on various topics of current interest to investors.

As a matter of best practice, the Chairman and Senior Independent Director, together with other members of the Board, make themselves available to meet with institutional investors upon request and regularly attend key investor relations events. The Chairman and Senior Independent Director have each met investors in both the UK and the US on scheduled roadshows. In addition, the Chairman hosted a very well-received corporate governance event in April. He was joined by all Board committee chairmen who presented the key areas of focus for their individual committees before questions were taken from major shareholders and corporate governance analysts in smaller workshop sessions.

In early 2016, we consulted with a number of investors on proposed changes to the 2016 annual bonus and performance share plan (PSP). In the autumn, the new chairman of the Remuneration Committee, Ruth Cairnie, undertook an extensive consultation programme to discuss the proposals for the new remuneration policy which will be put to shareholders at the 2017 AGM. Feedback from meetings with over 20 stakeholders helped to determine the shape and quantum of the proposed new policy framework (see Remuneration report on pages 72 to 82).

The Group's website ([www.rolls-royce.com](http://www.rolls-royce.com)) contains up-to-date shareholder information, including an online version of the Annual Report, materials from the capital markets' and corporate governance events, share price information, news releases, presentations to the investment community and information on shareholder services.

## Annual general meeting (AGM)

All holders of ordinary shares may attend the Company's AGM at which the Chairman and Chief Executive present a review of the key business developments during the year. This year's AGM will be held at 11.00am BST on Thursday, 4 May 2017 at the Pride Park Stadium, Pride Park, Derby, DE24 8XL. Shareholders can ask questions of the Board on the matters put to the meeting, including the Annual Report and the running of the Company generally. All Directors are invited to attend each AGM. Unless unforeseen circumstances arise, all committee chairmen will be present to take questions at the AGM.

The Company intends to send the AGM notice and any relevant related papers to shareholders at least 20 working days before the meeting. The AGM notice will be available to view on the Group's website.

A poll is conducted on each resolution at all Company general meetings. All shareholders have the opportunity to cast their votes in respect of proposed resolutions by proxy, either electronically or by post. Following the AGM, the voting results for each resolution are published and are made available on our website.

Shareholders unable to attend the AGM can vote on the business of the meeting either by post or online.

The Company will propose at the AGM certain changes to the Articles relating to shareholders who we have been unable to trace for a period of 12 years. In line with many other companies, the Articles currently allow the Company to sell any shares held by an untraced shareholder. The changes to the Articles are intended to clarify when a shareholder is considered to be untraced and to allow the Company to use the net proceeds of the sale of an untraced shareholder's shares to support the Group's community investment and education outreach programmes and to fund other good causes at the Company's discretion. At the same time, the Company intends to continue its use of a professional asset reunification agent to search for shareholders who have not kept their details up-to-date.

# Nominations & Governance Committee report



**Ian Davis**  
Chairman of the  
Nominations  
& Governance  
Committee

## Highlights

- Considered and recommended to the Board:
  - appointment of Brad Singer as a Non-executive Director
  - appointment of Sir Kevin Smith as Senior Independent Director
  - appointment of Stephen Daintith as Chief Financial Officer
  - re-appointment of Ian Davis as Chairman.
- Global governance framework launched.
- Talent, succession and diversity reviews.

## Principal responsibilities

The key areas of responsibility of the Committee are:

- To review the structure, size and composition of the Board and its committees, to ensure that they remain appropriate, and to make recommendations to the Board of any changes.
- To consider succession plans for Directors and senior executives.
- To oversee the induction plans for Directors.
- To review the independence of the Non-executive Directors.
- To conduct an annual evaluation of the Chief Executive.

- To review the Board's diversity policy and its implementation.
- To oversee the principal risk relating to talent and capability.
- To report to the Board on the Group's corporate governance practices and procedures to ensure that they remain appropriate for a group of the size and complexity of Rolls-Royce, taking account of best practice principles.
- To evaluate any conflicts of interest that the Directors may have.

The Chairman and the independent Non-executive Directors are members of this Committee and the Chief Executive attends the Committee meetings.

## At a glance

Area of focus	Matters considered	Outcome
<b>Board and committee composition</b>	Re-appointment of one Non-executive Director and of the Chairman.  The appointment of a new Senior Independent Director and changes to the chairmanship and composition of Board committees.	The Board made the following appointments after receiving recommendations from the Committee: <ul style="list-style-type: none"> <li>• Sir Kevin Smith was appointed as Senior Independent Director and chairman of the Science &amp; Technology Committee.</li> <li>• Lee Hsien Yang and Ian Davis were each re-appointed for a second three-year term (subject to annual shareholder approval).</li> <li>• Ruth Cairnie was appointed as chairman of the Remuneration Committee.</li> </ul>
<b>Appointments to the Board</b>	Appointment of Brad Singer, partner and the chief operating officer of major shareholder ValueAct Capital.  The appointment of a new Chief Financial Officer.	Recommended the appointment of Brad Singer to the Board as a Non-executive Director recognising that he was not considered to be independent.  Members of the Committee were involved in the interview process for the Chief Financial Officer and the Committee recommended Stephen Daintith's appointment to the Board.
<b>Succession planning and talent management</b>	Talent and succession, diversity and inclusion reviews.  Progress on appointments to the ELT.	This will be a continued area of focus. Further details of the reviews are shown on page 70.  Members of the Committee were involved in the interview process for the Chief Operating Officer and the Strategy & Marketing Director.
<b>Board inductions, training and development</b>	A schedule of site visits by all Directors and feedback from inductions from the Directors appointed in 2015.	A number of site visits had been carried out during the year as part of ongoing induction schedules. It was recommended that each Non-executive Director undertake at least one site visit each year, in addition to the Board and committee meetings held outside London.
<b>Governance</b>	Roll out of the global governance framework.	The Group's global governance framework was communicated to all employees during the year.

## Board and committee composition

The Committee regularly reviews the balance and composition of the Board, its committees and the executive team. These reviews identify current needs and consider longer-term succession planning in light of the Group's strategy. When reviewing Non-executive Director appointments the Committee considers the current skills, experience and tenure of the Directors and assesses future needs against the longer-term strategy of the Group.

The Committee recommended the appointments of a new Senior Independent Director and new chairmen for the Remuneration and Science & Technology committees. We take care to ensure that the skills and experience of Board members are closely aligned with the needs of the Board committees.

In February 2016, Lewis Booth indicated his intention to relinquish his responsibility as Senior Independent Director once a successor had been appointed. He remains chairman of the Audit Committee. Sir Kevin Smith, first appointed to the Board in November 2015, became Senior Independent Director following the AGM in May 2016. He is well known by the UK investor base and the Committee agreed he would be an excellent successor to Lewis. Sir Kevin was also appointed as chairman of the Science & Technology Committee in February 2016. Sir Kevin has significant aerospace industry knowledge with engineering and manufacturing experience, gained during a long career at GKN and BAE Systems.

Brad Singer joined the Science & Technology Committee on his appointment to the Board on 2 March 2016.

Dame Helen Alexander stepped down from the Board after the AGM in May 2016, having served as a Director for nine years. She was succeeded as chairman of the Remuneration Committee by Ruth Cairnie. Ruth first became a member of the Remuneration Committee when she joined the Board in September 2014. Ruth has been chairman of the remuneration committee at Keller Group plc since April 2012 and also sits on the remuneration committee of Associated British Foods plc. She therefore has both the experience and skills to chair the Rolls-Royce Remuneration Committee.

Alan Davies stepped down from the Board on 18 November 2016. As announced in July 2016, he had been appointed to the Safety & Ethics Committee with effect from 1 September 2016. However, he stepped down from the Board before any subsequent meetings of that committee took place.

Colin Smith will step down from the Board at the 2017 AGM after a distinguished career with the Group spanning over 40 years.

David Smith will leave the Company on 28 February 2017.

The Committee considered and recommended to the Board the terms of appointment for Lee Hsien Yang for a second three-year term subject to annual shareholder re-election. It also recommended my re-appointment, again for a three-year term subject to annual shareholder re-election. A full evaluation of my performance as Chairman was carried out by Lewis Booth, as Senior Independent Director, prior to confirmation of my re-appointment. Board committee membership is set out on page 54.

The Nominations & Governance Committee is satisfied with the composition of the Board committees however, with the resignation of Alan Davies in November 2016 and with the completion of John McAdam's nine-year term in 2017, we have recommended that the Board seeks at least one additional Non-executive Director, in particular someone who can complement the skills and experience on the Audit Committee.

### Appointments to the Board

In November 2015, ValueAct notified us that it had increased its shareholding in the Company to above 10%. The Committee discussed the implications of ValueAct increasing its shareholding and encouraged engagement to understand better its management's views, noting that it had requested a seat on the Board. The Committee agreed that any proposed appointee should be credible and have the appropriate skills and experience to bring valued contributions as a Non-executive Director on the Board, particularly as the Group continued to execute its transformation programme. Candidates would be required to follow the rigorous selection process that applies to all Board appointments. The Committee also considered the implications of having a shareholder representative as a Director and referred this matter to the Board for further consideration. The Committee agreed that any shareholder representative would not be considered independent.

During January and February 2016, Brad Singer, a partner and the chief operating officer of ValueAct, met with members of the Committee and with the Executive Directors. I also had several extended meetings with him and took up a number of references both on him as an individual and from other chairmen who have experience of having an active shareholder represented on their boards.

Previously, Brad had been senior executive vice president and the chief financial officer of Discovery Communications Inc, and chief financial officer and treasurer of American Tower Corp. He has also worked as an investment banker at Goldman Sachs in New York and London. The Committee agreed that Brad has an excellent record as a business leader. He has experience of public companies during periods of change, growth and significant financial outperformance, particularly in the US where Rolls-Royce has important business interests and a significant shareholder base.

The Committee considered that Brad was an appropriate candidate and recommended his appointment. The Board took account of the discussion of the Committee and of the terms of the proposed relationship agreement between the Company, ValueAct and Brad Singer and agreed that appointing him to the Board was in the best interests of shareholders.

Both Brad's appointment and the terms of the relationship agreement were finalised and published on 2 March 2016. Details of the relationship agreement are available on the corporate governance page of the Group's website, [www.rolls-royce.com](http://www.rolls-royce.com).

Stephen Daintith will join the Board as Chief Financial Officer in Spring 2017. Details of his career, skills and experience can be found on page 57.

The Inzito Partnership (Inzito) was engaged as the search consultant for the Chief Financial Officer. A candidate brief, which included technical and personal qualities and skills, was drawn up by the Chief Executive and Group Human Resources Director and shared with members of the Nominations & Governance Committee. Inzito drew up a list of potential candidates and the Chief Executive and Group Human Resources Director interviewed a number of them before presenting a shortlist of candidates for members of the Committee to interview. Formal and informal references were taken on the shortlisted candidates and Stephen Daintith met all members of the Committee, and met with the Chief Executive and Chairman several times, before his appointment was recommended to the Board. The terms of his appointment were also considered and agreed by the Remuneration Committee in principle before the Board formally appointed Stephen.

Each of the Directors continues to be effective and able to devote sufficient time to the business of the Company and the Nominations & Governance Committee will continue to keep the Board's composition under review.

## Diversity and inclusion

The Board and Committee actively support the Group's diversity and inclusion vision.

Rolls-Royce is a founder patron of the FTSE 100 Cross-Company Mentoring Programme which aims to widen the pool of eligible female board candidates. Following the departure of Dame Helen Alexander the percentage of women on the Board has fallen to 23% (2015:29%). Appointments will always be made on merit, however, for future Board appointments the Committee will instruct search consultants to identify as a priority female candidates who meet the skills and experience brief. As with previous Board appointments, we will consider candidates from the widest possible pool and will only engage search firms that have signed up to the Voluntary Code of Conduct for Executive Search firms. The Board has noted the Hampton Alexander recommendation for FTSE 100 companies to have at least 33% of the positions in their executive pipeline filled by women by 2020.

Our global diversity and inclusion policy and anti-discrimination policies aim to ensure that all employees are treated with dignity and respect and are empowered to deliver without fear of bullying or harassment (for more information see pages 42 and 43). We are

making preparations to report under the Gender Pay Gap Reporting Regulations by April 2018.

The Group acknowledges the challenges of increasing diversity within our industry. We are working closely with the Royal Academy of Engineering's Diversity Leadership Group which has launched working groups to drive change and challenge the status quo for diversity and inclusion in the engineering sector. We have representation on its steering group and support four of its five action groups.

We give full and fair consideration to all employment applications from people with disabilities, and support disabled employees, helping them to make the best use of their skills and potential. Our high performance culture training continues to be rolled out across the globe to help employees increase their personal effectiveness.

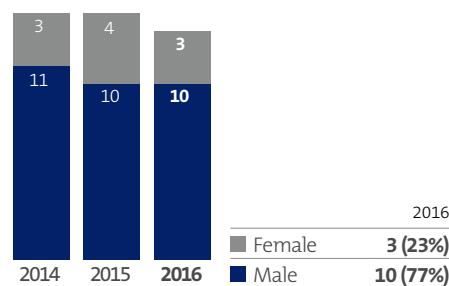
In March 2016, the Group Human Resources Director and Head of Global Talent Management shared with the Committee key diversity and inclusion achievements during 2015 and provided current global demographics and key elements of the diversity and inclusion strategy and priorities.

Non-executive Directors took positive action to meet a number of employee groups throughout the year to support these priorities. This included: an informal lunch with the Women's Group in Dahlewitz, Germany, on International Women's Day; dinner with high potential women in Derby, UK in May; and a meeting with representatives of the six employee resource groups (ERGs) in North America during the Board's visit to Indianapolis in September. In addition, individual members of the Committee took opportunities to support various activities by the ERGs in the UK, Germany and the US.

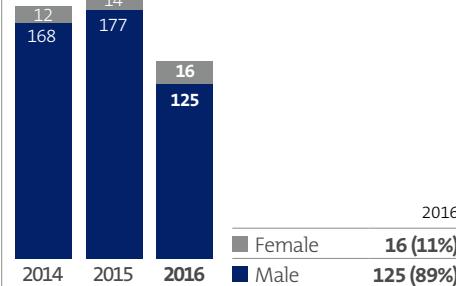
## Diversity and inclusion strategy and priorities

- Senior leaders committing to a diverse and inclusive environment.
- Hiring diverse talent at all levels.
- Continual improvement in the way we act and behave to ensure full inclusion of all our talent and enable them to perform at their best.
- Engage and retain our best talent.
- Provide equal opportunity and advance diverse talent on merit.

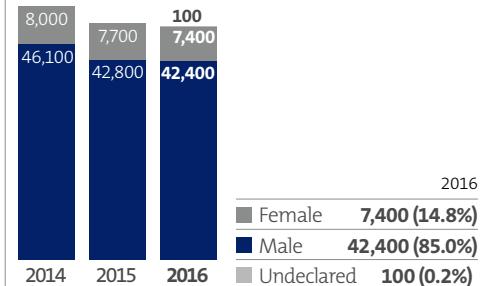
BOARD MEMBERS BY GENDER



SENIOR MANAGERS BY GENDER



EMPLOYEE HEADCOUNT BY GENDER



\* Changes to our HR management system has enabled employees to choose whether to declare gender information. This has introduced an undeclared category to our gender reporting in 2016.

## Succession planning and talent management

A principal risk to the business is the inability to attract, retain and incentivise talented individuals to deliver our strategy. The Committee is responsible for reviewing talent, capability and succession at the most senior levels of the business.

Following the announcement of the senior management restructuring in December 2015, and as part of our continuing transformation programme, there has been an increase in focus on our succession planning. Both the Committee and the Board held deep dives in these areas during 2016. Our desire to increase diversity, as described above, influences our approach to succession planning, training and development.

The Chief Executive and Group Human Resources Director led discussions on succession planning with the Board and the Committee in March and September 2016 respectively. In March, the Board considered skills and capability gaps at ELT level and succession planning both immediately below ELT level and those that would be ready to take up an ELT position in one or two moves. A new senior management structure was announced in December 2015 including the intention to appoint a new Chief Operating Officer. It was also agreed that a new role, Strategy & Marketing Director, would be added to the ELT. It was agreed that it was appropriate to recruit these roles from outside the business to help bring a fresh perspective. Members of the Committee were involved in the appointments of Simon Kirby as Chief Operating Officer and Ben Story as Strategy & Marketing Director.

We recognise that succession planning includes nurturing our own talent pool and giving opportunities to those who are capable of growing into more senior roles. Therefore, the review by the Committee in September focused on the executive pipeline from which the future leaders of the Company were likely to emerge, both for ELT roles and other key management areas. The Board also had dinner with a number of senior managers below ELT level in November 2016 and certain Non-executive Directors attended the senior leadership conference during the year to meet and exchange views with key managers.

## Board inductions, training and continuing development

The Company Secretary is responsible for ensuring that new Directors have a thorough and appropriate induction. Each newly appointed Director has a structured induction programme and receives a comprehensive data pack providing detailed information on the Group. Each induction is based on the individual Director's requirements and includes meetings with all other Directors and members of the ELT as well as other relevant employees, committee attendees and external advisers. All Directors visit the Group's main operating sites as part of their induction and are encouraged to make at least one visit to other sites each year throughout their tenure. Often these visits take place in small groups of two or three Directors together as it is often useful to have a common understanding and insight into an area of the business that may be less well known to one or more of them. It also gives the Directors the chance to spend time with their fellow Board members in a less formal setting which helps them to understand the concerns of

their colleagues. We regard these site visits as an important part of continuing education as well as an essential part of the induction process. They help Directors understand the business through direct experience of seeing processes in operation and by having discussions with a range of employees.

A summary of the visits carried out by individual Board members and Board committee in 2016 (as referred to in the Safety & Ethics and Science & Technology Committee reports) is shown on page 71.

Further training is available for all Directors, as appropriate, including presentations by the ELT on particular aspects of the business. The transformation team also presented to Non-executive Directors on progress, and the Board undertook the Group's ethics training.

There is a procedure for Directors to take independent professional advice at the Company's expense and every Director has independent access to the Company Secretary, who reports to the Chairman.

## Governance

A core element of our transformation is world-class governance: excellence in how we govern our business, manage risk, and make sure standards are maintained throughout the Group.

The Group's governance framework, which was approved by the Committee in December 2015, was deployed Group wide during the year in five languages. It was supported by an all-employee communications campaign which included a video message from the Chief Executive and a dedicated intranet site. Rolling out the framework has been an important step in clarifying the Group's expectations of its employees and supports the work being undertaken on transformation.

The framework outlines the rules which apply to all Rolls-Royce employees and is intended to guide them in making the right decisions on behalf of the Group, faster and with more confidence. In particular, the framework:

- Describes the Group's organisational structure, accountabilities and responsibilities.
- Clarifies decision-making authorities.
- Gives employees an overview of our mandatory policies, processes and procedures.

The Committee was kept up to date on progress as the framework was rolled out across the Group. The framework is kept under review and further enhancements will be communicated to employees in 2017.

## Conflicts of interest and independence

The Committee reviews the Non-executive Directors' external interests every year to determine whether each of them may continue to be considered independent. In undertaking the evaluation the Committee considers, among other things, the criteria set out in the Code.

The Committee also reviews any potential conflicts of interest as they arise and recommends to the Board whether these should be authorised and whether any conditions should be attached to any authorisation. Additionally, an annual review of conflicts of interest is undertaken to ensure that any previously authorised conflicting situations are still dealt with appropriately.

Brad Singer, as a representative of a significant shareholder, is not considered to be independent. As noted on page 68, the conflict of interest is managed by a relationship agreement between the Company, ValueAct and Brad Singer.

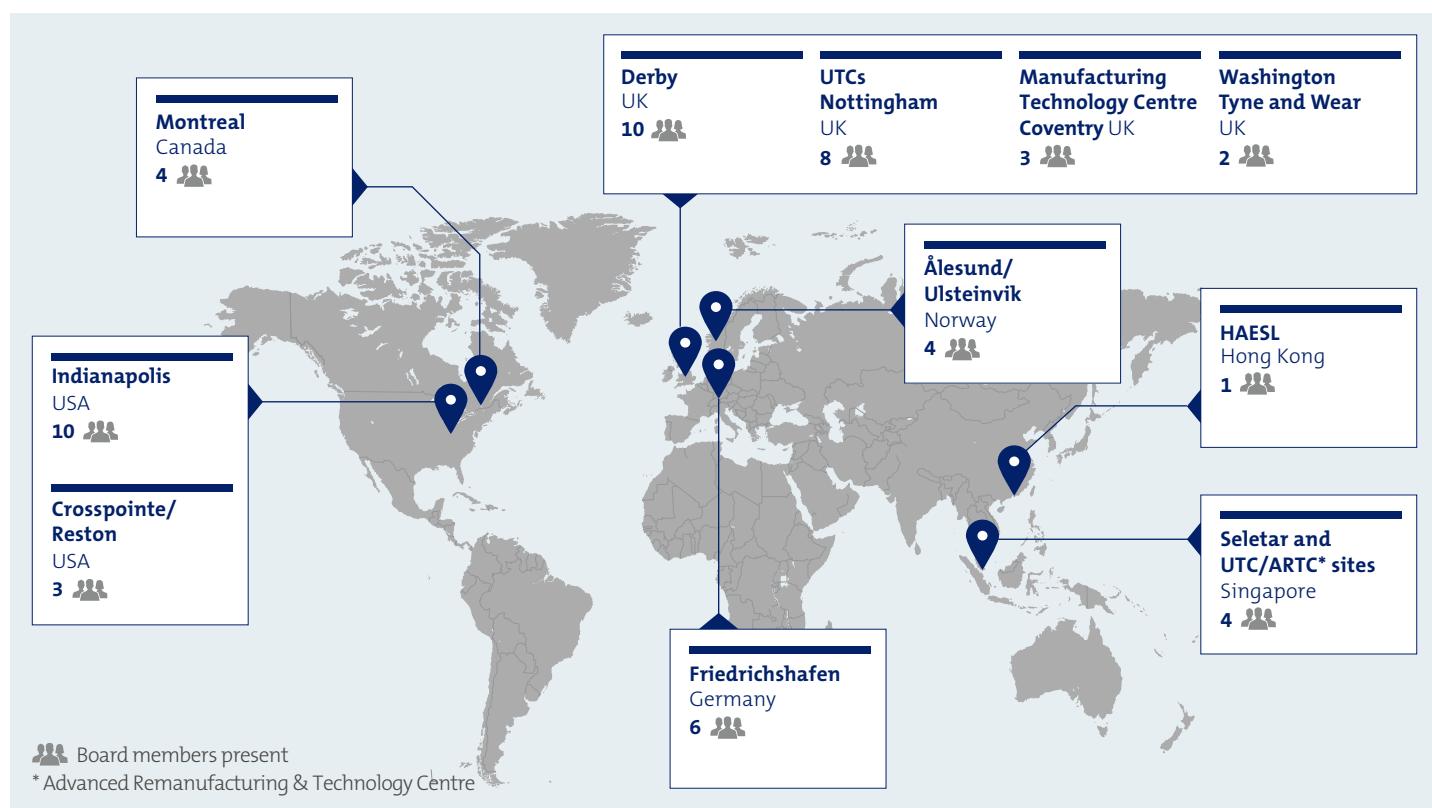
Having carried out the review, the Committee advised the Board that it considered that each of the remaining Non-executive Directors, with the exception of the Chairman for whom the test is not appropriate, continued to be independent. The Committee therefore recommended to the Board that each of the Director's potential conflicts of interest be authorised, without imposing any conditions.

## Looking forward

We have made good progress on our priorities for 2016 which were to develop succession plans, to ensure that the transformation of the business was adequately supported below Board level, and to oversee the development and roll out of the internal governance framework. These areas will continue to be priorities for the Committee in 2017.

**Ian Davis**  
Chairman of the  
Nominations & Governance Committee

### NON-EXECUTIVE DIRECTORS' SITE VISITS IN 2016



# Remuneration Committee report



**Ruth Cairnie**  
Chairman of the  
Remuneration  
Committee

## Highlights

- New remuneration policy.
- Outturns for 2016.
- Terms of appointment for Chief Financial Officer.

## 2016 overview

### Introduction

I am pleased to present my first report as chairman of the Remuneration Committee describing what we have done in the year and how we have reviewed our remuneration policy.

### Policy review

Much of the Committee's activity in 2016 has focused on reviewing our policy.

### Business context

The Group is at a critical stage in undergoing a major transition of the business including a ramp-up in delivery of new Trent engines, the associated modernisation of the manufacturing footprint and the far-reaching organisational transformation that is underway.

Whilst the transition has an expected short-term negative impact on profit, performance will improve through successful delivery of our transformation programme driving cost reduction and improving operational execution, and through achieving the increase in rate of engine delivery. This underpins our investment case and remuneration should be strongly linked to delivering this programme over the coming years.

### Policy drivers

Four key themes have emerged to underpin our policy design: supporting transformation, talent, stewardship and simplification.

- We focused on the linkage to successful delivery of the transformation agenda which is closely matched to shareholder interests.
- We also needed to address the competitiveness of our current rewards. Through 2016, we have sought to recruit into a number of senior positions to strengthen skills in some areas, or to support an overall raising of our leadership capability to deliver the transformation, bringing in experience from other sectors. In this we have encountered real evidence of our rewards not being sufficiently competitive to secure some key talent that would make a strong contribution to Rolls-Royce.
- We have continued to focus on aligning the interests of Executive Directors and shareholders.
- We have also looked for opportunities to simplify our reward structure, and to ensure a coherent framework that can be cascaded to lower levels in the organisation.

### Proposed changes

The overall structure will be unchanged, comprising base salary, benefits, annual bonus and a new long-term incentive plan (LTIP). This reflects our continued focus on pay for performance.

A number of simplifications are proposed in the structure of both annual bonus and LTIP, replacing multiplicative structures, hurdles and kickers with simpler additive components.

The performance measures are proposed to be unchanged for both annual bonus and LTIP, but with careful consideration having been given to the weightings of the LTIP components and a primary focus on growth in free cash flow.

Cash flow targets will be based on cumulative cash flow per share (CPS) as now; earnings per share (EPS) targets will be set on cumulative EPS over the three-year performance period; total shareholder return (TSR) will be measured relative to the constituents of the FTSE 100 as now, as well as the S&P Global Industrials Index. This approach better reflects our status as a FTSE 100 company and a global engineering group.

The maximum level of LTIP award is proposed to be increased to 250% of salary for the Chief Executive and 225% for other Executive Directors, to enhance our ability to attract and retain the talent we need in competitive markets. We also seek headroom up to 300% for the Chief Executive and 250% for other Executive Directors if this should be necessary for future recruitment. We have no other intention to use this headroom. Our current discretion to award a higher level of annual bonus on recruitment will be removed.

Shares received upon the vesting of LTIP awards, following the three-year performance period, will be subject to a two-year holding period. This approach further aligns incentives with long-term interests of shareholders.

The level of LTIP vesting for threshold performance will be reduced from 30% to 20% of the maximum.

## Shareholder engagement

We have consulted extensively with major shareholders throughout the policy review. Early in the year several shareholders expressed concerns about retention and motivation given our more limited incentive levels. We continued to discuss our thinking with shareholders as we developed our policy during the year. The majority of shareholders who participated in this process:

- Recognised the level of challenge in delivering the transformation and our need to attract top class talent.
- Supported the simplified remuneration structures.
- Welcomed the inclusion of a holding period and reduced threshold vesting for LTIP awards.
- Strongly supported cash as the most important measure.
- Supported an increase in the LTIP maximum award in the context of delivering our transformation.

Some shareholders favoured a more highly-geared approach to remuneration, with significantly higher incentive opportunities. Other shareholders, while supportive of an increase, were mindful, as are we, of the increasing attention to high levels of executive pay and concerns about inequality. On balance, we have opted for an operational LTIP maximum that, while a significant increase, was not as high as some of our shareholders suggested. A small number of shareholders suggested a fundamentally different approach to remuneration with higher salaries and lower leverage based on performance. However, at this time our strong preference is to link reward firmly with performance and the delivery of our transformation programme.

We also consulted widely with shareholders on LTIP performance measures. We received a very strong message that cash flow was the most important performance measure. Several shareholders asked us to consider a long-term return measure in the mix. On reflection, we were of the view that this would be too opaque as a Group-level incentive metric given the very diverse

nature of our businesses, differing sources of R&D funding and their long investment cycles. Some shareholders were ambivalent about inclusion of relative TSR, however we wanted to maintain a portion linked to the in-period value delivered to shareholders. Our shareholders also recognised the significant changes to EPS, as we transition to reporting under IFRS 15, but understood the approach we propose to take.

## Agreements with investigating authorities

As announced on 17 January 2017, agreements were entered into between Rolls-Royce and the UK Serious Fraud Office (SFO), US Department of Justice (DoJ) and Brazilian Federal Prosecution Service (MPF). These agreements relate to bribery and corruption involving intermediaries in a number of overseas markets from January 1989 to November 2013 and will result in penalties totalling £671m over the next five years. The agreements that have been reached relate to legacy behaviour, and, Lord Justice Leveson, made clear in his judgment, no current member of the Board was involved. As set out in his judgment, the new executive team demonstrated extraordinary co-operation and has made essential changes, creating new policies, practices and cultures.

As a Committee we have considered remuneration consequences for individuals who were in office at the time. Our clawback provisions were introduced in 2014, which was after the relevant period of these events. In cases where employees have been dismissed or resigned as a result of Rolls-Royce's own internal investigation, shares and incentives have been cancelled in full as a consequence of the termination of their employment.

Because the SFO, DoJ and MPF agreements relate to legacy matters, and given that the legal judgment was very clear that there was no culpability in relation to existing management, the Committee has concluded that the impact of the penalties should be excluded from the 2016 bonus and from future incentive targets.

## 2016 outturns

We have given careful consideration to both the reported numbers and the external context in determining the bonus outturns for 2016.

Group underlying profit and cash flow, our key financial metrics, were both above the target levels and therefore a bonus will be paid for the first time in three years.

Underlying profit is a key measure of performance and as such does not include the accounting impacts of non-operational factors. In particular it excludes our US dollar hedge book valuation adjustment, which is a non-cash consequence of managing our foreign exchange risk, and is larger this year due to the post-referendum sterling decline.

In assessing the achievement of bonus targets, the Committee made overall downwards adjustments to both profit and cash flow elements. Adjustments were made to remove gains from unbudgeted foreign exchange movements and cash receipts as well as restructuring payments.

Following these adjustments the Committee also reviewed the bonus outturn in the round, taking into account the Company's performance and the shareholder context. 2016 was a solid year in which we exceeded cash and profit expectations and our transformation programme is off to a good start. However, reflecting the overall experience of our shareholders, in a year when underlying profits have fallen, the Committee agreed with the management and Board that it would be appropriate for the business element of the executive team's bonuses to be reduced to target levels.

The 2014 performance share plan (PSP) awards will not vest as the performance conditions were not met over the three-year performance period to 31 December 2016.

## Board changes

In September 2016, we announced that David Smith would leave Rolls-Royce after two years as Chief Financial Officer and will be succeeded by Stephen Daintith. Stephen is expected to take up the role in Spring 2017. Colin Smith will also be stepping down from the Board at the 2017 AGM, after 43 years with Rolls-Royce.

The Committee considered appropriate terms for David and Colin on their departure. Their remaining contractual entitlements will be subject to phasing and mitigation. PSP awards will be pro-rated for service and will vest at the normal time, depending on achievement against the relevant performance targets. The 2014 awards have lapsed as the targets were not met and 2015 awards, for all participants, are not expected to vest either. Neither will participate in incentive schemes for 2017.

The Committee also considered the remuneration package for Stephen on his appointment, and believe his package is appropriate for the role and for someone of his experience and capabilities. We will also make some buyout awards in respect of his forfeited awards, retaining performance conditions where relevant and matching or exceeding time horizons.

## 2017 salary review

The Committee has reviewed the salary levels of the Executive Directors and has concluded that an increase of 2% will be made to Warren East in line with those made to other employees. All salary increases for management are being deferred until 1 September 2017. No increases are being made for other Executive Directors.

## Principal responsibilities

The key areas of responsibility of the Committee are:

- To set and monitor the strategy and policy for the remuneration of the Executive Directors, the Chairman and members of the Executive Leadership Team (ELT).
- To determine the design, conditions and coverage of annual and long-term incentive plans for senior executives and approve total and individual payments under the plans.
- To determine targets for any performance-related pay plans.
- To determine the issue and terms of all share-based plans available to all employees.
- To oversee any major changes in remuneration.

## Resolutions

At our AGM in 2017 we will be asking shareholders to pass resolutions to approve:

- Our new Directors' remuneration policy.
- Our Directors' remuneration report which sets out how we have applied our existing policy during 2016.
- Our new LTIP to accommodate the new remuneration policy.

I would like to thank the shareholders who contributed to the Committee's discussions during the year, and we hope that all our shareholders will support these resolutions.

**Ruth Cairnie**  
**Chairman of the**  
**Remuneration Committee**

## Remuneration for 2016 – at a glance\*

Fixed pay + Annual bonus (APRA) + Performance share plan (PSP)

## Fixed pay

<b>Base salary</b>	No increases for Executive Directors in 2016. Base salaries during the year were: Warren East – £925,000; Colin Smith – £550,000; David Smith – £540,000.
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<b>Pension</b>	Pension arrangements during the year were: <ul style="list-style-type: none"> <li>• Warren East – cash allowance of 25% of salary.</li> <li>• Colin Smith – continued participation in defined benefit scheme with no further accrual. – cash allowance of 32% of salary.</li> <li>• David Smith – cash allowance of 32% of salary.</li> </ul>
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<b>Other benefits</b>	Benefits include car or car allowance and related costs, financial planning assistance, certain insurances and other benefits.
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## Annual bonus (APRA)

<b>Maximum award**</b>	For 2016, the maximum APRA was 180% of salary for the Chief Executive and 150% of salary for other Executive Directors.
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<b>Performance measures</b>	Group performance for 2016 was based on: <ul style="list-style-type: none"> <li>• 75% financial (profit and cash performance).</li> <li>• 25% non-financial (employee and customer metrics).</li> </ul> Group performance outcomes can be multiplied by 0% to 120% based on individual performance.
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<b>Deferral</b>	40% of awards are deferred into shares for two years.
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<b>Award for 2016</b>	GROUP AND INDIVIDUAL PERFORMANCE AND BONUS OUTCOMES				
	Group performance (percentage of max)	Individual multiplier	Overall percentage of salary	Overall percentage of maximum	
Warren East	60%	1.1	99%	55%	
Colin Smith	60%	1.0	75%	50%	
David Smith	60%	1.0	75%	50%	

Discretion was applied to reduce the Group performance outcome to on-target (60% of maximum).

## Performance share plan (PSP)

<b>Maximum award**</b>	The maximum annual PSP award is normally 180% of salary for the Chief Executive and 150% of salary for other Executive Directors.  As disclosed last year, for 2016 awards only, the maximum opportunities were reduced to 150% of salary and 130% of salary respectively as a balance to changes to the measurement of the EPS hurdle.
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<b>Performance measures</b>	Awards are subject to an aggregate CPS performance condition measured over three years. The number of shares awarded can then be adjusted (up to 125% for 2016 awards) based on relative TSR versus constituents of the FTSE 100.  No awards can vest until an EPS hurdle is met. As disclosed last year, for 2016 awards EPS must exceed the Organisation for Economic Co-operation and Development (OECD) index of consumer prices over the two-year period 2017 and 2018.
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<b>Vesting of 2014 award</b>	The 2014 PSP awards will lapse in March 2017 based on performance to 31 December 2016 as the performance measures were not met.
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<b>Shareholding</b>	
<b>Shareholding requirements</b>	The Chief Executive is required to build up a holding equal to 250% of salary. For other Executive Directors the requirement is 200% of salary.

\* Based on current policy which is available on our website at [www.rolls-royce.com](http://www.rolls-royce.com).

\*\* APRA and PSP awards are subject to malus and clawback in certain circumstances (see page 79).

# Remuneration policy from 2017

## Introduction

The policy will take effect from 4 May 2017, subject to shareholder approval at the AGM.

### Consideration of shareholder feedback

During the policy review we have had extensive and constructive consultation with our largest shareholders which has been a significant factor in shaping the new policy. Further details are set out on page 73.

The overall consensus that came out of the consultation was:

- Recognition of the level of challenge in delivering transformation and attracting top talent.
- Support for simplified remuneration structures.
- Strong support for cash as the most important measure of performance.
- Welcome for the inclusion of a holding period post the performance period on the LTIP.
- Support for an increase in the LTIP maximum award in the context of delivering the transformation, linked to appropriately stretching targets.
- Recognition of the value of having some objective and quantifiable non-financial measures in addition to financial measures in our short-term incentive plan.

These views have been reflected in the final policy design for 2017.

### Key policy themes

As part of the remuneration policy review, the Committee has taken the opportunity to take a broad look at our remuneration approach underpinned by four key themes:

**Supporting transformation** – our policy should incentivise and reward the delivery of our transformation programme over the next three years. This programme aims to simplify the organisation and processes and embed the right cultural behaviours; these set the foundation for cost reduction and improved productivity, as well as greater pace, simplicity and clearer accountability in the way we work. This programme is essential to achieving both the production ramp-up and cost efficiencies that underpin the cash flow generation that is key to our long-term investment case. Our view is that remuneration should be strongly linked to the successful delivery of this programme and its financial benefits.

**Talent** – we must be able to attract and retain the individuals necessary for business success across a global and diverse talent pool. Our recent experience has shown that our current level of reward is not sufficiently competitive to secure some key talent that would make a strong contribution to the Group.

**Stewardship** – the system of remuneration should align interests of executives and shareholders and comprise a significant proportion of share-based long term incentives.

**Simplification** – our reward structure and performance measures should be aligned to the strategy and be simple to communicate to participants and shareholders. It should reflect the business priorities in terms of both financial and non-financial parameters and be seen to incentivise the right behaviours and the right outcomes for a long term, sustainable and profitable future.

Given the importance of delivering our business transformation over the next three years, we believe that retaining a strong emphasis on performance-related incentives is appropriate. We therefore plan to retain a structure of salary, benefits, annual bonus and long term incentives, underpinned by appropriate performance measures and award levels.

### Main changes to policy design

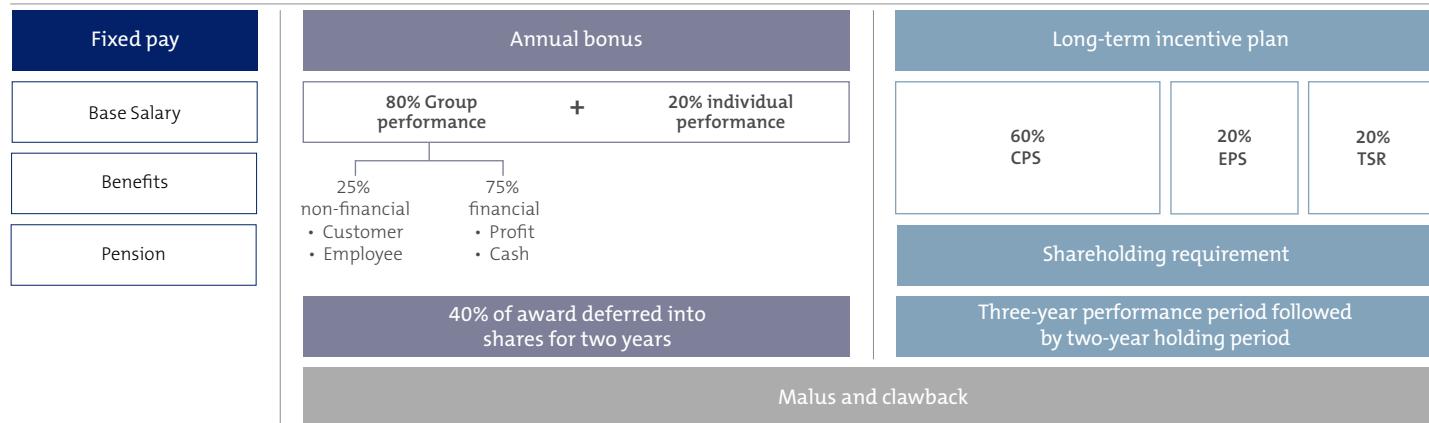
**Supporting transformation** – we will better align the incentive performance measures and weighting of those measures to our business strategy. For 2017, LTIP awards will be weighted 60% CPS, 20% EPS, and 20% TSR.

**Talent** – we will increase the level of award so that we can attract and retain the talent that we need. Under the new policy the normal maximum level of long-term incentive award is increased from 180% for the Chief Executive and 150% for the other Executive Directors to 250% of salary for the Chief Executive and 225% for other Executive Directors. The overall maximum under the policy will be 300% for the Chief Executive and 250% for other Executive Directors (for use in recruitment only).

**Stewardship** – we will introduce a two-year shareholding period following the three-year LTIP performance period. This will support the continued alignment of Executive Directors' reward to the interests of shareholders. We will reduce the amount of the long-term incentive award that vests for threshold performance from 30% of the award (equivalent to 54% of salary for the Chief Executive) to 20% of the award (equivalent to 50% of salary).

**Simplification** – we are simplifying the structure of our bonus and LTIP replacing multiplicative structures, hurdles and kickers with simpler additive components.

## Summary of policy design changes and link to policy themes\*



\* Weightings and non-financial measures are as applied in 2017.

Element	Commentary	Policy theme
<b>Fixed pay</b>	No changes are proposed to the fixed pay element of the remuneration policy approved by shareholders at the 2014 AGM. The new remuneration policy to be approved at the 2017 AGM will continue to apply until the 2020 AGM.	<i>Talent</i>
<b>Annual bonus</b>	<p>Performance measures remain appropriate following the introduction of customer and employee metrics in 2016. Bonuses are determined primarily by Group financial performance but the Committee may apply non-financial metrics that support the underlying strategic priorities for the forthcoming year.</p> <p>From 2017, Executive Director bonuses will be awarded using a simple additive approach:</p> <ul style="list-style-type: none"> <li>80% of the award will be based on Group performance.</li> <li>20% of the award will be based on individual performance.</li> </ul> <p>40% of any bonus will be deferred into shares for two years.</p>	<i>Transformation</i> <i>Simplification</i> <i>Stewardship</i>
<b>Long-term incentive plan</b>	<p>CPS, EPS and TSR remain our long-term measures of success and reflect the strategic focus on profitable growth, the quality of profit, and returns to shareholders. During shareholder consultation we received strong support for the continued use of cash flow as the central measure of long-term performance.</p> <p>The structure will be amended so elements are measured independently, rather than using an EPS hurdle and a TSR multiplier.</p> <p>The introduction of a two-year shareholding period following the three-year performance period. This includes a requirement to continue to hold shares after participants have left the Group.</p> <p>20% of the maximum award will vest for threshold performance (a reduction from 30% in the current remuneration policy).</p> <p>The new remuneration policy includes an overall maximum of up to 300% of salary for the Chief Executive and 250% for other Executive Directors. The intention is that this flexibility will only be used in recruitment (to secure talent across a global and diverse talent pool).</p> <p>The intended operational maximum for the three-year period of this policy is 250% of salary for the Chief Executive and 225% of salary for other Executive Directors.</p>	<i>Transformation</i> <i>Simplification</i> <i>Stewardship</i> <i>Talent</i>

## Remuneration policy table

The table below sets out each element of Executive Directors' remuneration.

Pay element – fixed pay	
Base salary	
<b>Purpose and link to strategy</b>	The Company provides competitive salaries suitable to attract and retain individuals of the right calibre to develop and execute the business strategy.
<b>Operation</b>	Salaries are reviewed, but not necessarily increased, annually. Decisions on salary are informed but not led by reference to companies of a similar size, complexity and international reach.
<b>Maximum opportunity</b>	Any salary increases will be assessed annually and will not normally exceed average increases for employees in other appropriate parts of the Group. The Committee may exercise discretion to make larger increases in circumstances where it is necessary to address particular issues or risks, including growth in the role for new appointments.
Benefits	
<b>Purpose and link to strategy</b>	The Company provides competitive benefits suitable to attract and retain individuals of the right calibre to develop and execute the business strategy.
<b>Operation</b>	Benefits may include car or car allowance and related costs, financial planning assistance, private medical insurance, life assurance and other appropriate benefits at the discretion of the Committee. Relocation support or support for accommodation and travel may be offered to executives where necessary. Executive Directors may participate in all-employee share plans including ShareSave and the Share Incentive Plan.
<b>Maximum opportunity</b>	Benefits excluding all employee share plans, and any accommodation, relocation and associated tax costs will not exceed £100,000 per annum.
Pension	
<b>Purpose and link to strategy</b>	The Company provides competitive pension schemes suitable to attract and retain individuals of the right calibre to develop and execute the business strategy.
<b>Operation</b>	Executive Directors are offered membership of a defined contribution pension plan. A cash allowance may be payable in lieu of pension contributions, reduced to allow for additional National Insurance incurred. There are a number of legacy pension arrangements, including defined benefit plans, which were in place before 27 June 2012 and have not changed. Commitments to these arrangements will be honoured.
<b>Maximum opportunity</b>	The maximum employer contribution to defined contribution plans (or to be taken as a cash allowance) is 25% of salary. Pension contributions are based on base salary only. Defined benefit legacy plans, now closed to new members, accrue pension up to a maximum of two thirds of final salary.

Pay element – variable pay	
Annual bonus	
<b>Purpose and link to strategy</b>	To incentivise the execution of the business strategy, delivery of financial targets, and the achievement of personal objectives.
<b>Operation</b>	<p>Bonuses are determined primarily by Group financial performance, but the Committee may apply non-financial metrics that support the underlying strategic priorities for the forthcoming year and/or adjust the payout level to ensure the outturns reflect performance. The bonuses payable are also linked to personal performance of the Executive Directors.</p> <p>The financial and non-financial metrics are set with reference to the prior year and to the budgets and business plans for the coming year, ensuring the levels to achieve base, on-target and maximum payout are appropriately stretching. At least 40% of the bonus is compulsorily deferred into shares for a further two years, and released subject to continued employment. Deferred shares may attract an issue of C Shares or equivalent during the deferral period.</p> <p>Awards are subject to malus and clawback provisions where there has been a material misstatement of audited results; serious financial irregularity which invalidates the targets set; reputational damage; material failure of risk management; a serious breach of the Group's Global Code of Conduct; or individual gross misconduct. These provisions apply from the date of deferral until three years after the release of shares.</p>
<b>Maximum opportunity</b>	The annual maximum for the Chief Executive is 180% of salary and 150% for other Executive Directors.
<b>Performance measures</b>	<p>The bonus is weighted 80% on Group metrics, and 20% on individual performance. Within the Group metrics:</p> <ul style="list-style-type: none"> <li>At least 60% is based on Group financial targets (for example profit and free cash flow).</li> <li>Up to 40% of the bonus is based on non-financial metrics such as employee engagement and customer delivery.</li> <li>Individual objectives are set and agreed with the Remuneration Committee at the start of each year, to reflect the prevailing business context.</li> <li>The Committee may, in the context of the underlying business strategy, use different performance measures.</li> </ul>
Long-term incentive plan (LTIP)	
<b>Purpose and link to strategy</b>	To reward the development and execution of the business strategy over a multi-year period.
<b>Operation</b>	<p>Executive Directors are granted awards over shares annually with a three-year performance period.</p> <p>The number of shares relative to the proportion of the award that vests is determined at the end of the performance period according to the achievement against the performance measures. The proportion of award that vests is then held for a further two-year holding period.</p> <p>Awards are subject to malus and clawback provisions where there has been a material misstatement of audited results; serious financial irregularity which invalidates the targets set; reputational damage; material failure of risk management; a serious breach of the Group's Global Code of Conduct; or individual gross misconduct. These provisions apply from the date of the award until three years from the date of vesting.</p>
<b>Maximum opportunity</b>	<p>Normal annual awards:</p> <ul style="list-style-type: none"> <li>Chief Executive – 250% of salary.</li> <li>Other Executive Directors – 225% of salary.</li> </ul> <p>The maximum face value of annual awards is 300% of salary for the Chief Executive and 250% for other Executive Directors. This flexibility would only be used in recruitment to secure individuals with the required skills and experience. This flexibility would not be used in the normal course of business.</p>
<b>Performance measures</b>	<p>Performance measures may include CPS, EPS, and/or relative TSR.</p> <p>For 2017 awards the measures will be weighted 60% CPS, 20% EPS, 20% TSR. No more than 20% of awards will vest for threshold performance.</p> <p>The Committee may, in the context of the underlying business strategy, use different performance measures and/or vary the weightings of the measures.</p>

The table below sets out the main elements of Non-executive Directors' remuneration.

Pay element	
Fees	
Purpose and link to strategy	To reward individuals for fulfilling their role and attract individuals of the skills and calibre required.
Operation	<p>The Committee makes recommendations to the Board on the Chairman's remuneration. The Chairman and the Executive Directors determine the remuneration of the Non-executive Directors. Levels take into account fees paid by other companies of a similar size and complexity.</p> <p>The Chairman is paid a single fee. Other Non-executive Directors are paid a base fee covering Board and Board Committee membership, with committee chairmen and the Senior Independent Director receiving an additional fee.</p>
Maximum opportunity	The maximum total remuneration payable to Non-executive Directors, including the Chairman, is £1,600,000 per annum.
Benefits	
Purpose and link to strategy	To devote maximum time and attention to the requirements of the role.
Operation	The Chairman has occasional use of chauffeur services. Travel, hotel and subsistence incurred in attending meetings are reimbursed by the Company. The Group may pay tax on such benefits, or provide support with tax matters for Non-executive Directors based outside the UK.
Maximum opportunity	<p>Maximum value for chauffeur services will not exceed £15,000 per annum.</p> <p>£5,000 maximum towards tax advice and filing per annum.</p>

## Performance measures and targets

The Committee will set Group financial targets for annual bonus and LTIP awards with reference to the prior year and to forward-looking business forecasts, ensuring the levels of performance required to achieve base, on-target and maximum bonus awards are appropriately challenging.

The Committee may, in the context of the underlying business strategy, use different performance measures for incentives and/or vary the weightings of the measures used for LTIP awards. For example, during the next two years we will transition to IFRS 15 which will impact the reporting of revenue and profit. The Committee may choose to increase the weighting on EPS as this new reporting standard becomes more established.

The measurement of performance against performance targets is at the Committee's discretion, which may include appropriate adjustments to financial or non-financial elements and/or consideration of overall performance in the round.

Performance conditions may also be replaced or varied if an event occurs or circumstances arise which cause the Committee to determine that the performance conditions have ceased to be appropriate. If the performance conditions are varied or replaced, the amended conditions must, in the opinion of the Committee, be fair, reasonable and materially no less difficult than the original condition when set.

## Policy on new appointments

The Committee will appoint new Executive Directors with a package that is in line with the remuneration policy in place and agreed by shareholders at the time. Base salary may be set at a higher or lower level than the previous incumbent. The Committee may use its discretion to make individual incentive awards up to the maximum policy headroom limits outlined in the policy table.

Remuneration forfeited on resignation from a previous employer may be compensated. This will be considered on a case-by-case basis and may comprise cash or shares. In general:

- If such remuneration was in the form of shares, compensation will be in the Company's shares.
- If remuneration was subject to achievement of performance conditions, compensation will be normally be subject to performance (either Rolls-Royce performance conditions or actual/forecast performance outturns from the previous company).
- The timing of any compensation will, where practicable, match the vesting schedule of the remuneration forfeited.

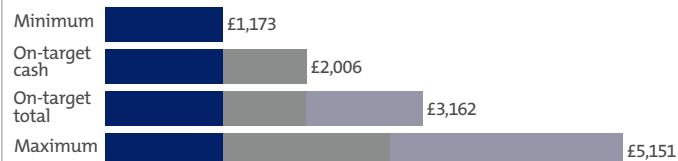
Legacy terms for internal appointments may be honoured, including pension entitlements and any outstanding incentive awards.

If an Executive Director is appointed following a merger or an acquisition of a company by Rolls-Royce, legacy terms and conditions may be honoured.

## Remuneration policy – worked examples below

### 2017 POLICY ILLUSTRATION

#### Chief Executive (£000)



#### Chief Financial Officer (£000)



#### Executive Director (£000)



■ Fixed remuneration (including salary, benefits and pension)

■ Annual bonus

■ Long-term incentive plan

Minimum – fixed remuneration (salary, pension, benefits), no bonus award or LTIP vesting.

On-target cash – fixed remuneration, 50% of maximum bonus award, no LTIP vesting.

On-target total – fixed remuneration, 50% of maximum bonus award, 50% of LTIP vesting.

Maximum – fixed remuneration, 100% of maximum bonus award, 100% of LTIP vesting.

## Group employee considerations

When setting remuneration for Executive Directors the Committee takes into account contextual information about pay and conditions within the Group, including:

- Salary increases for all employees.
- Bonus awards for all employees.
- Pay ratios between Executive Directors and other employees.

We are committed to sharing business success across the organisation with all employees participating in a short-term incentive plan. At more senior levels, remuneration is increasingly long term and larger proportions are dependent on both Group and individual performance and paid in the form of shares.

The Committee has not consulted all employees when reviewing the policy, considering the scale and geography of the population.

## Termination

The Company is required to give Executive Directors 12 months' notice under their service contracts. Payment in lieu of notice will not exceed the value of 12 months' salary, benefits and pension contributions. Both mitigation and the timing of payments through the notice period will be considered by the Committee where appropriate, as will the funding of reasonable outplacement and other professional fees. Pension benefits will normally be payable in accordance with the rules of the pension plan. There is no automatic entitlement to annual bonus. Taking into account the circumstances, the Committee has discretion to award a bonus in respect of performance in the financial year with appropriate consideration of time prorating.

Deferred shares will generally be released in cases such as retirement, death, injury, ill-health, redundancy or any other reason at the discretion of the Committee. In these cases any annual bonus awarded immediately prior to leaving may be delivered in cash rather than deferred shares.

For the LTIP, the rules state that unvested awards may be preserved at the Committee's discretion according to the circumstances. In such cases vesting will be at the normal date, subject to the established performance conditions, and prorated to employment in the performance period. In cases such as death and terminal illness, the Committee also has the discretion to vest the awards immediately using an estimate of future outturn. If an individual leaves after the LTIP shares have vested but during the holding period, shares will not be forfeited but the holding period will remain in force.

The treatment of leavers in ShareSave and the Share Incentive Plan is covered by the respective plan rules. Change of control provisions in respect of employee share plans are set out on page 187.

Any termination payments will be in line with the remuneration policy agreed by shareholders at that time.

## Service contracts

The service contracts for Warren East, Colin Smith and David Smith include 12 months' notice of termination from the Company and six months' notice from the Executive. The service contracts of Stephen Daintith, and any new appointee, will include 12 months' notice from the Company and 12 months' notice from the Executive Director. All contracts include the entitlement to paid holidays, sick pay, and other standard employment terms including reimbursement of reasonable business expenses.

The Chairman and Non-executive Directors have letters of appointment. No compensation is payable to the Chairman or to any Non-executive Director if the appointment is terminated early or if they fail to be re-elected at an AGM.

## Legacy commitments

Any remuneration payments and/or payments for loss of office made under legacy arrangements prior to the approval of the Company's remuneration policy may be paid out subject to the terms of any remuneration policy in place at the time they were agreed. For these purposes 'payments' include the Company satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are agreed at the time the award is granted.

This provision includes PSP awards granted under the previous approved remuneration policy. These awards were subject to CPS and relative TSR performance conditions, with vesting only possible if the EPS hurdle was met. The Chief Executive received awards of 180% of salary, and other executives received awards of 150% of salary (including the relative TSR multiplier).

## Minor amendments

The Committee may make minor amendments to the policy (for regulatory, exchange control, tax or administrative purposes or to take account of a change in legislation) without obtaining shareholder approval.

# Directors' remuneration report

The table below shows how we have applied the current remuneration policy during 2016. It discloses all the elements of remuneration received by the Directors during the year. The current remuneration policy, as approved by shareholders in 2014, is available on our website.

## Single figure of remuneration (audited)

	Salary/fees (A) £000		Benefits (B) £000		Bonus (C) £000		LTIP (D) £000		Other (E) £000		Sub-total £000		Pension (F) £000		Total £000	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
<b>Executive Directors</b>																
Warren East <sup>1</sup>	925	421	17	8	916	—	—	—	—	—	1,858	429	231	114	2,089	543
Colin Smith <sup>2</sup>	550	546	156	150	413	—	—	—	—	—	1,119	696	176	140	1,295	836
David Smith	540	535	51	35	405	—	—	—	—	—	996	570	173	171	1,169	741
<b>Former Executive Directors</b>																
James Guyette <sup>3</sup>	—	274	—	47	—	—	—	—	—	—	321	—	262	—	—	583
Mark Morris <sup>4</sup>	—	—	—	—	—	—	—	—	—	597	—	597	—	—	—	597
John Rishton <sup>5</sup>	—	519	3	82	—	—	—	—	—	—	3	601	—	153	3	754
<b>Sub-total</b>	<b>2,015</b>	<b>2,295</b>	<b>227</b>	<b>322</b>	<b>1,734</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>597</b>	<b>3,976</b>	<b>3,214</b>	<b>580</b>	<b>840</b>	<b>4,556</b>	<b>4,054</b>	
<b>Chairman and Non-executive Directors</b>																
Ian Davis	425	425	2	1	—	—	—	—	—	427	426	—	—	427	426	
Lewis Booth	100	110	14	11	—	—	—	—	—	114	121	—	—	114	121	
Ruth Cairnie	83	70	2	3	—	—	—	—	—	85	73	—	—	85	73	
Sir Frank Chapman	90	90	2	4	—	—	—	—	—	92	94	—	—	92	94	
Irene Dorner <sup>6</sup>	70	30	—	—	—	—	—	—	—	70	30	—	—	70	30	
Lee Hsien Yang	70	70	3	8	—	—	—	—	—	73	78	—	—	73	78	
John McAdam	70	70	—	—	—	—	—	—	—	70	70	—	—	70	70	
Bradley Singer <sup>7</sup>	58	—	—	—	—	—	—	—	—	58	—	—	—	58	—	
Sir Kevin Smith <sup>8</sup>	98	12	2	—	—	—	—	—	—	100	12	—	—	100	12	
Jasmin Staiblin	70	70	4	7	—	—	—	—	—	74	77	—	—	74	77	
<b>Former Non-executive Directors</b>																
Dame Helen Alexander <sup>9</sup>	31	90	—	—	—	—	—	—	—	31	90	—	—	31	90	
Alan Davies <sup>10</sup>	62	12	1	—	—	—	—	—	—	63	12	—	—	63	12	
Warren East <sup>1</sup>	—	45	—	—	—	—	—	—	—	—	45	—	—	—	45	
John Neill <sup>11</sup>	—	25	—	3	—	—	—	—	—	—	28	—	—	—	28	
<b>Sub-total</b>	<b>1,227</b>	<b>1,119</b>	<b>30</b>	<b>37</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,257</b>	<b>1,156</b>	<b>—</b>	<b>—</b>	<b>1,257</b>	<b>1,156</b>	
<b>Total</b>	<b>3,242</b>	<b>3,414</b>	<b>257</b>	<b>359</b>	<b>1,734</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>597</b>	<b>5,233</b>	<b>4,370</b>	<b>580</b>	<b>840</b>	<b>5,813</b>	<b>5,210</b>	

<sup>1</sup> Warren East was appointed as Chief Executive on 3 July 2015, having served as a Non-executive Director from 1 January 2014 to 2 July 2015.

<sup>2</sup> Colin Smith's benefits have been restated for 2015 due to late receipt of invoices relating to accommodation costs totalling £10,000.

<sup>3</sup> James Guyette left the Board on 8 May 2015.

<sup>4</sup> Mark Morris left the Board on 4 November 2014.

<sup>5</sup> John Rishton stepped down as Chief Executive and left the Board on 2 July 2015. A final payment in settlement of chauffeur expenses was made to John Rishton in December 2016.

<sup>6</sup> Irene Dorner was appointed as a Non-executive Director on 27 July 2015.

<sup>7</sup> Bradley Singer was appointed as a Non-executive Director on 2 March 2016.

<sup>8</sup> Sir Kevin Smith was appointed as a Non-executive Director on 1 November 2015.

<sup>9</sup> Dame Helen Alexander left the Board on 5 May 2016.

<sup>10</sup> Alan Davies was appointed as a Non-executive Director on 1 November 2015 and left the Board on 18 November 2016.

<sup>11</sup> John Neill left the Board on 8 May 2015.

## Notes to the table

### A. Salary and fees

#### BASE SALARY

The Executive Directors' salaries are normally reviewed, but not necessarily increased, with effect from 1 March each year. In 2016 there were no increases.

#### EXECUTIVE DIRECTORS' BASE SALARY

	Base salary as at 1 September 2017	Base salary as at 1 March 2016	Base salary as at 1 March 2015
Warren East	£943,500	£925,000	£925,000
Colin Smith <sup>1</sup>	n/a	£550,000	£550,000
David Smith <sup>2</sup>	n/a	£540,000	£540,000
Stephen Daintith <sup>3</sup>	£680,000	n/a	n/a

<sup>1</sup> Colin Smith will step down as an Executive Director on 4 May 2017.

<sup>2</sup> David Smith will leave the Company on 28 February 2017.

<sup>3</sup> Stephen Daintith is expected to take up his role in Spring 2017.

The Committee reviewed Executive Directors' salaries in early 2017 and concluded that an increase of 2% will be made to Warren East in line with those made to other employees. All salary increases for management are being deferred until 1 September 2017. No increases are being made for other Executive Directors.

#### NON-EXECUTIVE DIRECTORS' FEES

The Chairman's fee is reviewed by the Board as a whole on the recommendation of the Remuneration Committee and the review of the Non-executive Directors' fees is reserved to the Executive Directors, who take recommendations from the Chairman. No individual may be involved in setting his or her own fee. The Executive Directors and the Chairman reviewed Non-executive Directors' fees in December 2016 and resolved that there will be no increase in fees in 2017. The Non-executive Directors' fees were last increased in 2014.

The Chairman and Non-executive Directors are not eligible to participate in any of the Group's share schemes, incentive arrangements or pension schemes. We have in place a facility to enable Non-executive Directors to use some or all of their fees, after the appropriate statutory deductions, to make market purchases of shares in the Company on a monthly basis. Ruth Cairnie, Sir Frank Chapman, Ian Davis, Lee Hsien Yang, John McAdam and Sir Kevin Smith participate in this facility.

#### NON-EXECUTIVE DIRECTORS' BASE FEES

	2017 £000	2016 £000	2015 £000
Chairman	425	425	425
Other Non-executive Directors	70	70	70
Chairman of the Audit Committee	25	25	25
Chairman of the Remuneration Committee	20	20	20
Chairman of the Safety & Ethics Committee	20	20	20
Chairman of the Science & Technology Committee	20	20	20
Senior Independent Director	15	15	15

## B. Benefits

Benefits are provided to ensure that remuneration packages remain sufficiently competitive to recruit and retain Directors and to enable them to devote themselves fully to their roles. The benefits for the Non-executive Directors relate predominantly to travel and subsistence associated with attending Board meetings, although for Directors who are based outside the UK, the Company may pay towards tax advice and filing. The taxable value of all benefits paid to Executive Directors in the year is shown below.

### BENEFITS PAID TO EXECUTIVE DIRECTORS (AUDITED)

	Car or car allowance including fuel allowance £'000		Chauffeur services £'000		Financial planning £'000		Medical insurance £'000		Club membership fees £'000		Travel and subsistence £'000		Accommodation costs £'000		Total £'000	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Warren East <sup>1</sup>	15	7	—	—	—	—	2	1	—	—	—	—	—	—	17	8
Colin Smith <sup>2</sup>	30	30	—	—	6	6	2	2	—	—	7	4	111	108	156	150
David Smith	28	16	—	—	—	—	2	2	—	—	6	5	15	12	51	35
<b>Former Non-executive Directors</b>																
James Guyette <sup>3</sup>	—	5	—	—	—	20	—	—	—	6	—	—	—	16	—	47
John Rishton <sup>4</sup>	—	14	3	14	—	6	—	1	—	—	—	—	—	47	3	82
Total	73	72	3	14	6	32	6	6	—	6	13	9	126	183	227	322

<sup>1</sup> Warren East was appointed as Chief Executive on 3 July 2015, having served as a Non-executive Director from 1 January 2014 to 2 July 2015.

<sup>2</sup> Colin Smith's benefits have been restated for 2015 due to late receipt of invoices relating to accommodation costs totalling £10,000.

<sup>3</sup> James Guyette left the Board on 8 May 2015.

<sup>4</sup> John Rishton stepped down as Chief Executive and left the Board on 2 July 2015. A final payment in settlement of chauffeur expenses was made to John Rishton in December 2016.

## C. Annual bonus outcome

Annual bonuses may be awarded under the annual performance related award plan (APRA).

Executive Directors receive any annual bonus awarded in March following the performance period. The bonus is paid partially in cash and partially in deferred shares. The deferred shares are held in trust for two years before being released, subject to the recipient still being employed by the Group. Ordinary shares held as deferred shares will include the right to receive an enhancement equal in value to the C Shares issued during the deferral period.

Malus and clawback provisions apply where there has been: a material misstatement of audited results; serious financial irregularity which invalidates the targets set; reputational damage; material failure of risk management; a serious breach of the Group's Global Code of Conduct; or individual gross misconduct. Clawback will apply within three years from the date of grant.

Following consultation with shareholders at the start of 2016, the Committee introduced two new measures relating to customer delivery and employee engagement, subject to any bonus in relation to these targets being underpinned by the underlying profit threshold. The maximum bonus opportunity for Executive Directors was 180% for the Chief Executive and 150% of salary for other Executive Directors.

The Remuneration Committee reviewed the 2016 outturn against the performance measures, which are shown below:

### APRA 2016 PERFORMANCE MEASURES AND OUTTURN (AUDITED)

#### GROUP PERFORMANCE

	Profit	Cash	Customer delivery	Employee engagement
Weighting	37.5%	37.5%	12.5%	12.5%
Base (30%)	£650m	(£250m)	80%	73
Target (60%)	£712m	(£169m)	90%	75
Maximum (100%)	£790m	0	100%	78
2016 performance	£713m	£48m	88%	75
Bonus outturn (as a % of maximum)	60%	100%	54%	60%

Discretion was applied to reduce the overall Group performance outturn to on-target (60% of maximum).

Definitions used for performance measures:

**Profit** – underlying profit before tax that is reported by the Group for 2016, adjusted to exclude unbudgeted acquisitions and disposals.

**Cash** – free cash flow which is cash flow before acquisitions and disposals, shareholder payments, foreign exchange and share buybacks.

**Customer delivery** – % on-time to purchase order, measured for new equipment, spare parts or equipment repair and overhaul.

**Employee engagement** – measured through our long-standing global employee opinion survey.

For the purposes of assessing performance the Committee adjusted the actual underlying profit of £813m downwards to £713m and free cash flow of £100m downwards to £48m to remove gains from unbudgeted foreign exchange movements and cash receipts as well as restructuring payments.

#### INDIVIDUAL PERFORMANCE

The individual performance multiplier can increase or decrease the business outturn in a range of 0 – 120%, where on-target is 100%.

Personal performance objectives are set at the beginning of the year and are aligned with the Group's internal strategic priorities.

For Executive Directors these have included:

- Driving the transformation programme; simplification, cost reduction and improved behaviours.
- Engineering excellence – advancing our world-class technology.
- Operational excellence – embedding a lean enterprise and high-performance culture.
- Capturing aftermarket value and providing outstanding service to customers.
- Restoring investor confidence.
- Developing our people and our culture in a safe and ethical environment.
- Improving profitable growth.

The Committee assesses performance against the objectives and the overall assessed multiplier is based on the Committee's judgement and may include other factors and achievements in the year.

The following provides an overview of key achievements during the year for each Executive Director:

Warren East	Colin Smith	David Smith
Launched transformation including cultural change and process improvements, delivering cost reduction at the top end of the target range.	Progressed engineering supply chain interface, lead time reductions and product cost improvement ahead of target.	Continued to develop the finance function including review of management structures and achievement of key hires.
Drove the reorganisation of the Group with restructuring at many levels in the organisation.	Built talent within engineering to support succession planning.	Finalised plan for cost and margin work streams, tracking transformation and underlying cost actions.
Strengthened engagement with shareholders.	Drove transformation, including cultural and behavioural change programmes with cost reduction at the top end of the target range.	Improved effectiveness of forecasting and management information systems.

#### BONUS OUTTURN

	Warren East	Colin Smith	David Smith
Group performance (% of salary)	90%	75%	75%
Individual performance multiplier	1.1	1.0	1.0
Total bonus (% of salary)	99%	75%	75%
Total bonus (% of maximum)	55%	50%	50%

## D. LTIP

### PSP 2016 AWARD CPS TARGETS (AUDITED)

The cash flow per share targets for awards made in 2016 were as follows and straight-line vesting will apply between these points.

Aggregate CPS over the three-year period	Maximum award released %
Less than 10p	0
10p	30
50p	100

2016 PSP Awards are based on CPS and TSR measures with an EPS hurdle. As disclosed in the 2015 Annual Report, for the 2016 awards, the EPS hurdle will be measured over the period 2017 and 2018. This change reflected business circumstances and the intended level of stretch of the EPS hurdle which is used as an underpin rather than a primary performance measure. In recognition of the change the maximum vesting level for 2016 awards was reduced from 180% to 150% of salary for the Chief Executive and from 150% to 130% of salary for other Executive Directors.

### PSP AWARDS MADE IN MARCH 2016

In 2016, Executive Directors received PSP awards in line with the remuneration policy as follows:

	Date of award	Number of shares awarded	% of salary (% of salary maximum)	Performance period end date
Warren East	1 March 2016	164,202	120	150 31 December 2018
Colin Smith	1 March 2016	81,361	100	130 31 December 2018
David Smith	1 March 2016	79,882	100	130 31 December 2018

All awards are made as performance shares based on a percentage of salary and the value is divided by the average share price over a three-day period before the date of grant, being 676p for the award on 1 March 2016.

Malus and clawback provisions apply where there has been: a material misstatement of audited results; serious financial irregularity which invalidates the targets set; reputational damage; material failure of risk management; a serious breach of the Group's Global Code of Conduct; or individual gross misconduct. Clawback will apply for three years after the vesting of an award.

If the EPS and base CPS targets are not achieved, no awards vest.

### PSP AWARDS VESTING IN MARCH 2017

The following sets out details in respect of the March 2014 PSP award, for which the final year of performance was the 2016 financial year. Subject to performance conditions, the vesting date of these awards is in March 2017, three years after the award was made.

	Targets for 2014 – 2016 period	Performance against targets
EPS growth (hurdle)	Awards may vest if EPS growth exceeds the OECD index of consumer prices. Awards will lapse if hurdle not met.	EPS growth of (53.42%) over the three-year period underperformed the hurdle which was 3.06%.
Aggregate CPS	Aggregate CPS over three-year period of less than 117p – zero vesting. Aggregate CPS over three-year period of 147p – 100% vesting.	Aggregate CPS performance over three years of 27p.
Relative TSR	Relative TSR versus FTSE 100 constituents less than median – 1x multiplier. Relative TSR versus FTSE 100 constituents equal to median – 1.25x multiplier. Relative TSR versus FTSE 100 constituents equal to upper quartile – 1.5x multiplier.	Relative TSR performance over three years was below median versus FTSE 100 companies. No multiplier applied.
Outcome		None of the 2014 awards will vest in March 2017.

### IMPLEMENTATION OF REMUNERATION POLICY FOR 2017\*

<b>Base salary</b>	Warren East's salary will be increased by 2% in line with increases made to other employees. All salary increases for management are being deferred until September 2017. Base salaries from September 2017 will be: <ul style="list-style-type: none"> <li>• Warren East – £943,500.</li> <li>• Stephen Daintith – £680,000 (expected to take up his role in Spring 2017).</li> </ul>																
<b>Benefits</b>	There will be no change to our approach to benefits in 2017, which includes car or car allowance, financial planning assistance, insurances and other benefits.																
<b>Pensions</b>	There will be no change to our approach to pensions in 2017. Pension arrangements will be: <ul style="list-style-type: none"> <li>• Warren East: cash allowance of 25% of salary.</li> <li>• Stephen Daintith: cash allowance of 25% of salary.</li> </ul>																
<b>Annual bonus</b>	For 2017, bonuses will be awarded using a simple additive approach: <ul style="list-style-type: none"> <li>• 80% of the award will be based on Group performance.</li> <li>• 20% of the award will be based on individual performance.</li> </ul> For 2017, the Group measures will be unchanged: <ul style="list-style-type: none"> <li>• Profit (37.5%).</li> <li>• Free cash flow (37.5%).</li> <li>• On-time customer delivery (12.5%).</li> <li>• Employee engagement (12.5%).</li> </ul> Maximum opportunities will remain unchanged: <ul style="list-style-type: none"> <li>• Chief Executive – 180% of salary.</li> <li>• Other Executive Directors – 150% of salary.</li> </ul>																
<b>LTIP awards</b>	For awards to be granted in 2017 performance measures will be weighted: <ul style="list-style-type: none"> <li>• 60% on CPS.</li> <li>• 20% on EPS.</li> <li>• 20% on relative TSR (versus FTSE 100 and Global S&amp;P Index, to recognise that Rolls-Royce is a global company).</li> </ul> Performance will be measured over three years to 31 December 2019. Performance targets will be: <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th>CPS</th> <th>EPS</th> <th>Relative TSR</th> </tr> </thead> <tbody> <tr> <td>Threshold (20% vesting)</td> <td>60p</td> <td>115p</td> <td>Median</td> </tr> <tr> <td>Mid (50% vesting)</td> <td>80p</td> <td>135p</td> <td>Between median and upper quartile</td> </tr> <tr> <td>Maximum (100% vesting)</td> <td>110p</td> <td>160p</td> <td>Upper quartile</td> </tr> </tbody> </table> Performance below threshold will result in that element lapsing in full. The above targets are not an indication of forecast numbers for the three-year period.		CPS	EPS	Relative TSR	Threshold (20% vesting)	60p	115p	Median	Mid (50% vesting)	80p	135p	Between median and upper quartile	Maximum (100% vesting)	110p	160p	Upper quartile
	CPS	EPS	Relative TSR														
Threshold (20% vesting)	60p	115p	Median														
Mid (50% vesting)	80p	135p	Between median and upper quartile														
Maximum (100% vesting)	110p	160p	Upper quartile														

#### Methodologies

CPS – calculated as reported cash flow before the cost of business acquisitions or proceeds of disposals, foreign exchange translation effects, special payments into pension schemes and payments to shareholders, divided by the weighted average number of shares in issue. CPS is cumulative over a three-year period. The Committee will review CPS performance to ensure that it is a fair reflection of achievements over the period.

EPS – calculated as cumulative absolute underlying EPS over the three-year performance period. With the introduction of IFRS 15 in 2018, the first three-year period starting in 2017 will use existing contract accounting, but will be restated in 2018 under IFRS 15. The Committee will ensure that translated targets are based on the same underlying assumptions under both accounting bases.

Relative TSR – measured 50% against the constituents of the FTSE 100 and 50% against the constituents of the S&P Global Industrials index.

#### Award sizes for maximum performance

- Chief Executive: 250% of salary.
- Other Executive Directors: 225% of salary.

Threshold vesting at 20% equates to 50% of salary for the Chief Executive and 45% of salary for other Executive Directors.

LTIP awards will be subject to an additional shareholding period of two years following the three-year performance period.

\* Subject to shareholder approval at the 2017 AGM.

The SFO, DoJ and MPF agreements relate to legacy matters and the legal judgment was clear that there was no culpability in relation to existing management. The future impact of these agreements are therefore excluded from incentive targets.

## E. Other

### PAYMENTS FOR LOSS OF OFFICE (AUDITED)

Mark Morris left the Group on 4 November 2014 and contractual payments of £597,000 were made to him in 2015 in respect of the termination of his employment. No further payments were made in 2016.

### PAYMENTS TO PAST DIRECTORS (AUDITED)

Dr Mike Howse retired from the Board on 30 June 2005. Following his retirement he was retained by the Company for his expertise in engineering and received his final payment of £2,520 under this arrangement in January 2016.

No other payments were made to former Directors.

## F. Pension entitlements (audited)

The Group's UK pension schemes are funded, registered schemes and were approved under the regime applying until 6 April 2006. They include both defined contribution and defined benefit pension schemes. In the defined benefit pension schemes normal retirement age is 62. During the year, the Group restructured its UK defined benefit arrangements. Four of the five UK schemes merged together into a consolidated scheme, renamed the Rolls-Royce UK Pension Fund. The merged scheme is estimated to have a material surplus on its statutory funding basis, with a largely de-risked investment strategy. All future defined benefit accrual will be provided from this scheme (limited to employees who joined the Group before 1 April 2007). The scheme merger will simplify future administration and governance. As part of this merger, three transferring schemes are being wound up and over 3,400 former employees with benefits below statutory limits elected to receive lump sums in exchange for their existing benefits. The liabilities of the fifth scheme, the Vickers Group Pension Scheme have been fully insured with Legal & General Assurance Company Limited and that scheme is also in the process of being fully wound up. Neither of these transactions required any additional funding by the Group.

John Rishton, who left the Company and started to receive his pension on 2 July 2015, was a member of one of the Group's UK defined contribution pension schemes and received employer contributions restricted to the annual allowance limits with any excess paid as a cash allowance. The cash allowance was calculated as equivalent to the cost of the pension contributions after allowing for National Insurance costs.

Warren East and David Smith receive a cash allowance in lieu of pension accrual. Stephen Daintith will receive a cash allowance in lieu of pension accrual.

Colin Smith opted out of future pension accrual with effect from 1 April 2006 and opted out of salary linkage with effect from 30 November 2015. He started to receive his pension from 1 December 2016. He receives a cash allowance in lieu of pension accrual.

### DEFINED BENEFIT SCHEME

Details of the defined benefit of the Executive Directors as at 31 December 2016 in the Group's pension schemes are given below.

	2016 £000 pa	2015 £000 pa
Colin Smith	350	385

## OTHER INFORMATION

### BOARD CHANGES DURING 2016

On 22 September 2016, it was announced that David Smith would leave the Group after three years to pursue other business interests. Stephen Daintith is expected to take up his role in Spring 2017. Remuneration arrangements in respect of these changes are set out below.

### David Smith

On leaving Rolls-Royce, David Smith will receive payment in lieu of any outstanding portion of his 12 months' notice period, which started on 21 September 2016. He may also receive a payment in respect of any unused leave. He remained eligible for an APRA award for 2016. He will not participate in the incentive plans for 2017. Mitigation will be applied to reflect his new employment at QinetiQ Group plc.

His outstanding PSP awards will be prorated for time based on his leaving date. The performance conditions will be assessed following the end of the three-year performance period and any vested shares will be released at the normal vesting date. The 2014 and 2015 awards are not expected to meet the performance measures.

### Stephen Daintith

On appointment Stephen Daintith's annual base salary will be £680,000. He will receive a pension allowance of 25% of salary.

For 2017 he will be eligible to participate in annual bonus up to a maximum of 150% of salary per annum. His maximum 2017 LTIP award will be 225% of salary.

Following his appointment he will be made awards to compensate for unvested incentives awarded to him at Daily Mail and General Trust plc which were forfeited as a result of him joining Rolls-Royce. All such awards will be of equivalent value to the awards forfeited and match or exceed the time horizons and reflect performance conditions.

His forfeited bonus awards will be replaced with Rolls-Royce shares vesting over the same time horizons. Buy out awards in respect of forfeited LTIP awards with a performance period to October 2017 will be assessed against the original Daily Mail and General Trust plc performance conditions and will vest at that time. For LTIP awards with performance measured to October 2018 and October 2019, buy-out awards will be assessed against the 2016 Rolls-Royce PSP performance conditions. All awards will be in Rolls-Royce shares and will be forfeited in the event of resignation within two years of his appointment. Full details of the buy out awards will be provided at the time the awards are granted and will be included in the 2017 Annual Report.

### PAY ACROSS THE ORGANISATION

This section of the report enables our remuneration arrangements to be seen in context by providing:

- A comparison of the year-on-year percentage change in our Chief Executive's remuneration with the change in average remuneration across the Group.
- A year-on-year comparison of the total amount spent on employment costs across the Group and shareholder payments.
- An eight-year history of our Chief Executive's remuneration.
- Our TSR performance over the same period.

### PERCENTAGE CHANGE IN CHIEF EXECUTIVE REMUNERATION

The following table compares the percentage change in the Chief Executive's salary, bonus and benefits to the average percentage change in salary, bonus and benefits for all UK employees from 2015 to 2016.

### CHANGE IN REMUNERATION

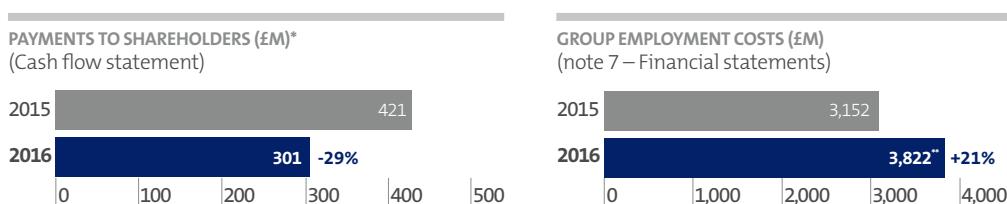
	Salary	Benefits	Annual bonus <sup>2</sup>
Chief Executive	—	(82)%	n/a
UK employees <sup>1</sup> average	2.35%	(4.31)%	n/a

<sup>1</sup> UK employees were chosen as a comparator group in order to avoid the impact of exchange rate movements over the year. UK employees excluding apprentices, graduates and interns, make up 43.5% of the total employee population.

<sup>2</sup> No annual bonus was paid for the financial years 2014 or 2015. For 2016, the annual bonus paid out at 78% of the maximum bonus level. The Chief Executive received 55% of his maximum bonus. The percentage of maximum is shown above. No bonus was paid in 2015.

### RELATIVE SPEND ON PAY

The following chart sets out the percentage change in payments to shareholders and overall expenditure on pay across the Group.



\* Value of C Shares issued during the year.

\*\* Includes £306m costs of restructuring the UK defined benefit pension schemes.

## CHIEF EXECUTIVE PAY

Year	Chief Executive <sup>1</sup>	Single figure of total remuneration £000	Annual bonus as a % of maximum	PSP as a % of maximum
2016	Warren East	2,089	55	—
2015	Warren East	543	0	—
2015	John Rishton <sup>2</sup>	754	0	—
2014	John Rishton	2,596	0	45
2013	John Rishton	6,228	55	100
2012	John Rishton	4,577	85	—
2011	John Rishton	3,677	63	—
2011	Sir John Rose <sup>3</sup>	3,832	—	75
2010	Sir John Rose	3,914	100	100
2009	Sir John Rose	2,409	29	93

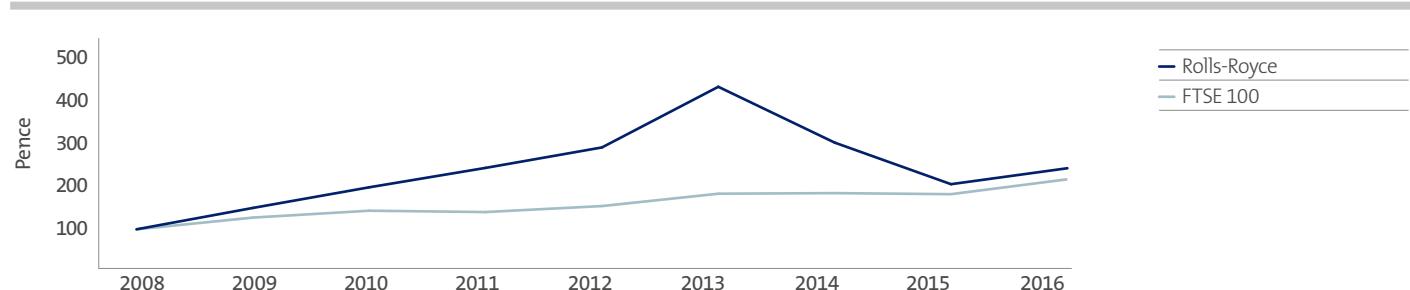
<sup>1</sup> On 31 March 2011, Sir John Rose retired and John Rishton was appointed. John Rishton retired on 2 July 2015 and Warren East was appointed as Chief Executive on 3 July 2015.

<sup>2</sup> John Rishton received a special grant of shares on joining the Company on 1 March 2011 to mirror the shares he forfeited on resigning from his previous employer. The share price had increased from 483.50p at the time this grant was made to 870p at the end of 2014. These are the main reasons why John Rishton's remuneration in 2012 and 2013 exceeded that of his predecessor.

<sup>3</sup> The remuneration for Sir John Rose does not include any pension accrual or contribution as he received his pension from 1 February 2008.

## TSR PERFORMANCE

The Company's TSR performance over the previous eight years compared to a broad equity market index is shown in the graph below. The FTSE 100 has been chosen as the comparator because it contains a broad range of other UK listed companies. The graph shows the growth in value of a hypothetical £100 holding in the Company's ordinary shares over eight years, relative to the FTSE 100 index.



## CONTRACTUAL ARRANGEMENTS

The Executive Directors have service agreements that set out the contract between each Executive Director and the Company. Executive Directors retain payments received from serving on the boards of external companies, the details of which are given below.

The Chairman and other Non-executive Directors have letters of appointment. Each Non-executive Director serves for a term of three years, which may be extended twice up to a total of nine years.

## EXECUTIVE DIRECTORS' SERVICE CONTRACTS

	Date of contract	Notice period Company	Notice period individual
Warren East	21 April 2015	12 months	6 months
Colin Smith	1 July 2005	12 months	6 months
David Smith	19 November 2014	12 months	6 months
Stephen Daintith*	21 September 2016	12 months	12 months

\* Stephen Daintith is due to take up his role in Spring 2017.

**PAYMENTS RECEIVED FOR SERVING ON EXTERNAL BOARDS**

	Directorships held	Payments received and retained £000
Warren East	Dyson James Group Limited	80
Warren East <sup>1</sup>	Micron Technology, Inc.	6
David Smith	Motability Operations Group plc	43

<sup>1</sup> Warren East stepped down from the board of Micron Technology Inc on 27 January 2016.

**NON-EXECUTIVE DIRECTORS' LETTERS OF APPOINTMENT**

	Appointment date	Current letter of appointment end date
Ian Davis	1 March 2013	28 February 2019
Lewis Booth	25 May 2011	24 May 2017
Ruth Cairnie	1 September 2014	31 August 2017
Sir Frank Chapman	10 November 2011	9 November 2017
Irene Dorner	27 July 2015	26 July 2018
Lee Hsien Yang	1 January 2014	31 December 2019
John McAdam	19 February 2008	4 May 2017
Bradley Singer	2 March 2016	3 May 2018
Sir Kevin Smith	1 November 2015	31 October 2018
Jasmin Staiblin	21 May 2012	20 May 2018

**DIRECTORS' INTERESTS IN SHARES (AUDITED)**

Each Executive Director's total shareholding, for the purposes of comparing it with the shareholding requirement, includes shares held: by connected persons; in the all-employee Share Incentive Plan; and PSP shares that have vested, but does not include unvested PSP awards.

Shareholding requirements are 250% of salary for the Chief Executive and 200% of salary for the other Executive Directors. APRA deferred shares do not count towards their shareholding requirement. Participants in the PSP are required to retain at least one half of the number of after-tax shares released from the PSP, until the value of their shareholding reaches the percentage of salary shown in the table below. When this level is reached it must be maintained until retirement or departure from the Group.

**SHAREHOLDING REQUIREMENT**

	Base salary £000	Total shareholding	Shareholding requirement as % of salary	Shareholding requirement <sup>1</sup>	Actual shareholding as % of requirement
Warren East	925	25,365	250	342,086	7
Colin Smith	550	222,798	200	162,722	137
David Smith	540	42,038	200	159,763	26

<sup>1</sup> Salary divided by the March 2016 PSP grant price of 676p multiplied by percentage of salary.

The Directors and their connected persons had the following interests in the ordinary shares and C Shares of the Company at 31 December 2016, as shown in the following table.

#### DIRECTOR'S SHARE INTERESTS

	Ordinary shares	C Shares <sup>1</sup>	Unvested awards	Vested awards		
			Conditional shares not subject to performance conditions (APRA)	Conditional shares subject to performance conditions (PSP)	Options over shares subject to savings contracts	Vested shares and options exercised in 2016
<b>Executive Directors</b>						
Warren East	25,365	—	—	290,845	1,264	—
Colin Smith	222,798	—	—	192,960	758	8,977
David Smith	42,038	—	—	155,373	758	—
<b>Chairman and Non-executive Directors</b>						
Ian Davis	42,049	—	—	—	—	—
Lewis Booth	60,000	—	—	—	—	—
Ruth Cairnie	11,137	—	—	—	—	—
Sir Frank Chapman	22,091	5,061,879	—	—	—	—
Irene Dorner	5,132	—	—	—	—	—
Lee Hsien Yang	4,005	—	—	—	—	—
John McAdam	3,230	—	—	—	—	—
Bradley Singer	—	—	—	—	—	—
Sir Kevin Smith	20,587	—	—	—	—	—
Jasmin Staiblin	—	—	—	—	—	—

<sup>1</sup> Non-cumulative redeemable preference shares of 0.1p each.

#### DIRECTOR'S CHANGE IN SHARE INTERESTS

	Ordinary shares		C Shares	
	31 December 2016	Changes from 31 December 2016 to 13 February 2017	31 December 2016	Changes from 31 December 2016 to 13 February 2017
<b>Executive Directors</b>				
Warren East	25,365	174	—	—
Colin Smith	222,798	1,525	—	—
David Smith	42,038	329	—	—
<b>Chairman and Non-executive Directors</b>				
Ian Davis	42,049	873	—	—
Lewis Booth	60,000	—	—	—
Ruth Cairnie	11,137	649	—	—
Sir Frank Chapman	22,091	1,178	5,061,879	—
Irene Dorner	5,132	35	—	—
Lee Hsien Yang	4,005	317	—	—
John McAdam	3,230	71	—	—
Bradley Singer	—	—	—	—
Sir Kevin Smith	20,587	924	—	—
Jasmin Staiblin	—	—	—	—

**DIRECTORS' INTERESTS IN UNVESTED AND VESTED AWARDS****WARREN EAST**

	31 December 2015	Granted during year	TSR uplift/ dividend enhancement	Vested awards	Lapsed	31 December 2016	Market price at date of award (p)	Date of grant	Date of vesting	Market price at vesting (p)
PSP 2015	126,643	—	—	—	—	126,643	730.00	01/09/2015	01/09/2018	—
PSP 2016	—	164,202	—	—	—	164,202	676.00	01/03/2016	01/03/2019	—
<b>Total</b>	<b>126,643</b>	<b>164,202</b>	—	—	—	<b>290,845</b>				
ShareSave (options) <sup>1</sup>	1,264	—	—	—	—	1,264	616.80	12/10/2015	01/02/2021	—
<b>Total</b>	<b>1,264</b>	<b>—</b>	—	—	—	<b>1,264</b>				

<sup>1</sup> For ShareSave, the share price shown is the exercise price which was 85% of the market price at the date of the award.

**COLIN SMITH**

	31 December 2015	Granted during year	TSR uplift/ dividend enhancement	Vested awards	Lapsed	31 December 2016	Market price at date of award (p)	Date of grant	Date of vesting	Market price at vesting (p)
PSP 2013	51,304	—	—	—	51,304	—	1023.33	01/03/2013	01/03/2016	—
PSP 2014	53,336	—	—	—	—	53,336	984.33	07/05/2014	03/03/2017	—
PSP 2015	58,263	—	—	—	—	58,263	944.00	02/03/2015	02/03/2018	—
PSP 2016	—	81,361	—	—	—	81,361	676.00	01/03/2016	01/03/2019	—
<b>Total</b>	<b>162,903</b>	<b>81,361</b>	—	—	<b>51,304</b>	<b>192,960</b>				
APRA 2013	16,000	—	939	16,939	—	—	984.40	07/05/2014	03/03/2016	687.78
<b>Total</b>	<b>16,000</b>	<b>—</b>	<b>939</b>	<b>16,939</b>	<b>—</b>	<b>—</b>				
ShareSave (options) <sup>1</sup>	758	—	—	—	—	758	616.80	12/10/2015	01/02/2019	—
<b>Total</b>	<b>758</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>758</b>				

<sup>1</sup> For ShareSave, the share price shown is the exercise price which was 85% of the market price at the date of the award.

**DAVID SMITH**

	31 December 2015	Granted during year	TSR uplift/ dividend enhancement	Vested awards	Lapsed	31 December 2016	Market price at date of award (p)	Date of grant	Date of vesting	Market price at vesting (p)
PSP 2014	18,287	—	—	—	—	18,287	984.33	03/03/2014	03/03/2017	—
PSP 2015	57,204	—	—	—	—	57,204	944.00	02/03/2015	02/03/2018	—
PSP 2016	—	79,882	—	—	—	79,882	676.00	01/03/2016	01/03/2019	—
<b>Total</b>	<b>75,491</b>	<b>79,882</b>	—	—	—	<b>155,373</b>				
ShareSave (options) <sup>1</sup>	758	—	—	—	—	758	616.80	12/10/2015	01/02/2019	—
<b>Total</b>	<b>758</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>758</b>				

<sup>1</sup> For ShareSave, the share price shown is the exercise price which was 85% of the market price at the date of the award.

### **Committee members and attendance**

The Committee membership and attendance throughout 2016 is shown on pages 54 and 61. In addition to the Committee members, the Chairman, the Chief Executive, the Chief Financial Officer and any of the Non-executive Directors may attend one or more meetings at the Committee's invitation, although none was present during discussion of his or her own remuneration package.

The Committee is supported by the Company Secretary, the Group Human Resources Director and the Global Performance, Reward & Pensions Director.

### **Advisers to the Committee**

During the year, the Committee had access to advice from Deloitte LLP's executive compensation advisory practice. Total fees for advice provided to the Committee during the year by Deloitte were £159,175 (2015: £125,150). Deloitte also advised the Company on tax, assurance, pensions and corporate finance and Deloitte MCS Limited provided consulting services. The Committee is exclusively responsible for reviewing, selecting and appointing its advisers.

Deloitte is a founding member of the Remuneration Consultants Group and adheres to its code in relation to executive remuneration consulting. The Committee requests Deloitte to attend meetings periodically during the year. The Committee is satisfied that the advice it has received has been objective and independent.

### **Statement of shareholder voting**

	For	Against	Votes withheld
Results of the resolution approving the 2015 remuneration report at the AGM held on 5 May 2016			
Percentage of votes (%)	98.71	1.29	0.85
Number of votes cast	1,370,054,216	17,870,398	11,922,905

The current remuneration policy was approved by shareholders at the 2014 AGM. We monitor carefully shareholder voting on our remuneration policy and implementation. The full 2014 policy is available on our website, [www.rolls-royce.com](http://www.rolls-royce.com). We have undertaken a comprehensive review of our remuneration policy, with significant contribution from shareholders. The 2017 remuneration policy on pages 76 to 82 and available on our website, will be put to shareholders for approval at the AGM on 4 May 2017.

### **Statutory requirements**

The Directors' remuneration report has been prepared on behalf of the Board by the Remuneration Committee. We adopt the principles of good governance as set out in the UK Corporate Governance Code and comply with the regulations contained in Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013, the Listing Rules of the Financial Conduct Authority and the relevant schedules of the Companies Act 2006. The Companies Act 2006 and the Listing Rules require the Company's auditor to report on the audited information in their report on pages 176 to 182 and to state that this section has been properly prepared in accordance with these regulations. The Directors' remuneration report and the Directors' remuneration policy are subject to shareholder approval at the AGM on 4 May 2017. The Directors' remuneration report was approved by the Board on 13 February 2017 and signed on its behalf.

**Ruth Cairnie**

**Chairman of the Remuneration Committee**

# Audit Committee report



**Lewis Booth**  
Chairman of the  
Audit Committee

## Highlights

- Implementation of enhanced risk management system.
- Issue of governance framework for internal controls.
- Review of key judgements and estimates and consistency of accounting policies.
- Significant progress on the adoption of IFRS 15.
- PwC selected as auditor for 2018.

During 2016, we recommended revisions to reflect the review of Directors' and senior managers' expenses that we undertake and to remove the requirements for the Committee to review payments to shareholders, which are considered by the Board as a whole.

The Committee met six times in 2016. In addition, the audit tender steering group (see page 102) also met six times. The Chief Financial Officer, Deputy CFO & Group Controller, Group Chief Accountant, Director of Internal Audit, General Counsel, Director of Risk and representatives from our external auditor are also invited to attend. Lord Gold also attended the Committee's meetings in July and December.

## 2016 overview

### Introduction

I am pleased to present the 2016 report of the Audit Committee which describes how the Committee has carried out its responsibilities during the year. I would like to thank the members of the Committee, the executive management team and KPMG for the open discussions that take place at our meetings and the importance they all attach to its work.

All members of the Committee are independent Non-executive Directors. Alan Davies stepped down from the Board and the Committee in November 2016. For the purposes of the Code, Irene Dorner and I have recent and relevant financial experience. Our biographies are on pages 55 and 56.

### Operation of the Committee

The Committee's responsibilities are outlined in its terms of reference which we review annually and refer to the Board for approval.

### Principal responsibilities

The principal responsibilities of the Committee are to assist the Board in fulfilling its oversight responsibilities.

### Financial reporting

- Review financial results announcements and financial statements, focusing on:
  - the appropriateness of critical accounting policies, judgements and estimates and consistent application of those accounting policies;
  - inclusion of appropriate disclosures;
  - compliance with relevant regulations; and
  - reporting to the Board as to whether the Annual Report, as a whole, is fair, balanced and understandable.

### Risk and control environment

- Assess the scope and effectiveness of the systems to identify, manage and monitor financial and non-financial risks.
- Assess the management of principal risks allocated to the Committee: business continuity, market and financial shock and IT vulnerability.

- Review the procedures for detecting, monitoring and managing the risk of fraud.
- Review the system of internal control over the business processes and the risks identified through the risk management process.

### Internal audit

- Review the scope, resources, results and effectiveness of internal audit.

### External auditor

- Oversee the relationship with the external auditor, review the effectiveness of the external audit process and make recommendations to the Board for the external auditor's appointment and fees.

### Areas of focus for 2016

- Overseeing the ongoing projects to enhance the systems for risk management and internal control.
- Assessing the effectiveness of internal control over financial reporting.
- Reviewing key accounting judgements and estimates and the consistent application of accounting policies which had the most significant impacts on the financial results in 2016. In addition, we requested a comprehensive review of the application of all accounting policies across the Group.
- Reviewing the Group's basis for the viability statement.
- Overseeing the project for the implementation of IFRS 15 *Revenue from Contracts with Customers*, which will be adopted in 2018.
- Reviewing the progress of the management information systems project.
- Reviewing principal risks on behalf of the Board.
- Leading the audit tender process.

## At a glance

Area of focus	Matters considered	Outcome
<b>Financial reporting</b>	<p>The appropriateness of accounting policies and key accounting judgements and estimates, including:</p> <ul style="list-style-type: none"> <li>• estimates used in accounting for long-term contractual arrangements, including the regular review of the methodologies for taking account of uncertainties in these estimates and the financial impact;</li> <li>• further impairment of goodwill in Marine;</li> <li>• carrying value of goodwill in Rolls-Royce Power Systems AG; and</li> <li>• disclosures of contingent liabilities.</li> </ul> <p>The consistency of the application of accounting policies across the Group.</p> <p>The form and content of the Annual Report.</p> <p>The implementation project for IFRS 15 and the communication to investors in November 2016.</p>	<p>The accounting policies and key judgements and estimates are appropriate and key estimates used are balanced.</p> <p>The reviews of consistent application of accounting policies identified some minor differences, which have now been amended.</p> <p>The Annual Report, taken as a whole, is fair, balanced and understandable.</p> <p>IFRS 15 will introduce some very significant changes in accounting policies, particularly in the Civil Aerospace business.</p>
<b>Risk and control environment</b>	<p>Improvements to the risk management and internal controls systems to address requirements of the Code.</p> <p>Management's assessment of the risk of a disruptive event.</p> <p>The procedures for preventing, monitoring and combatting breaches of the security of the Group's IT systems.</p> <p>The processes for identifying and managing risks.</p> <p>The model for assessing the effectiveness of the Group's systems of internal control.</p> <p>The process and assumptions underlying the viability statement.</p>	<p>Appropriate procedures are in place to identify and manage principal risks and all of these have been subject to a review by the Board or an appropriate Board committee.</p> <p>Appropriate procedures are in place to manage business continuity, cyber-security and market shock risks.</p> <p>The internal control system meets the requirements of the Code. It will continue to be enhanced during 2017.</p> <p>Reported to the Board that an appropriate process is in place to make the viability statement.</p>
<b>Internal audit</b>	<p>The effectiveness of the internal audit function, its key findings and trends arising, and the resolution of these matters.</p>	<p>The scope, extent and effectiveness of internal audit are appropriate.</p>
<b>External audit</b>	<p>The approach and scope of external audit and the effectiveness and independence of the external auditor and the review of the 2015 Rolls-Royce audit by the FRC's Audit Quality Review team.</p> <p>The extent of non-audit services provided by KPMG and the tendering firms during the tender process.</p> <p>The requirements of the FRC's new Ethical Standard on non-audit services.</p> <p>The audit tender process.</p>	<p>Assessed KPMG as effective and independent and recommended their re-appointment at the 2017 AGM.</p> <p>No concerns over the nature and scale of the non-audit services provided.</p> <p>Approved a revised policy on the provision of non-audit services.</p> <p>A thorough process resulted in the Committee recommending to the Board that PricewaterhouseCoopers LLP (PwC) be proposed at the 2018 AGM to succeed KPMG as the Group's auditor.</p>

## Business and function presentations

We have a regular schedule of presentations from each of the Group's businesses and its key functions. During 2016, we received presentations from the following:

- **Civil Aerospace** – key business risks (including major product failure, on-time and profitable delivery of new programmes, business continuity risks including supply chain disruption and market shock due to external events or factors reducing air travel); accounting policies; key accounting judgements, estimates and controls; credit risks associated with customers; and TotalCare and CorporateCare accounting.
- **Defence Aerospace** – key business risks (including the impact of government spending and pricing in the traditional UK and US markets and the protection of our position in the transport and patrol markets); and key accounting estimates (which principally relate to long-term contracts, in particular the contract loss provisions on the contract for TP400 development and production); and controls.
- **Marine** – key business risks (including the impact of the current low oil price to the offshore business and the restructuring programme); and key accounting estimates (which principally relate to the carrying value of goodwill and inventory, warranty and restructuring provisions); and controls.
- **Group Tax Director** – approach to managing the Group's tax affairs; key tax risks and how they are managed (with specific consideration of tax disputes); key sources of estimation uncertainty (in particular the recognition of deferred tax assets); and key tax-related disclosures (in particular we considered the disclosure of the Group's approach to managing its tax affairs).

We also reviewed the introduction of enhanced management information systems. To date, these have covered the introduction of new dashboards and forecasting processes which have improved visibility to the ELT and the Board, although more work is required. The full benefits will also be dependent on the implementation of improvements to underlying IT systems over the next few years.

## Financial reporting

We place considerable emphasis on making sure that the accounting policies are appropriate and are consistently applied so that the financial statements faithfully represent the results and financial position of the Group and its underlying contractual arrangements.

Given the long-term nature of the Group's businesses, most of the accounting policies subject to significant judgement do not change materially year-on-year. However, the facts and circumstances on which those judgements are based do vary over time, with a

consequential impact on the application of the policies. The key areas of focus in 2016 are set out in the table opposite. In part, these reflect the current weak trading conditions in Marine. Overall, we are satisfied that the judgements and estimates made are balanced.

In July, the FRC wrote to the Company following its review of the 2015 Annual Report. This review, which was based solely on the Annual Report, did not identify any questions or queries which the FRC wished to pursue, although a number of suggestions for improvements were noted, and these have been taken into account in preparing the 2016 Annual Report.

During the year, we reviewed the conclusions reached by the implementation project on IFRS 15, which will be applicable for 2018.

This new standard will have a significant impact on our accounting policies for revenue recognition, most particularly in our Civil Aerospace business. We agreed with the conclusions reached that will require us to account for OE and aftermarket contracts separately and to recognise aftermarket revenues based on activities performed rather than flying hours.

These changes were presented at an investor event in November 2016 and are discussed further in the accounting policies on page 130.

The Group continues to consult with other companies in the aerospace and defence sector. We believe that the new policies will be broadly comparable across the sector.

Since the year end, we have reviewed the form and content of the Company's 2016 Annual Report together with the processes used to prepare and verify it. We have reported to the Board that, taken as a whole, we consider the Annual Report to be fair, balanced and understandable. We further believe the Annual Report provides the necessary information for shareholders to adequately assess the Company's performance, business model and strategy. In making this assessment, we considered:

- The process for preparing the Annual Report, including a steering committee, the core team, and instructions to contributors.
- Written representations from management in respect of the business reviews, sustainability, principal risks and financial statements.
- The completion of a regulatory compliance checklist.
- All reviews performed (including the Board, the ELT and KPMG). We ensured that all feedback was appropriately reflected.

## Financial reporting: key areas of focus

Key issues	Matters considered	Outcome
<b>Indications of impairment of the carrying values of intangible assets in Civil Aerospace</b>	The assessments of the value-in-use of the principal intangible assets, including the key assumptions and estimates on which they are based.*	We are satisfied that there were no indications of impairment.
<b>The estimates used in accounting for long-term contractual arrangements in Civil Aerospace are appropriate</b>	The basis on which the estimates are prepared and, in particular, how the inherent uncertainties are reflected in these estimates. In particular: <ul style="list-style-type: none"> <li>• Lifecycle cost improvements.</li> <li>• Long-term exchange rates.</li> </ul>	We are satisfied that the process produces balanced estimates, with appropriate consideration of the uncertainties.  The Civil Aerospace business continued to review the estimates and compare them to the actual outcome. Based on this actual experience, which was generally better than previously assumed, this led to a revision to the estimates, which resulted in a net profit benefit of £90m.  The estimates for long-term exchange rates were reviewed against third-party forecasts. This led to a reduction in these forecasts, resulting in a one-off profit benefit of £35m.
<b>The sale of engines to joint ventures</b>	The basis for assessing the selling price.	We are satisfied that the price represents the fair value of the engines.
<b>Impairment of goodwill in Marine</b>	The forecasts for each of the relevant cash generating units, including the key assumptions on which they are based.*	We are satisfied with the analysis and that impairments should be recognised where these did not support the carrying value of the goodwill.
<b>Whether there is any impairment to the carrying value of the goodwill in Rolls-Royce Power Systems AG</b>	The business plan and the underlying assumptions on which it is based.*	We are satisfied that, although the headroom has reduced as a result of the current trading environment, there is no indication of impairment.
<b>Warranty and contractual provisions in Marine</b>	The basis for specific warranty and contractual provisions.	We are satisfied that the estimates reflect a balanced assessment of the likely outcome.
<b>Post-retirement benefits</b>	The impact of the restructuring of the five UK defined benefit schemes.	We are satisfied that the impacts are reflected in accordance with IAS 19 <i>Employee Benefits</i> , in particular their recognition in the Income Statement and Other Comprehensive Income.  We were also satisfied that the exclusion of the settlement and related costs of £306m from the underlying results is appropriate (see page 157).
<b>Deferred tax assets (DTAs)</b>	The recognition of DTAs arising from tax losses in the UK and Norway.	Based on the Group's forecasts, we are satisfied that it is appropriate to continue to recognise the UK DTAs, and that, given the current uncertainty in the oil & gas market, those in Norway should cease to be recognised.

\* See note 9 to the financial statements for further details of the assumptions.

## Sector audit committees

In support of our work, each of the Group's businesses and principal functions has its own sector audit committee, each of which comprises senior finance personnel and is attended by business and functional leaders and KPMG. These committees:

- Allow the review of accounting policies and their consistent application, risk management, internal systems and issues arising at a more detailed level.
- Give us further assurance as to the extent of management control and accountability.
- Promote the governance culture within the Group.
- Inform areas for further consideration at our meetings.

All the committees meet twice a year to consider the accounting policies, judgements and estimates and the internal control environment. They are chaired by the Director of Internal Audit, who then reports to us. During the year, both Irene Dorner and I attended sector audit committee meetings.

In 2016, the sector audit committees have focused on the improvement project for internal control and risk management processes.

## Risk and control environment

### Assessment of principal risks

Risk management is a fundamental and integral part of how we work. All risks are managed through a risk management system (RMS) (described on page 48) in accordance with policies and guidance established by the Director of Risk and his team and approved by the Board.

Judgement is required in evaluating the risks facing the Group in achieving its objectives, in determining the risks that are considered acceptable, in determining the likelihood of those risks materialising, in identifying the Group's ability to reduce the incidence and impact on the business of risks that do materialise, and in ensuring the costs of operating particular controls are proportionate to the benefit provided.

On behalf of the Board, we monitored the RMS. During 2016, we focused on the continued implementation of the enhancements identified in 2015. These are described in more detail on page 48.

This process and the principal risks arising (see page 50) then formed the basis for our assessment of the going concern and viability statements which are discussed later in this report. The processes are designed to identify and manage, rather than eliminate, the risk of failure to achieve our business objectives.

We satisfied ourselves that the processes for identifying and managing the principal risks are appropriate and that all risks and mitigating actions had been subject, during the year, to a detailed review by the Board or an appropriate committee. Based on this and on our other activities, including consideration of the work of internal and external audit and presentations from senior management of each business which include risk management, we reported to the Board that a robust assessment of the principal risks facing the Company had been undertaken.

### Review of principal risks

We considered in detail the principal risks that have been allocated to us by the Board. We reviewed:

#### Business continuity

- The generic design of the Civil Aerospace supply chain and the risks that arise due to constraints (such as single sources of supply).
- The management of these risks using business continuity processes and controls.
- Improvements planned to enhance the visibility of key risks.

#### IT vulnerability

- The changing threat landscape (in particular the Nation State threat has diminished, but there has been an increase in targeting of supply chain, joint ventures and other partners, and a very significant increase in organised crime threats).
- How the principal risks are being tracked and managed.
- Improvement activities over the past year.
- Plans for the future.

#### Market and financial shock

- The Group's exposure to market risks (in particular: exchange rates, oil prices, interest rates, liquidity, credit risk reductions in air travel or other disruption to customers' operations).
- The Group's policies, procedures and controls for identifying, managing and mitigating these risks, in particular through the Financial Risk Committee which meets quarterly, chaired by the Chief Financial Officer.

We are satisfied that appropriate procedures are in place to monitor and manage these risks.

#### Internal control

The Board has overall responsibility to the shareholders for the Group's system of internal control over its business and risk management processes and the risks identified through the risk management process. The Committee has responsibility for reviewing the system's operation and effectiveness.

The Group has a long-standing process for identifying risks and planning mitigating actions and for assessing the effectiveness of internal control. In assessing the Code requirements in 2015, the Group identified improvements to the existing processes. In 2016, the implementation of these improvements has continued. Our model for representing the system comprises:

- Entity-level controls covering leadership and direction from the top.
- Specific control activities, covering detailed process controls, and internal and external assurance activities.

In 2016, the Group issued a governance framework providing an overview of how internal control frameworks to manage risk in key business activities are established. This gives a framework for the entity-level controls. The Group has continued to document and assess the effectiveness of core financial controls, and we routinely review controls over the Group's principal risks, and the key risks and critical processes in each of the Group's businesses. Both the sector audit committees and this Committee also consider KPMG's observations on the Group's control environment. We noted a general improvement in the control environment, including the ongoing improvements to the controls around the accounting for long-term aftermarket contracts in Civil Aerospace referred to in the Independent auditor's report on pages 177 and 178.

The Group has also used the internal control framework as an opportunity to improve the consistency of reporting, in particular from the Group's smaller operations. We paid particular attention to internal controls over financial reporting and have implemented a wide-ranging plan to improve controls in this area.

We have conducted a review of the effectiveness of the Group's systems of risk management and internal control, including those relating to the financial reporting process, in accordance with the Code. The Group's systems of risk management and internal control have been in place throughout 2016. We consider that these existing systems, together with the enhancements made in 2016, are sufficient to meet the requirements of the Code and the FCA's Disclosure Guidance and Transparency Rules.

#### **Going concern and viability statements**

We reviewed the processes and assumptions underlying the statements set out on page 53. In particular, we considered:

- The Group's forecast funding position over the next five years.
- An analysis of impacts of severe but plausible risk scenarios, ensuring that these were consistent with the risks reviewed by the Board as part of its strategy review.
- The impact of multiple risks occurring simultaneously.
- Additional mitigating actions that Group could take in extreme circumstances.
- The current borrowing facilities in place and the availability of future facilities.

As a result, we were satisfied that the going concern and viability statements have been prepared on an appropriate basis.

#### **Internal audit**

We receive a quarterly dashboard from the Director of Internal Audit identifying key trends and findings from internal audit reports, and the resolution of actions agreed. Twice a year, we review detailed updates of significant findings. In particular, we review the nature and number of issues raised by internal audit and the time to complete the related actions. The small number of overdue actions received particular attention and the time to complete all actions has reduced, and is now in line with expectations. In November, we reviewed and approved the internal audit plan. I am confident that the plan is strongly correlated to the key risks facing the business, and we monitor changes during the course of the year.

We also receive two reports each year setting out the Director of Internal Audit's perspectives on the internal control environment. These are used to drive management responses to underlying root causes and systemic issues. Topics discussed in 2016 included: process and control design; compliance to process; data integrity; and management behaviours.

The Committee considered and reviewed the effectiveness of the Group's internal audit function, including resources, plans and performance as well as the function's interaction with management. The outcome of the 2016 review was positive and identified opportunities for ongoing improvement which have been implemented.

I meet the Director of Internal Audit privately before each meeting and on an ad-hoc basis throughout the year, as do other members of the Committee. As a whole we have a private meeting with him at least once a year. These discussions cover the activities, findings, resolution of control weaknesses, progress against the agreed plan and the resourcing of the department.

We are satisfied that the scope, extent and effectiveness of internal audit work are appropriate for the Group and that there is a sound plan for ensuring that this continues to be the case as our business progresses and risks change.

#### **External audit**

##### **2016 audit**

During the year, KPMG presented the audit strategy, which identified their assessment of the key audit risks and the proposed scope of audit work. We agreed the approach and scope of audit work to be undertaken. Key risks and the audit approach to these risks are discussed in the Independent auditor's report (pages 176 to 182), which also highlights the other significant risks that KPMG drew to our attention.

As part of the reporting of the half-year and full-year results, in July 2016 and February 2017, KPMG reported to the Committee on its assessment of the Group's judgements and estimates in respect of these risks and the adequacy of the reporting. KPMG also reported on its assessment of the Group's control environment.

We also undertook an assessment of KPMG's qualifications, expertise and resources, independence and the effectiveness of the external audit process. This included:

- A presentation to the Committee of KPMG's Quality Control Framework and Internal Quality Evaluation, the experience of the key members of the audit team and the extent of their individual involvement in the audit work. This also included KPMG's responses to matters identified by management in a survey conducted following the 2015 audit.
- Consideration of the FRC's Audit Quality Inspection (AQI) Annual Report 2015/16 on KPMG.
- The results of the AQI review of KPMG's audit of Rolls-Royce. The FRC's Audit Quality Review (AQR) team monitors the quality of audit work of UK audit firms, including inspections of a sample of audits. During 2016, the AQR reviewed the 2015 audit. The review findings noted limited areas for improvement and commended KPMG on the particularly high standard of its auditor's report. We have discussed these findings with the AQR and KPMG; KPMG's responses to the areas for improvement were incorporated into the 2016 audit work.

The Committee does not consider any of the findings to have a significant impact on KPMG's audit approach. We also reviewed the fees of the external auditor. Our conclusions were that the external audit was carried out effectively, efficiently and with the necessary objectivity and independence.

We continue to support the extended auditor's report and KPMG's approach which goes beyond the minimum requirements, providing additional clarity on the key judgements and estimates.

I meet with the lead partner prior to each meeting and the whole Committee has a private meeting with KPMG at least once a year.

#### **Re-appointment of KPMG**

The Committee reviews and makes recommendations to the Board with regard to the re-appointment of the external auditor. In doing so, we take into account auditor independence and audit partner rotation. KPMG was appointed as auditor in 1990. No contractual obligations restrict our choice of external auditor. The lead audit partner is required to rotate every five years and other key audit partners are required to rotate every seven years. Jimmy Daboo took over as lead audit partner in 2013, and will be required to rotate after the 2018 AGM. For the first time since KPMG's appointment, in 2016, we have tendered the audit for appointment in 2018, coinciding with Jimmy Daboo's rotation.

The Committee and the Board have recommended KPMG's re-appointment at the 2017 AGM.

#### **Non-audit services provided by KPMG**

In order to safeguard the auditor's independence and objectivity, we do not engage KPMG for any non-audit services except where it is work that they must, or are clearly best suited to, perform. Fees paid to KPMG for audit, audit-related and other services are set out in note 8 to the Financial Statements and summarised below.

All proposed services must be pre-approved in accordance with the non-audit services policy which is reviewed and approved annually. Above defined levels, my pre-approval is required. The Committee also reviews the non-audit fees charged by KPMG quarterly.

Non-audit related fees paid to KPMG during the year were 12% (2015: 29%) of the audit fee. Our annual review of the external auditor takes into account the nature and level of all services provided.

	2016		2015	
	£m	%	£m	%
Audit	6.8		5.9	
Audit-related <sup>1</sup>	0.6	9	1.3	22
Tax compliance	0.5	7	0.4	7
Other	0.1	1	—	—
Non-audit	1.2	17	1.7	29

<sup>1</sup> Includes £0.3m for the review of the half-year report.

Based on our review of the services provided by KPMG and discussion with the lead audit partner, we concluded that neither the nature nor the scale of these services gave any concerns regarding the objectivity or independence of KPMG.

As part of the EU audit reform, with effect from 1 January 2017, the FRC's Ethical Standard places further restrictions on auditors undertaking non-audit services. Accordingly, we have revised our policies for the engagement of the auditor to undertake non-audit services, broadly limiting these to audit-related services such as reporting to lenders and grant providers.

During the audit tender process, we also implemented additional procedures to monitor engagements with each potential future auditor to ensure that we can discontinue or transition any engagements with the new auditor as required.

#### **Audit tender**

As reported last year, we are required to appoint a new auditor no later than 2020. As planned, we tendered the audit in 2016, for the appointment of a new external auditor for the financial year 2018. The process was led by an audit tender steering group (comprising the Committee members, the Chief Financial Officer and the Director of Internal Audit and supported by Group Finance and Purchasing), which met six times from May until November. We issued a request for proposal in August 2016 to suitable, appropriately experienced candidates to participate in the tender.

The process included: provision of data on the Group operations, finances and processes; meetings with key management from the businesses and Group functions and two presentations to the Committee. In December, the Committee concluded that PwC was the preferred firm to conduct the audit engagement, judged against the selection criteria including quality of the proposed team, experience within the aerospace and defence industry, and available resources and organisation.

The Committee recommended that the Board propose, to the 2018 AGM, the appointment of PwC as the external auditor of the Company for the financial year 2018. On behalf of the Committee, I would like to thank all the candidates for the quality and professionalism of their proposals.

The Committee considers that the Company has, throughout the year ended 31 December 2016, complied with The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014.

#### **Looking forward**

During 2017, we will monitor the transition activities so that PwC can take over the audit in 2018 in a seamless manner.

We will also continue to monitor:

- The implementation of IFRS 15, focusing on the development of the supporting processes and controls.
- The key accounting judgements and estimates.
- The continuous improvements planned for the documentation of controls.
- The continuing development of the management information systems and improvements to the underlying systems and tools.

IFRS 16 *Leases* will be applicable to the Group in 2019. The Group will address its implementation during 2017, and we will review the development of these plans.

In addition to the continuing oversight by the Safety & Ethics Committee of the Company's ethics and compliance programme (see pages 105 and 106), we will monitor the Group's actions relating to risk management, internal controls and other matters relevant to the Committee that arise out of Lord Gold's recommendations, and from the agreements with prosecuting authorities.

**Lewis Booth**

**Chairman of the Audit Committee**

# Safety & Ethics Committee report



**Sir Frank Chapman**  
Chairman of the  
Safety & Ethics  
Committee

## Highlights

- Ethics and compliance improvement programmes well embedded and reaching sustainable steady state.
- Detailed review of product safety management in Marine undertaken, providing good levels of assurance.
- Key safety and ethics Group policies rolled out to Power Systems.
- Improved score in Dow Jones Sustainability Index.

In addition to its oversight role for the Board, the Committee supports management in its aim to create, promote and maintain an ethical, compliant, safety-conscious, environmentally-aware and socially-responsible culture across the Group as a means of delivering its safety and ethics goals.

## Principal responsibilities

Under its wide remit, the Committee's key responsibilities are:

- To maintain an understanding of and keep under review the Group's frameworks for the effective governance of safety and ethics and the Group's culture in these areas.
- To oversee and review annually the Group's key safety and ethics policies, including: the Global Code of Conduct, anti-bribery and corruption and export controls, product safety, HS&E and sustainability policies, and ensuring appropriate independent scrutiny of policies and practices.
- To review compliance with relevant legislation and regulations and make recommendations in key policy areas.
- To oversee training in respect of safety and ethics, including ensuring adequate arrangements exist to enable employees and contractors to raise concerns in confidence.
- To review reports on issues raised through the Ethics Line and review the results of any investigations into ethical or compliance breaches or allegations of misconduct.
- To review reports on risks in relation to products not meeting safety expectations.

- To review reports on health and safety risks and proposed actions to manage such risks.
- To review remedial actions and lessons learned in relation to material investigations.
- To review disciplinary action taken following safety and ethics concerns.
- To keep under review the key performance indicators in relation to safety and ethics.

The Committee regularly reports to the Board and refers any concerns about possible financial improprieties to the Audit Committee. Two of the four members are also members of the Audit Committee; this enables strong links to be made between the oversight of behavioural and cultural issues, and the detection and control of the consequential financial risks and implications.

The Group President, Group Director – Engineering and Technology, General Counsel, Director of Risk and other senior safety and risk executives attend Committee meetings. Lord Gold attended the Committee's meetings in July and December. More on Lord Gold's role and his work is on page 105.

The Committee considered its terms of reference during the year and proposed certain revisions for the Board to consider. This included: the deletion of reference to oversight of fraud policy, since fraud prevention and risk management procedures are reviewed by the Audit Committee; and minor definitional amendments to reflect the breadth of topics overseen by the Committee. The terms of reference otherwise remained appropriate.

## 2016 overview

### Introduction

The Committee assists the Board in fulfilling its oversight responsibilities in respect of safety and ethics matters, which include:

- Product safety.
- HS&E (occupational health, process safety, asset integrity, personal security and the environment).
- Sustainability.
- Ethics (business ethics, anti-bribery and corruption, data privacy and export controls compliance).

The Committee has been allocated responsibility on behalf of the Board for overseeing the Group's principal risks of product failure and compliance (see pages 50 and 52). These topics form a core part of discussions at our meetings.

## At a glance

Area of focus	Matters considered	Outcome
<b>Ethics and compliance</b>	Progress with ethics and compliance improvement programme.	Continuing very good progress made in implementing plans and Lord Gold's independent recommendations. Lord Gold relayed his views to the Committee from his participation in employee focus groups at various locations during 2016. Ethics and compliance KPIs established.
	Monitoring deployment of anti-bribery and corruption (ABC) policies.	Global ABC policies adopted and published by Power Systems after approval by works councils.
	Promotion of an ethical culture, and handling of cases of unethical behaviour.	Employee performance assessments now include review of behaviours including creating trust and being a positive role model for ethical behaviour, fairness and integrity.
	Review of maturity of ethics and compliance processes and policies at joint ventures.	Mixed picture highlighting areas where more focus is required to increase maturity.
	Impact of local ethics advisers (LEAs).	Met with LEAs to discuss their experiences. Presence of LEAs means more concerns being raised and dealt with locally.
	Use of commercial intermediaries and advisers.	Significant reduction in number of commercial intermediaries and advisers used.
<b>Product safety</b>	Response to the General Data Protection Regulations.	Application made to the Information Commissioner's office for Binding Corporate Rules.
	Product safety incidents in service and the Group's response. Annual review of product safety metrics and the product failure principal risk dashboard.	Satisfactory response to incidents and support to investigations. Product failure risk can never be fully mitigated but the Group's exposure is well-managed and reducing through better identification and controls.
	Management of personal and product safety risks during transformation and organisational changes. The role and impact of culture on product safety.	Consistent, regular messaging from senior leadership and the safety teams serve to keep safety front of mind to reduce risk. Expected cultural safety behaviours defined and endorsed. Plans are in place to drive improvement where gaps identified.
	The product safety policy, elements of the product safety assurance framework and aspects of safety management systems.	The framework and systems are robust and provide appropriate governance and accountability.
<b>Sustainability</b>	Workshop on product safety in Marine, followed by visit to facilities in Norway.	The Marine business has made significant improvements in its governance of product safety, the maturity of its processes and the embedding of its safety culture.
	Consideration of Modern Slavery Act disclosure requirements, and the mechanism for imposing assurance requirement on suppliers.	We reviewed and strengthened the policy and processes relating to human rights and facilitated the disclosure statement that will be required in 2017.
<b>Travel security</b>	The Group's Dow Jones Sustainability Index submission and results.	Improved score versus 2015 and industry-best scores in several categories.
	Review of travel security programme.	Robust and well-managed arrangements are in place.

Area of focus	Matters considered	Outcome
<b>Health, safety &amp; the environment (HS&amp;E)</b>	Review of HS&E risk profile, total reportable injuries (TRI) performance reports, learning from incidents and global HS&E improvement programmes.	Risk profile updated to reflect identified risks and their likelihood. TRI performance improved in all businesses, though remains high in Power Systems. We reviewed Power Systems' improvement plan concluding that it was robust. New standards and procedures on control of contractors are being implemented and electrical safety will remain an area of focus.
	Review of HS&E governance as adjusted following removal of the Aerospace and Land & Sea divisions in January 2016.	Governance changes considered appropriate for new organisational structure.
	Review of HS&E strategy and assurance.	We endorsed the HS&E strategy. HS&E assurance methodology was adapted to improve quality of audits.
	Implementation of new HS&E management system.	Progress is being made which will facilitate better reporting and shared learning across the Group.
	HS&E learning and development.	Strong crossover between product safety and HS&E could be better exploited. The new human resources system will allow training requirements to be added to employees' work plans.
	Visit to the Group's Precision Castings Facility examining HS&E management of processes.	HS&E methodologies and good practices common with other facilities were observed.

## Ethics and compliance

Ethics and compliance are at the heart of the Group's culture and are part of everything that we do at Rolls-Royce. There is continued recognition that the Board and the ELT must demonstrate leadership around ethical and behavioural standards. The Board is determined to ensure that ethical conduct remains embedded in the culture of the business. The Committee plays a vital role in providing dedicated focus and attention on behalf of the Board to this critical area.

### Regulatory investigations

Following a lengthy period of investigation into allegations of bribery and corruption, in January 2017 the Group entered into deferred prosecution agreements with the UK Serious Fraud Office and the US Department of Justice, and a leniency agreement with the Brazilian authority, MPF (together the DPAs). During 2016, the Committee was kept informed on the ongoing status of the investigations and developments and discussions with the relevant authorities. We fully supported and endorsed the Group's approach of full and open co-operation with the investigations, for which the Group was highly praised in the judgment of Lord Justice Leveson.

### Lord Gold's work

Lord Gold, a leading expert on regulatory compliance matters, was appointed by the Group in 2013 to conduct an independent review of its ethics and compliance procedures and to provide oversight of the Group's ethics and compliance improvement programme, under which the recommendations contained in his interim reports to the Company in 2013 and December 2014 have been implemented.

As part of his work, Lord Gold has reviewed the Group's policies and procedures, met with many members of management, the ethics and compliance teams, and a wide range of other employees to gain

an understanding of the extent to which ethics and compliance awareness and adherence to the Group's Global Code of Conduct (Global Code) is embedded in the Group's culture, and the robustness of the risk management, controls and assurance framework that supports this.

Lord Gold is invited to meetings of the Committee, and attended in July and December 2016. He updated us on his findings and observations to date, including insights from the latest focus groups that he held with a range of employees in different businesses across different countries. We discussed his observations and identified areas for continued focus. Lord Gold's latest report was issued to the Company in January 2017, and will be considered by the Committee during this year.

Lord Gold will continue his role as an independent specialist in 2017 and beyond, to report on findings and where appropriate advise and make recommendations to be implemented. His ongoing oversight is an important factor that led to the investigating authorities deciding not to appoint their own monitor to oversee the Group's adherence to the terms of the DPAs. We welcome Lord Gold's ongoing valuable insight and counsel as we maintain our focus on sustaining a culture of compliance and zero tolerance for unethical behaviour and misconduct.

### Our ethics and compliance programme

Over the last few years the Group has continued to invest significantly in its ethics and compliance programme. The Committee and the Group's management recognise that companies that are run ethically and have a strong compliance culture are sustainable, enabling profitable and long-term partnerships with their customers, suppliers and investors.

We have continued to oversee significant progress in the Group's ethics and compliance improvement programme throughout 2016. Having established the programme, there was increased focus in 2016 on the oversight and assurance of ethics and compliance issues ensuring that 'we do what we say we do'.

The size, structure and skills of the risk function were kept under review during the year with regard to the required resourcing to deliver and maintain the appropriate level of focus. This included a restructuring of the Power Systems' senior ethics and compliance leadership to allow more central oversight, specialist expertise and better integration.

#### **Anti-bribery and corruption (ABC) policies**

During 2016, the full suite of ABC Group policies, which had been revised in 2014 and 2015, were rolled out into the Power Systems business following approval by the local works councils, providing coverage across the entire Group for the first time.

Since the introduction of the Group's new adviser policy in 2014, all advisers engaged by the Group are rigorously vetted through the Group's advisers panel, presently comprised of the Director of Risk, Lord Gold, and a partner from an external law firm. The new adviser policy has significantly reduced the number of advisers engaged by the Group including at Power Systems which has a large network of distributors and is more reliant on the services of third parties to sell, distribute and support its products, in a similar way to automotive dealerships. In 2016, the review of Power Systems' advisers in accordance with the Group adviser policy progressed well towards completion during 2017.

#### **Ethics Line and local ethics advisers**

Ethical questions and concerns that are raised by employees and other stakeholders are recorded as contacts in the Ethics Line system, the Group's confidential reporting helpline. The total number of Ethics Line contacts marginally decreased in 2016 to 683 (2015: 729 contacts) with the number of ethical concerns discussed remaining at a similar level to last year at 428 (2015: 439 concerns). The Ethics Line oversight group continued to review cases, analyse the contact trends, focus on the root cause of reported cases and provide updates to the Committee, highlighting any high-risk cases. We share any concerns about possible improprieties in matters of financial reporting with the Audit Committee.

In December 2016, the Committee met with some of the Group's local ethics advisers (LEAs) to hear from them about their experiences and engagement with employees on ethics issues. The LEAs are appointed from the existing workforce, are trained in how to respond to ethical issues raised, and are in place to promote speaking up and tackling of ethical issues locally where appropriate to provide staff with an alternative to using the Ethics Line. At the end of 2016 there were a total of 80 LEA roles across the Group.

#### **Data privacy**

Recognising the importance of data privacy to employees, customers, suppliers and other stakeholders, the Group is investing in data privacy compliance by preparing to adopt the Binding Corporate Rules regime. We were briefed on the implications for the Group of the rules, which are due to come into force in May 2018, and reviewed the Group's plans to ensure compliance with them.

#### **Training**

The Committee attaches significant importance to regular, relevant and focused training and therefore has spent time reviewing the Group's ethics and compliance training programme including the levels of participation and feedback from the 2015 business ethics training programme. It approved the proposal for the 2016 business ethics training, built on manager-led group discussions based on real ethical dilemma scenarios. Annual ethics training is mandatory for all employees across the Group.

ABC training is mandatory for all employees who have dealings with persons outside of the Company and focused face-to-face training is provided to those employees whose roles have higher exposure to ABC risk. Monthly dilemma-based stories drawn from real cases also continued to be published on the Group's intranet during 2016 inviting employees to vote on what action they would take. Mandatory training programmes will continue in 2017.

ETHICS EMPLOYEE CERTIFICATION AND TRAINING (% OF EMPLOYEES)<sup>1,2</sup>



<sup>1</sup> 2015 certification by managers only.

<sup>2</sup> 2016 certification excludes Power Systems.

#### **Disciplinary proceedings under the Global Code of Conduct**

If an employee is found to have acted in breach of the Global Code, the Group takes appropriate action to address that breach. That action may include giving a disciplinary warning, imposing another penalty or, ultimately, terminating employment in the most serious of cases.

In 2016, there were 38 employees (2015: 33 employees) whose employment ended for reasons relating to breaches of the Global Code. An improved investigations protocol was introduced in 2016 to underpin the Global Code and the suite of ABC Group policies, and to support faster resolution of issues.

#### **Behavioural expectations linked to performance and reward**

In 2016, the Group updated its performance review process so that it provided an increased focus on behavioural expectations as a core assessment feature in all employees' formal performance reviews. The required behaviours include creating trust and a baseline by which employees will be recognised and rewarded for acting as a positive role model for ethical behaviour. From 2016, manager bonuses include an element based on what objectives managers have achieved and the behaviours they have demonstrated. The Committee welcomed this positive step as a means of embedding expectations and maintaining individuals' focus.

## Product safety

The Group recognises that its products are critical to its customers, and the people its customers serve, all over the world. As Rolls-Royce products become increasingly technologically advanced, they are expected to always be reliable and safe whenever they are used, often in harsh operating environments. Our commitment to meet this expectation is essential to the Group's business, its reputation and its sustainability. As a Committee, we draw on our collective industry and regulatory experience to oversee the Group's work in achieving this.

A key theme in 2016 was to ensure that safety of people and product remained front of mind across the workforce during the Group's current period of transformation. We discussed this topic regularly during the year and reviewed the risk implications for safety of organisational and role changes, and the lack of focus that can emerge in times of uncertainty and change. We were pleased to see that regular and clear communications, including videos from senior leaders and poster campaigns, were taking place in order to reinforce these messages.

We discussed and endorsed a set of expected behaviours that will promote and strengthen a culture where safety is prevalent. These behaviours are aligned to many of the expectations and principles within the Group's values, the Global Code of Conduct and the product safety Group policy, as well as features of the Group's high performance culture training. Assessments against the expected behaviours have led to plans for targeted improvements.

Again this year, the Committee received detailed briefings in relation to further elements of the product safety assurance framework and safety management system. In February 2016, we reviewed the work of the product safety process council that was completed in 2015 and its plans for 2016. This body is responsible for the definition and implementation of product safety processes, process effectiveness, compliance, governance of improvements, development and training, and sharing of knowledge and best practice in the area of product safety within the Group. We also considered the role of external learning and regulation in product safety. We concluded that the framework and system remain robust and provide appropriate governance and accountability.

Rolls-Royce recognises in its product safety Group policy, reviewed annually by the Committee, that robust quality is an essential building block of product safety. In 2016, we looked at the increasing role of product quality planning which links the 'design' and 'make' parts of product safety. We also reviewed product conformity performance metrics which showed that process compliance, as indicated by audit findings, is improving. We conducted a review of the product safety training programme, and considered how the Group manages the competency of its purchasing function given the high proportion of components produced in the supply chain.

Throughout the year, we were kept regularly updated on product-related safety incidents in service and considered the potential impact on the Group and its products. This included the Airbus A400M crash near Seville, Spain in May 2015, and the Group's response to an issue detected on Trent 1000 intermediate pressure turbine (IPT) blades on All Nippon Airways' Boeing 787 aircraft.

We also reviewed the learnings from a fire arising in an engine assembled into an MTU railcar powerpack on a London Midland diesel locomotive, and had an initial briefing on the grounding of a vessel in the Scottish Hebrides.

Our work in reviewing incidents in service involved: monitoring management's progress in root cause identification; being briefed on the development and deployment of technical solutions required; testing the Group's approach in engaging with affected operators; and overseeing plans for the timely mitigation and retirement of any safety risk including through applying lessons learned back into product design. The Committee was again satisfied with the Group's response in swiftly deploying its safety assessment process to mitigate, control and monitor any potential product safety risks as they emerged. As well as incidents in service, we were also assured by seeing examples of eradication of conformity issues identified between the manufacturing and assembly phases, through design and build instruction changes.

We conducted our annual review of the product safety metrics used as a management information indicator of the performance of the safety management system. This includes trend data on the number of 'Red Tops' raised by each of the Rolls-Royce businesses, which is the document raised when a safety issue is identified on a product.

We also reviewed the Group's product failure principal risk dashboard. Although product failure can never be fully mitigated, the Group's approach to risk identification and management, assurance and controls gave us confidence that the likelihood of incidents is very low.

During the year, the Committee continued the work started in 2015 to gain a deep understanding of how the product safety management system is applied in the Marine business. This started with a half-day workshop in March 2016 with members of the Marine leadership and product safety teams, where we covered the applicable legislative and industry regulatory framework, accident prevention methodology, and each of the detailed product safety processes that underpin the product safety Group policy.

This provided a good foundation upon which we were able to examine the maturity of implementation of these processes during a visit by the Committee members in September to the Group's Marine facilities in Ålesund and Ulsteinvik, Norway. We met with local management and explored the product safety framework and processes as they apply to design, manufacturing engineering, production, assembly and testing, operator training, operational performance monitoring and servicing of some of the business' core products. It was very valuable to gain an understanding of the history and development of the business from the local teams, as well as to see up close the current and planned products and technology. This helped the Committee to understand better the journey the business had undertaken to increase the maturity of product safety governance, and the areas of continued focus for improvement.

## Sustainability

The Committee oversees and helps guide the Group's approach to sustainability, as well as monitoring progress towards goals in this area.

In September, Rolls-Royce once again improved its overall score in the Dow Jones Sustainability Index (DJSI), remaining listed in the DJSI World and Europe Indexes and achieving a bronze class award. We achieved industry best scores for corporate governance, materiality, product stewardship and human capital development, and significantly improved our scores in the social reporting and risk and crisis management categories. This recognition reflects the Group's continuing focus on public disclosure and transparency, with the breadth of the 2016 submission enhanced by the inclusion of social and HS&E data sets from Power Systems.

The Committee reviewed the Group's approach and steps being taken in preparation for the statement required to be made in 2017 under the UK Modern Slavery Act 2015. This statement outlines the steps the Group has taken to minimise the risk of slavery and human trafficking taking place in any part of the Group's supply chain. Our 2016 anti-human trafficking and modern slavery statement is available at [www.rolls-royce.com](http://www.rolls-royce.com).

We also discussed the growing importance, underpinned by developing legislation, on engaging external suppliers on sustainability issues. The Group's principal enabler for this is its Global Supplier Code of Conduct (the Supplier Code), adherence to which is mandated through contractual terms. In 2016, the Group focused on embedding sustainability and ethical considerations into sourcing and supplier selection, on strengthening understanding and application of the Supplier Code, and on monitoring compliance with it.

You can read more about the Group's approach to sustainability on pages 40 to 45.

## Travel security

In July 2016, the Committee reviewed the Group's programme and arrangements for ensuring the security of its workforce while travelling on business and were assured that these were robust and managed well.

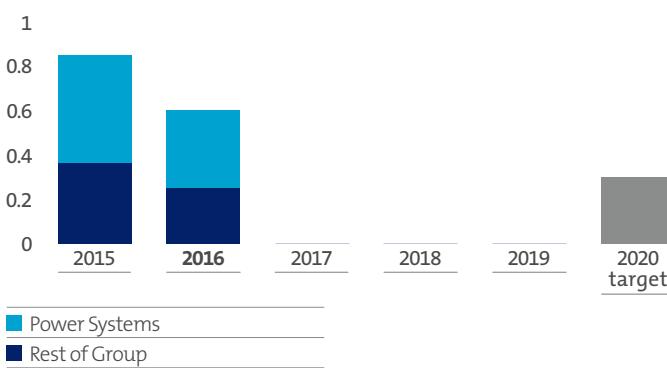
## Health, safety and the environment

During the year, we received a number of briefings and presentations as part of an annual agreed cycle of HS&E topics. This enables oversight, discussion and year-on-year monitoring of the Group's progress on key aspects of its HS&E management, performance and assurance.

The HS&E strategy and corporate strategic plan were presented to the Committee, including measures and targets aligned to delivery of the strategic themes.

In February 2016, the Committee reviewed the 2015 Group HS&E performance report and a balanced scorecard showing performance trends against the Group's published target objectives on protecting health, preventing injury and reducing environmental impact. We then looked at in-year progress in June and again in December. Overall, with recovery improvements to be made in some areas, performance remained on track towards achievement of the target objectives (see the Sustainable business section on page 42), with the exception of our 2020 targets for the total reportable injury (TRI) rate and for total solid and liquid waste reduction, which remain challenging. The TRI rate for all our businesses has however improved. From 2015, the inclusion of Power Systems' TRI data has significantly impacted the Group's overall TRI rate. Extraordinary effort has been applied to improve Power Systems' performance in this area and significant improvements were achieved in 2016, but there is more to do to drive this to a level matching that of the remainder of the Group.

TRI RATE (PER 100 EMPLOYEES)\*



\* External assurance over STEM, Energy, GHG and TRI rate data provided by Bureau Veritas. See page 183 for the sustainability assurance statement.

In December, representatives from Power Systems attended the Committee meeting to report on their HS&E recovery plans based on implementation of Group standards, policies and processes. We were assured that the team recognised the need for improvements and are actively progressing with robust plans, supported by the central Group HS&E team.

The Committee also oversees the learning from incidents process that examines root causes of significant and major incidents, identifies any systemic issues, and defines measures to mitigate against the risk of similar incidents. We focused on the global improvement programmes, in particular on electrical safety, infrastructure integrity and control of contractors which continue to be higher risk areas for the Group contributing to several serious incidents in the year. The implementation of new Group-wide control standards and the continued use of HS&E bulletins are expected to contribute to better risk identification and hazard and incident reduction in these and other areas.

The Group's HS&E experts also provided updates to the Committee during the year on the HS&E improvement programme for field services, and on the wellbeing element of the occupational health strategy. The Committee was satisfied that good progress was being made on these programmes.

We conducted an annual review of HS&E governance, which includes a rolling calendar of executive level reviews. The governance structure was adapted following the removal of the Aerospace and Land & Sea divisional structures from the start of 2016. We concluded that this remained satisfactory.

The Committee examined the HS&E Group risk profile twice in the year, which remained largely stable against the previous reporting period. We reviewed the steps taken to contain known issues and to mitigate against the effects of future emerging risks. We were also briefed on a revised approach to corporate HS&E auditing and assurance, which had been adapted to make this more focused, effective and efficient.

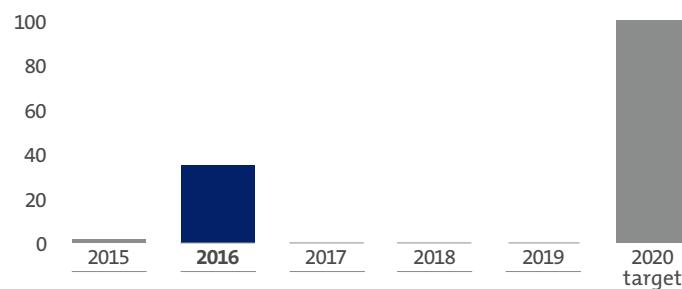
The Committee reviewed the overall HS&E learning and development programme, and were satisfied that a comprehensive enhancement of the programme through standardised global HS&E training had been endorsed and was underway. This included working with a selected training provider to produce new courses to close identified gaps, as well as making existing modules available in more languages.

In October, a Group-wide HS&E week was held with all employees encouraged to take part in activities and discussions, with very positive feedback having been received.

In December, we received an update on implementation of the Group's new HS&E management system, which provides more capability to support risk identification and reporting. This is being deployed across all of the businesses.

We also maintained our oversight of the Group's occupational health strategy, with further increase in the level of focus and resources being applied in promoting health risk management, resilience and wellbeing among the workforce. We are committed to creating workplaces that enhance the wellbeing of our people. At the end of 2016, 35% of our sites have achieved a LiveWell Award, recognising the steps they have taken to create an environment that supports employee wellbeing, where our people are motivated and enabled to make healthy choices and lead healthier lives.

#### LIVEWELL SITE ACCREDITATION (%)<sup>1</sup>



SEE FURTHER HS&E KPIs ON PAGES 42 AND 44

#### Looking forward

The Group continues to have a high degree of focus on the management of product safety, peoples' health and safety, environmental, ethics and compliance risks, with constant improvements being sought. With sustained support from senior leadership and the central expert teams, there is encouraging evidence that consideration and awareness of these topics is becoming ever more a part of everyday life for the Group's employees. We observe a growing peer culture of being curious, speaking up and challenging any potentially unsafe, unhealthy, unethical or wasteful behaviour. The Committee and I look forward to supporting and seeing this culture develop in 2017 and beyond.

In particular, the Committee will oversee the implementation of all outstanding recommendations made by Lord Gold and monitor compliance with the Group's obligations under the DPAs.

**Sir Frank Chapman**  
Chairman of the Safety & Ethics Committee

# Science & Technology Committee report



**Sir Kevin Smith**  
Chairman of the  
Science & Technology  
Committee

## Highlights

- Review of small modular reactor nuclear technology.
- Review of technology acquisition process.
- Review of Advance3, UltraFan and MTU Series 5000 programmes.
- Visit to University Technology Centres in Nottingham, UK.
- Detailed briefing on manufacturing R&T strategy and programme.
- Visit to facilities in Indianapolis, US and Coventry, UK to review manufacturing technologies.

## Principal responsibilities

The remit of the Committee is to:

- Review the strategic direction of the Group's research, technology and development activities.
- Provide assurance that significant trends in science, technology, software and data are identified and incorporated into management plans.
- Assist the Board in its oversight of major R&D investment and provide assurance on its competitiveness and adequacy.
- Oversee the effectiveness of key engineering and technology processes and operations, including delivery of major product development and technology programmes, intellectual property management and interactions with professional and academic institutions.

- Provide assurance on the identification and management of key technological risks.
- Oversee processes for ensuring effective resourcing and development of required technological capability and skills.
- Conduct visits to research and development facilities.
- Ensure dialogue with the Group's engineering and technology leaders and employees.
- Review industry and scientific benchmark data and best practices.
- Review and consider any other topics or risks appropriate to the overall remit of the Committee as delegated by the Board.

The Group President, Director – Engineering & Technology and other senior engineering and technology executives attend the Committee meetings.

## At a glance

Area of focus	Matters considered	Outcome
<b>Technology acquisition process 2016 outcome</b>	How the Group develops and acquires new technology, and the outcome of the process during 2016.	The technology process was appropriate and supported the technology development strategy of the businesses.
<b>Technology deep dive reviews</b>	The Committee received briefings on key technologies for small modular reactors (SMRs), and on required manufacturing capabilities and potential partnerships.	The Group's core nuclear technologies and potential partners position it well to address SMR opportunities, and the Group is focused on developing and deploying competitive manufacturing solutions.
<b>New product programme reviews</b>	Status of the Advance3, UltraFan and MTU Series 5000 programmes.	These programmes will bring a step-change in technology to key products enhancing their efficiency and effectiveness.
<b>University Technology Centres (UTCs)</b>	Review of the UTCs' role in partnering with Rolls-Royce, and tour of the work of the Gas Turbine Transmission Systems and Manufacturing Technology UTCs at Nottingham, UK.	The UTC model is highly beneficial in supporting R&D by leading academics in key technology areas for improving the Group's tools and processes and for application in future products.
<b>Manufacturing technology</b>	As well as the visit to the Nottingham UTCs, review of manufacturing technology strategy and development programme, including visits to facilities in Indianapolis, US and the Manufacturing Technology Centre at Coventry, UK.	The manufacturing technology strategy and programme are well defined across the businesses and there are visible signs of new technologies starting to be deployed.

## 2016 overview

### Introduction

The Group invests more than £1 billion each year in R&D to enable it to conceive, design and deliver world-class technology that meets customers' current and future needs. The Committee was established by the Board to provide dedicated focus and support to this key area of the business especially in helping with the formulation of strategic direction. It is the aim of the Committee to provide high-level oversight and assurance of the Group's scientific and technological strategy, processes and investments.

### Work of the Committee in 2016

In 2016, the Committee focused on deepening our understanding of some of the Group's existing and developing core technologies differentiators and enablers, and on reviewing critical technology programmes. These technologies help differentiate us from our competitors and enable us to meet customers' needs. We covered technologies deployed inside the Group's products as well as technologies that support their design and manufacture.

In May, the Committee undertook a review with the Group's experts of the technology capabilities necessary to address SMR opportunities. The Group has decades of experience in the design and manufacture of small nuclear-powered propulsion plants for the UK Royal Navy's submarine fleet. We also have extensive knowledge of civil nuclear reactor technology, components and systems through our instrumentation & controls and nuclear services businesses. These factors, together with proven expertise in high-volume, high-tech precision manufacturing through the aerospace businesses, provide the Group with a very strong and credible technology proposition. The Committee therefore supported the Group's initial investment in progressing the SMR opportunity as the UK Government considers its future energy options to meet projected demand.

We received a briefing on the new 'innovation accelerator' network introduced across the Group to engage our people worldwide enabling them to turn ideas into value-generating activities.

The Committee visited two UTCs at Nottingham, UK. The Group's established global network of UTCs enables long-term funded research as well as close contact with world-class academic institutions and access to leading talent and innovation in key engineering and technology disciplines.

We first met with researchers and staff at the Gas Turbine Transmissions Systems UTC where we were shown some of the expert work being undertaken in advanced fluid mechanics. This enables the modelling of fluid flow and heat transfer in complex oil flows within the gas turbine core and transmissions architectures, and analysis of the behaviours of seals, shafts, bearings and support structures in different conditions. This work impacts directly on the development of new engines in considering material strength and wear at high temperatures.

We then moved on to the UTC in Manufacturing Technology where we saw some of the innovative work being undertaken in the fields of robotic inspection and repair, and in miniature machine tools. It is easy to see the potential this brings for enabling high-precision work in restricted space environments such as within engines.

The Committee was hugely impressed by the quality of work undertaken at the UTCs and the strength of the relationships. We were also satisfied with arrangements for the protection and management of intellectual property.

At our meeting in July, we examined progress with the Group's research and technology programmes, reviewing the 2016 technology themes and master programmes for each of the Group's businesses, and the planned sources of R&T co-funding. We conducted a review of the key technologies within the Advance and UltraFan programmes, including the Rolls-Royce Power Gearbox, which are driving changes to engine architecture and component technologies to form the core of the next generation of more efficient Rolls-Royce aero engines. Representatives from Rolls-Royce Power Systems also briefed us on the core technologies planned for the new MTU Series 5000 engine programme and the modular nature of its design.

The Committee endorsed the Group's critical programmes and will continue to keep them, and their key contributing technologies, under review.

The Committee was updated in July on the Group's technology strategy and programme in the field of manufacturing technology. This is an important area as the Group drives operational improvements in the near-term, as well as positioning the Group competitively for the future. We were briefed on the activities undertaken through the Group's global advanced manufacturing research centre network, and the particular areas of focus within each of the Group's businesses. This helped provide context for the Committee's visit in September to some of the Group's facilities in Indianapolis, US where we were briefed on advanced technology across several of the Group's businesses and programmes. This included: technology used in the Advance1 engine core architecture; development by LibertyWorks of engine infrared suppression technology; a review of CastBond technology which combines cooling and manufacturing techniques; and a briefing on the Group's investment in ceramic matrix composites (CMC) in Cypress, California to serve as a dedicated centre for CMC R&D to support the development of next-generation turbine materials.

During this visit, we also received briefings on advanced methods to reduce cost and shorten schedules for development programmes, and on repair technologies that decrease lifecycle cost and enhance fleet readiness. The LibertyWorks team provided a briefing on some of their areas of technology development. This included: engine infrared signature suppression technology that provides a benefit to defence customers; integrated power and thermal management; and other aspects of improving the Group's electrical capability in all business sectors. The DARPA VTOL X-Plane project was highlighted, that will lead to a demonstration of a distributed turbo-electric powered vertical take-off/landing aircraft.

In December, the Committee visited the Manufacturing Technology Centre (MTC) at Coventry, UK, the largest of a network of advanced manufacturing research centres. Here, we saw close up how advanced technologies, in particular in additive layer manufacturing and laser welding, are being applied to bring step-change efficiency improvements to the production process. We were particularly impressed by the capability of the MTC personnel, a team of industrially experienced process experts who, together with the world-class facilities at the MTC, provide fantastic capability in manufacturing solutions to Rolls-Royce and others.

I was delighted to attend this year's Rolls-Royce Science Prize finals. This flagship annual event at the London Science Museum gives recognition and reward to teachers that have undertaken innovative work in implementing science teaching ideas in their schools and colleges across the UK. The passion and enthusiasm of all of the finalists for their projects was evident, and their achievements in inspiring the next generation to pursue learning in STEM subjects in novel and engaging ways were truly deserving of this recognition.

### Looking forward

The Committee will continue to support management in overseeing the Group's technology strategy and its response to emerging technology risks and opportunities. In December 2016, the Committee was allocated responsibility for overseeing management of the Group's new principal risk of disruptive technologies and business models, which we will be examining more in 2017.

Building on the understanding we have developed on the Group's technologies and plans, in 2017, the Committee expects to have a particular focus on how they contribute to sustaining competitiveness in our key business areas. We will also review the impact of transformation on our R&T strategy. We are excited by the possibilities ahead to build on the Group's strengths and harness new technologies to create and address future market opportunities.

**Sir Kevin Smith**  
Chairman of the Science & Technology Committee

### The Rolls-Royce Science Prize

The Rolls-Royce Science Prize is an annual awards programme launched in 2004 as part of the Group's continuing commitment to science education, designed to foster, recognise and reward outstanding work in science and maths teaching. It promotes innovative and sustainable strategies for teaching science and at the same time contributes to teachers' continuing professional development. Since its launch, over £1,250,000 of prize money has been awarded to over 550 schools.

Rolls-Royce works with the National STEM Learning Centre and Network, The National Centre for Excellence in Teaching Mathematics (NCETM) and the Institute of Mathematics and its Applications (IMA) to invite teachers, technicians and teaching assistants throughout the UK to submit a proposal for any science, or combined maths and science, project that meets a need in their school or college.

Up to 60 special merit awards of £1,000 are awarded by Rolls-Royce to selected schools that have submitted proposals of a very high standard. From these shortlisted schools up to six finalists receive an additional £5,000 from Rolls-Royce to develop and enhance their projects. Finalists are lent a video camera which records their progress and are aligned to a Rolls-Royce STEM Ambassador mentor to support them through to successful project completion.

The winning entrant is announced at an annual awards ceremony held at the London Science Museum, and the school receives a prize of £10,000. You can read about the 2016 finalists and their projects on the Group's website [www.rolls-royce.com](http://www.rolls-royce.com).

# Responsibility statements

## STATEMENT OF DIRECTORS' RESPONSIBILITIES IN RESPECT OF THE ANNUAL REPORT AND THE FINANCIAL STATEMENTS

The Directors, as listed on pages 54 to 57, are responsible for preparing the Annual Report and the Group and parent company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with IFRS as adopted by the EU and applicable law and have elected to prepare the parent company financial statements in accordance with UK Accounting Standards and applicable law.

Under company law, the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent company and of their profit or loss for that period.

In preparing each of the Group and parent company financial statements, the Directors are required to:

- Select suitable accounting policies and then apply them consistently.
- Make judgements and estimates that are reasonable and prudent.
- For the Group financial statements, state whether they have been prepared in accordance with IFRS as adopted by the EU.
- For the parent company financial statements, state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the parent company financial statements.
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and the parent company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent and Group's transactions and disclose with reasonable accuracy at any time the financial position of the parent company and enable them to ensure that its financial statements comply with the Companies Act 2006. They have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Directors' report, Directors' remuneration report and Corporate governance statement that complies with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Group's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

## RESPONSIBILITY STATEMENTS UNDER THE DISCLOSURE GUIDANCE AND TRANSPARENCY RULES

Each of the persons who is a Director at the date of approval of this report confirms that to the best of his or her knowledge:

- Each of the Group and parent company financial statements, prepared in accordance with IFRS and UK Accounting Standards respectively, gives a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole.
- The Strategic report on pages 2 to 53 and Directors' Report on pages 54 to 113 and pages 186 to 189 include a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.
- The Annual Report, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

By order of the Board

**Pamela Coles**  
**Company Secretary**

13 February 2017

# Financial statements

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# Consolidated income statement

For the year ended 31 December 2016

	Notes	2016 £m	2015 <sup>1</sup> £m
<b>Revenue</b>	2	<b>14,955</b>	13,725
Cost of sales		(11,907)	(10,448)
<b>Gross profit</b>		<b>3,048</b>	3,277
Other operating income	5	5	10
Commercial and administrative costs <sup>2</sup>		(2,208)	(1,070)
Research and development costs	3	(918)	(818)
Share of results of joint ventures and associates	11	117	100
<b>Operating profit</b>		<b>44</b>	1,499
(Loss)/profit on disposal of businesses		(3)	2
<b>Profit before financing and taxation</b>	2	<b>41</b>	1,501
Financing income	4	96	115
Financing costs	4	(4,773)	(1,456)
<b>Net financing</b>		<b>(4,677)</b>	(1,341)
<b>(Loss)/profit before taxation*</b>		<b>(4,636)</b>	160
Taxation	5	604	(76)
<b>(Loss)/profit for the year</b>		<b>(4,032)</b>	84
<b>Attributable to:</b>			
Ordinary shareholders		(4,032)	83
Non-controlling interests		—	1
<b>(Loss)/profit for the year</b>		<b>(4,032)</b>	84
<b>Earnings per ordinary share attributable to ordinary shareholders:</b>	6		
Basic		(220.08)p	4.51p
Diluted		(220.08)p	4.48p
<b>Payments to ordinary shareholders in respect of the year:</b>	17		
Per share		11.70p	16.37p
Total		215	301
<b>* Underlying profit before taxation</b>	2	<b>813</b>	1,432

<sup>1</sup> 2015 figures have been restated as a result of £11m of Power Systems costs previously reported in 'cost of sales', being reclassified as 'commercial and administrative costs' to ensure consistent treatment with 2016. The applicable notes have also been restated.

<sup>2</sup> In 2016, 'commercial and administrative costs' include £671m for financial penalties from agreements with investigating bodies (see note 23) and £306m for the restructuring of the UK pension schemes (see note 19).

## Consolidated statement of comprehensive income

For the year ended 31 December 2016

	Notes	2016 £m	2015 £m
<b>(Loss)/profit for the year</b>		<b>(4,032)</b>	84
<b>Other comprehensive income (OCI)</b>			
Movements in post-retirement schemes	19	495	(722)
Share of OCI of joint ventures and associates	11	(2)	–
Related tax movements	5	(179)	257
<b>Items that will not be reclassified to profit or loss</b>		<b>314</b>	(465)
Foreign exchange translation differences on foreign operations		861	(129)
Reclassified to income statement on disposal of businesses		–	1
Share of OCI of joint ventures and associates	11	(7)	(19)
Related tax movements	5	4	(2)
<b>Items that may be reclassified to profit or loss</b>		<b>858</b>	(149)
<b>Total comprehensive income for the year</b>		<b>(2,860)</b>	(530)
<b>Attributable to:</b>			
Ordinary shareholders		(2,860)	(530)
Non-controlling interests		–	–
<b>Total comprehensive income for the year</b>		<b>(2,860)</b>	(530)

# Consolidated balance sheet

At 31 December 2016

	Notes	2016 £m	2015 £m
<b>ASSETS</b>			
Intangible assets	9	5,080	4,645
Property, plant and equipment	10	4,114	3,490
Investments – joint ventures and associates	11	844	576
Investments – other	11	38	33
Other financial assets	17	382	83
Deferred tax assets	5	876	318
Post-retirement scheme surpluses	19	1,346	1,063
<b>Non-current assets</b>		12,680	10,208
Inventories	12	3,086	2,637
Trade and other receivables	13	6,956	6,244
Taxation recoverable		32	23
Other financial assets	17	5	29
Short-term investments		3	2
Cash and cash equivalents	14	2,771	3,176
Assets held for sale		5	5
<b>Current assets</b>		12,858	12,116
<b>TOTAL ASSETS</b>		25,538	22,324
<b>LIABILITIES</b>			
Borrowings	15	(172)	(419)
Other financial liabilities	17	(651)	(331)
Trade and other payables	16	(7,957)	(6,923)
Current tax liabilities		(211)	(164)
Provisions for liabilities and charges	18	(543)	(336)
<b>Current liabilities</b>		(9,534)	(8,173)
Borrowings	15	(3,185)	(2,883)
Other financial liabilities	17	(5,129)	(1,651)
Trade and other payables	16	(3,459)	(2,317)
Non-current tax liabilities		–	(1)
Deferred tax liabilities	5	(776)	(839)
Provisions for liabilities and charges	18	(216)	(304)
Post-retirement scheme deficits	19	(1,375)	(1,140)
<b>Non-current liabilities</b>		(14,140)	(9,135)
<b>TOTAL LIABILITIES</b>		(23,674)	(17,308)
<b>NET ASSETS</b>		1,864	5,016
<b>EQUITY</b>			
Called-up share capital	20	367	367
Share premium account		181	180
Capital redemption reserve		162	161
Cash flow hedging reserve		(107)	(100)
Other reserves		814	(51)
Retained earnings		445	4,457
<b>Equity attributable to ordinary shareholders</b>		1,862	5,014
Non-controlling interests		2	2
<b>TOTAL EQUITY</b>		1,864	5,016

The financial statements on pages 115 to 166 were approved by the Board on 13 February 2017 and signed on its behalf by:

**WARREN EAST**  
Chief Executive

**DAVID SMITH**  
Chief Financial Officer

## Consolidated cash flow statement

For the year ended 31 December 2016

	Notes	2016 £m	2015 £m
<b>Operating profit</b>		<b>44</b>	<b>1,499</b>
Loss on disposal of property, plant and equipment		5	8
Share of results of joint ventures and associates	11	(117)	(100)
Dividends received from joint ventures and associates	11	74	63
Amortisation and impairment of intangible assets	9	628	432
Depreciation and impairment of property, plant and equipment	10	426	378
Impairment of investments	11	—	2
Increase/(decrease) in provisions		44	(151)
(Increase)/decrease in inventories		(161)	63
Decrease/(increase) in trade and other receivables		54	(836)
Accruals for financial penalties from agreements with investigating bodies		671	—
Other increase in trade and other payables		234	242
Cash flows on other financial assets and liabilities held for operating purposes		(608)	(305)
Net defined benefit post-retirement cost recognised in profit before financing	19	510	213
Cash funding of defined benefit post-retirement schemes	19	(271)	(259)
Share-based payments	21	35	5
Net cash inflow from operating activities before taxation		1,568	1,254
Taxation paid		(157)	(160)
<b>Net cash inflow from operating activities</b>		<b>1,411</b>	<b>1,094</b>
<b>Cash flows from investing activities</b>			
Additions of unlisted investments	11	—	(6)
Additions of intangible assets	9	(631)	(408)
Disposals of intangible assets	9	8	4
Purchases of property, plant and equipment		(585)	(487)
Government grants received		15	8
Disposals of property, plant and equipment		8	33
Acquisitions of businesses	25	(6)	(5)
Disposal of discontinued operations		—	(121)
Disposals of other businesses	25	7	2
Increase in share in joint ventures	11	(154)	—
Other investments in joint ventures and associates	11	(30)	(15)
Cash and cash equivalents of joint ventures reclassified as joint operations		5	—
<b>Net cash outflow from investing activities</b>		<b>(1,363)</b>	<b>(995)</b>
<b>Cash flows from financing activities</b>			
Repayment of loans		(434)	(54)
Proceeds from increase in loans and finance leases		93	1,150
Capital element of finance lease payments		(4)	(1)
<b>Net cash flow from (decrease)/increase in borrowings and finance leases</b>		<b>(345)</b>	<b>1,095</b>
Interest received		14	5
Interest paid		(84)	(58)
Interest element of finance lease payments		(2)	(2)
(Increase)/decrease in short-term investments		(1)	5
Issue of ordinary shares (net of expenses)		1	32
Purchase of ordinary shares – share buyback		—	(433)
Purchase of ordinary shares – other		(21)	(2)
Redemption of C Shares		(301)	(421)
<b>Net cash (outflow)/inflow from financing activities</b>		<b>(739)</b>	<b>221</b>
<b>Change in cash and cash equivalents</b>		<b>(691)</b>	<b>320</b>
<b>Cash and cash equivalents at 1 January</b>		<b>3,176</b>	<b>2,862</b>
Exchange gains/(losses) on cash and cash equivalents		286	(6)
<b>Cash and cash equivalents at 31 December</b>		<b>2,771</b>	<b>3,176</b>

## Consolidated cash flow statement continued

For the year ended 31 December 2016

	2016 £m	2015 £m
<b>Reconciliation of movements in cash and cash equivalents to movements in net debt</b>		
Change in cash and cash equivalents	(691)	320
Cash flow from decrease/(increase) in borrowings and finance leases	345	(1,095)
Cash flow from increase/(decrease) in short-term investments	1	(5)
<b>Change in net debt resulting from cash flows</b>	<b>(345)</b>	<b>(780)</b>
Net debt (excluding cash and cash equivalents) of joint ventures reclassified as joint operations	(9)	–
Exchange gains on net debt	240	3
Fair value adjustments	(345)	45
<b>Movement in net debt</b>	<b>(459)</b>	<b>(732)</b>
Net debt at 1 January excluding the fair value of swaps	(124)	608
<b>Net debt at 31 December excluding the fair value of swaps</b>	<b>(583)</b>	<b>(124)</b>
Fair value of swaps hedging fixed rate borrowings	358	13
<b>Net debt at 31 December</b>	<b>(225)</b>	<b>(111)</b>

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

	At 1 January 2016 £m	Funds flow £m	Reclassification of joint ventures to joint operations £m	Exchange differences £m	Fair value adjustments £m	Reclassifications £m	At 31 December 2016 £m
Cash at bank and in hand	662	96	5	109	–	–	872
Money-market funds	783	(260)	–	29	–	–	552
Short-term deposits	1,731	(532)	–	148	–	–	1,347
<b>Cash and cash equivalents</b>	<b>3,176</b>	<b>(696)</b>	5	286	–	–	<b>2,771</b>
Short-term investments	2	1	–	–	–	–	3
Other current borrowings	(417)	350	(9)	(24)	–	(69)	(169)
Non-current borrowings	(2,833)	(1)	–	(11)	(345)	69	(3,121)
Finance leases	(52)	(4)	–	(11)	–	–	(67)
<b>Net debt excluding fair value of swaps</b>	<b>(124)</b>	<b>(350)</b>	<b>(4)</b>	240	(345)	–	<b>(583)</b>
Fair value of swaps hedging fixed rate borrowings	13				345		358
<b>Net debt</b>	<b>(111)</b>	<b>(350)</b>	<b>(4)</b>	240	–	–	<b>(225)</b>

## Consolidated statement of changes in equity

For the year ended 31 December 2016

	Notes	Attributable to ordinary shareholders							Non-controlling interests (NCI) £m	Total equity £m	
		Share capital £m	Share premium £m	Capital redemption reserve £m	Cash flow hedging reserve <sup>1</sup> £m	Other reserves <sup>2</sup> £m	Retained earnings <sup>3</sup> £m	Total £m			
<b>At 1 January 2015</b>		376	179	159	(81)	78	5,671	6,382	5	6,387	
Profit for the year	—	—	—	—	—	—	83	83	1	84	
Foreign exchange translation differences on foreign operations	—	—	—	—	(128)	—	(128)	(128)	(1)	(129)	
Reclassified to income statement on disposal of businesses	—	—	—	—	1	—	1	1	—	1	
Movement on post-retirement schemes	19	—	—	—	—	—	(722)	(722)	—	(722)	
Share of other comprehensive income of joint ventures and associates	11	—	—	—	(19)	—	—	(19)	—	(19)	
Related tax movements	5	—	—	—	—	(2)	257	255	—	255	
<b>Total comprehensive income for the year</b>		—	—	—	(19)	(129)	(382)	(530)	—	(530)	
Arising on issues of ordinary shares	—	—	1	—	—	—	—	1	—	1	
Issue of C Shares <sup>4</sup>	17	—	—	(430)	—	—	2	(428)	—	(428)	
Redemption of C Shares	17	—	—	423	—	—	(423)	—	—	—	
Ordinary shares purchased – share buyback <sup>5</sup>	—	—	—	—	—	—	(433)	(433)	—	(433)	
Ordinary shares cancelled <sup>5</sup>	20	(9)	—	9	—	—	—	—	—	—	
Ordinary shares purchased – other	—	—	—	—	—	—	(2)	(2)	—	(2)	
Share-based payments – direct to equity <sup>6</sup>	—	—	—	—	—	—	30	30	—	30	
Transactions with NCI	—	—	—	—	—	—	—	—	(3)	(3)	
Related tax movements	5	—	—	—	—	—	(6)	(6)	—	(6)	
<b>Other changes in equity in the year</b>		(9)	1	2	—	—	(832)	(838)	(3)	(841)	
<b>At 1 January 2016</b>		367	180	161	(100)	(51)	4,457	5,014	2	5,016	
Loss for the year	—	—	—	—	—	—	(4,032)	(4,032)	—	(4,032)	
Foreign exchange translation differences on foreign operations	—	—	—	—	—	861	—	861	—	861	
Movement on post-retirement schemes	19	—	—	—	—	—	495	495	—	495	
Share of other comprehensive income of joint ventures and associates	11	—	—	—	(7)	—	(2)	(9)	—	(9)	
Related tax movements	5	—	—	—	—	4	(179)	(175)	—	(175)	
<b>Total comprehensive income for the year</b>		—	—	—	(7)	865	(3,718)	(2,860)	—	(2,860)	
Arising on issues of ordinary shares	—	—	1	—	—	—	—	1	—	1	
Issue of C Shares <sup>4</sup>	17	—	—	(301)	—	—	1	(300)	—	(300)	
Redemption of C Shares	17	—	—	302	—	—	(302)	—	—	—	
Ordinary shares purchased	—	—	—	—	—	—	(21)	(21)	—	(21)	
Share-based payments – direct to equity <sup>6</sup>	—	—	—	—	—	—	30	30	—	30	
Related tax movements	5	—	—	—	—	—	(2)	(2)	—	(2)	
<b>Other changes in equity in the year</b>		—	—	1	1	—	—	(294)	(292)	—	(292)
<b>At 31 December 2016</b>		367	181	162	(107)	814	445	1,862	2	1,864	

<sup>1</sup> See accounting policies note 1.

<sup>2</sup> Other reserves include a merger reserve of £3m (2015: £3m, 2014: £3m) and a translation reserve of £811m (2015: £(54)m, 2014: £75m).

<sup>3</sup> At 31 December 2016, 6,854,216 ordinary shares with a net book value of £56m (2015: 5,894,064, 2014: 14,561,097 ordinary shares with net book values of £52m and £129m respectively) were held for the purpose of share-based payment plans and included in retained earnings. During the year, 1,955,390 ordinary shares with a net book value of £17m (2015: 10,892,026 shares with a net book value of £98m) vested in share-based payment plans. During the year, the Company acquired 165,542 (2015: 224,993) of its ordinary shares via reinvestment of dividends received on its own shares and purchased 2,750,000 (2015: 2,000,000) of its ordinary shares through purchases on the London Stock Exchange.

<sup>4</sup> In Rolls-Royce Holdings plc's own financial statements, C Shares are issued from the merger reserve. 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.

<sup>5</sup> Following the completion of the sale of the Energy business to Siemens on 1 December 2014 and further to the announcement on 19 June 2014 of a £1bn share buyback, the Company put in place a programme to enable the purchase of its ordinary shares. The aim of the buyback was to reduce the issued share capital of the Company, helping enhance returns for shareholders. In the year to 31 December 2015, 46,016,303 shares were purchased at an average price of 937p. 44,016,303 of these shares were cancelled and 2,000,000 were retained for use in share-based payment programmes. On 6 July 2015, the Company announced that the share buyback programme had been curtailed at the to-date total of £500m.

<sup>6</sup> Share-based payments – direct to equity is the net of the credit to equity in respect of the share-based payment charge to the income statement and the actual cost of shares vesting, excluding those vesting from own shares.

# Notes to the consolidated financial statements

## 1 Accounting policies

### THE COMPANY

Rolls-Royce Holdings plc (the 'Company') is a company domiciled in the United Kingdom. The consolidated financial statements of the Company for the year ended 31 December 2016 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 European Union (EU) regulations, these financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), as adopted for use in the EU effective at 31 December 2016 (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 167 to 169 and the accounting policies in respect of Company financial statements are set out on page 168.

These 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 53.

The consolidated financial statements are presented in sterling which is the Company's functional currency.

The preparation of 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 financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

### KEY AREAS OF JUDGEMENT

#### Introduction

The Group generates a significant portion of its revenues and profit on aftermarket arrangements arising from the installed original equipment (OE) fleet. As a consequence, the Group will often agree contractual prices for OE deliveries that take into account the anticipated aftermarket arrangements. Accounting policies reflect this aspect of the business model, in particular the policies for the recognition of contractual aftermarket rights and the linkage of OE and actual aftermarket arrangements.

When a civil large engine is sold, the economic benefits received usually far exceed the cash receivable under the contract, due to the rights to valuable aftermarket spare parts business. However, because the value of this right cannot be estimated with enough precision, accounting standards require that the revenue recognised in the accounts on sale of the engine is restricted to a total amount that results in a break even position. The amount of the revenue recognised in excess of cash receivable is recognised as an intangible asset, which is called a contractual aftermarket right (CAR).

There is only one circumstance where accounting standards require the recognition of more of the value of the aftermarket rights when an engine is sold. This occurs where a long-term aftermarket contract (generally a TotalCare agreement – TCA) and an engine sale contract have been negotiated together. In this circumstance, the part of the aftermarket rights covered by the TCA can be valued much more precisely and is recognised at the time of the engine sale through accounting for the engine sale and TCA as a single contract. Nevertheless, the accounting profit recognised is still less than the economic benefits on the sale as there will be other valuable aftermarket rights (for instance for the period beyond the TCA term or for the sale of parts which are outside the scope of the TCA) which cannot be recognised.

The Group enters into arrangements with long-term suppliers to share the risks and rewards of major programmes – risk and revenue sharing arrangements (RRSAs). The accounting policy for these arrangements has been chosen, consistent with Adopted IFRS, to reflect their commercial effect.

The key judgements in determining these accounting policies are described below.

#### Contractual aftermarket rights

On delivery of Civil Aerospace engines, the Group has contractual rights to supply aftermarket parts to the customers and its intellectual rights, warranty arrangements and, where relevant, statutory airworthiness or other regulatory requirements provide reasonable control over this supply. The Directors consider that these rights meet the definition of an intangible asset in IAS 38 *Intangible Assets*. However, the Directors do not consider that it is possible to determine a reliable fair value for this intangible asset. Accordingly, an intangible asset (CAR) is only recognised on the occasions where the contractual price of the engine is below the cost of manufacture and then only to the extent of this deficit, as this amount is reliably measurable. An equal amount of revenue is recognised at the same point. Where a long-term aftermarket contract is linked to the OE contract (see page 122), the contractual price of the engine (including amounts allocated from the aftermarket contract) is above its cost of manufacture; consequently no CAR is recognised.

## Notes to the consolidated financial statements continued

### 1 Accounting policies continued

#### Measure of performance on long-term aftermarket contracts

A large proportion of the Group's activities relate to long-term aftermarket contracts, in particular TotalCare and similar arrangements in Civil Aerospace. Under these contracts, the Group's primary obligation is to maintain customers' equipment in an operational condition and it achieves this by undertaking various activities, such as engine monitoring, line maintenance and repair and overhaul, over the period of the contract. In general, the Directors consider that the stage of performance of the contract should be by reference to the obligation to maintain an operational fleet and that this is best measured by the operation of the fleet. Accordingly, stage of performance is measured by reference to flying hours of each fleet under contract.

#### Linkage of OE and long-term aftermarket contracts

Where the key terms of a long-term aftermarket contract are substantively agreed (eg. in a term sheet) at the same time as an OE contract with the operator, the Directors consider these to be linked for accounting purposes and they are treated as a single contract, as this best reflects the overall commercial effect. Where the OE contract is not with the operator, eg. where it is with an OE manufacturer or a lessor, the contracts are not linked as they were not negotiated on a unified basis.

#### Sales of spare engines to joint ventures

Whether the sales price reflects fair value when the Group sells spare engines to a joint venture company.

#### Risk and revenue sharing arrangements

RRSAs with key suppliers (workshare partners) are a feature of our 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 revenues as a 'life of type' supplier (ie. as long as the engine remains in service). The share of development costs borne by the workshare partner and of the revenues 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. In summary, and as described below, the Directors' view is that the development and production phases of the contract should be considered separately in accounting for the RSA, which results in the entry fee being matched against the non-recurring costs incurred by the Group.

Having considered the features above, the Directors consider that there is no directly applicable IFRS to determine an accounting policy for the recognition of entry fees of this nature in the income statement. Consequently, in developing an accounting treatment for such entry fees that best reflects the commercial objectives of the contractual arrangement, the Directors have analysed these features in the context of relevant accounting pronouncements (including those of other standard setters where these do not conflict with IFRS) and have weighed the importance of each feature in faithfully representing the overall commercial effect. The most important considerations that need to be balanced are: the transfer of development risk; the workshare partner receiving little standalone value from the payment of the entry fee; and the overall effect being collaboration between the parties which falls short of being a joint venture as the Group controls the programme. Also important in the analysis is the fact that, whilst the Group and the workshare partner share risks and rewards through the life of the contract, these risks and rewards are very different during the development and production phases.

In this context, the entry fee might be considered to represent: an amount paid as an equalisation of development costs; a payment to secure a long-term supply arrangement; a purchase of intellectual property; or some combination thereof. The accounting under these different scenarios could include: recognition of the entry fee to match the associated costs in the income statement; being spread over the life of the programme as a reduction in the cost of supply during production; or being spread over the time period of the access to the intellectual property by the workshare partner.

The Directors consider that the most important features of the arrangement are the risk sharing and that the entry fee represents a contribution to the development costs that the Group incurs in excess of its proportionate programme share. The key judgements taken in reaching this view are: the entry fee is determined by the parties on that basis and the contract specifies that, in the event that a derivative engine is to be developed, additional entry fees will also be calculated on this basis; the workshare partners describe the entry fee in this way; although the workshare partner receives little stand-alone value from paying the entry fee, the entry fee together with its own development activities represent its aggregate investment in the collaboration; the amount of the entry fee does not include any amount in excess of that necessary to equalise forecast development costs; the Group is not 'on risk' for the full development costs it incurs but for that amount less the entry fees received.

The resulting accounting policy (described on page 125) represents the commercial effect of the contractual arrangements in that the Group recognises only those development costs to which it is exposed (and thus reflects the significant transfer of development risk to the workshare partner) and the costs of supply of parts during the production phase is measured at the workshare partner's share of programme revenues (which we consider to be a commercial fair value). The Directors do not consider that accounting which would result in entry fees only being recognised in the production phase would appropriately reflect the sharing of development risk. Accordingly, the Directors believe that the policy adopted best reflects the commercial objectives of the arrangements, the nature of the relationship with the workshare partner and is in accordance with Adopted IFRS.

## 1 Accounting policies continued

As described in the 2013 Annual Report, an alternative view is that the RRSA contract cannot be divided into separate development and production phases, as the fees and development components received by the Group during the development phase are exchanged for the obligation to pay the supplier a predetermined share of any sales receipts during the production phase. On this basis, the entry fees received would be deferred in their entirety and recognised over the period of production. The size of the difference between the two approaches is monitored and is not currently expected to become material in the foreseeable future. The impact of the different approaches on profit before tax and net assets, which is not considered to be material, is as follows:

	2016			2015		
	Reported profit before tax £m	Underlying profit before tax £m	Net assets £m	Reported profit before tax £m	Underlying profit before tax £m	Net assets £m
Adopted policy	(4,636)	813	1,864	160	1,432	5,016
Difference	(2)	(2)	(442)	(28)	(28)	(435)
Alternative policy <sup>1</sup>	(4,638)	811	1,422	132	1,404	4,581

<sup>1</sup> If the alternative policy were adopted, the difference would be included in profit before financing, which would change from £41m as reported to £39m (2015: £1,501m to £1,473m).

### Internally-generated development costs

IAS 38 requires that internally-generated development costs should only be recognised if strict criteria are met, in particular relating to technical feasibility and generation of future economic benefits. The Directors consider that, due to the complex nature of new equipment programmes, these criteria are not met until relatively late in the programme – Civil Aerospace programmes represent around half of development costs recognised; for these, the criteria are generally satisfied around the time of the initial engine certification.

### Customer financing contingent liabilities

The Group has contingent liabilities in respect of financing support provided to customers. In order to assess whether a provision should be recognised, judgement as to the likelihood of these crystallising is required. This judgement is based on an assessment on the knowledge of the customers' fleet plans, the underlying value of the security provided and, where appropriate, the customers' creditworthiness.

### KEY SOURCES OF ESTIMATION UNCERTAINTY

In applying the accounting policies, estimates are made in many areas; the actual outcome may differ from that calculated. The 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 set out below. The estimation of the relevant assets and liabilities involves the combination of a number of assumptions. Sensitivities are disclosed in the relevant notes where this is appropriate and practicable.

### Forecasts and discount rates

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 2016: £1,537m, 31 December 2015: £1,503m) 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 business.
- The assessment as to whether there are any indications of impairment of development, participation, certification, customer relationships and contractual aftermarket rights recognised as intangible assets (carrying values at 31 December 2016: £2,846m, 31 December 2015: £2,533m) 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 for customer specific intangible assets (CARs) for launch customers and typically reduces as programmes become more established.

### Assessment of long-term contractual arrangements

The Group has long-term contracts that fall into different accounting periods and which can extend over significant periods – the most significant of these are long-term service arrangements in the Civil Aerospace business. The estimated revenues 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; life-cycle cost improvements over the term of the contracts and escalation of revenues and costs. The estimates take account of the inherent uncertainties and the risk of non-recovery of any resulting contract balances. 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. In 2016, the US dollar long-term exchange rate was reduced by five cents, resulting in a one-off benefit to profit before tax of £35m.

## Notes to the consolidated financial statements continued

### 1 Accounting policies continued

#### Post-retirement benefits

The Group's defined benefit pension schemes and similar arrangements are assessed annually in accordance with IAS 19. The accounting valuation, which is based on assumptions determined with independent actuarial advice, resulted in a net deficit of £29m before deferred taxation being recognised on the balance sheet at 31 December 2016 (31 December 2015: net deficit £77m). The size of the net surplus/deficit is sensitive to the market value of the assets held by the schemes and 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 are included in note 19.

#### Provisions

As described in the accounting policy on page 128, the Group measures provisions (carrying value at 31 December 2016: £759m, 31 December 2015: £640m) 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.

#### Taxation

The tax payable on profits is determined based on tax laws and regulations that apply in each of the numerous jurisdictions in which the Group operates. Where the precise impact of these laws and regulations is unclear, or uncertain, then reasonable estimates may be used to determine the tax charge included in the financial statements.

The main area of uncertainty is in relation to cross-border transactions, entered into in the normal course of business, as the amount of income or profit taxable in each country involved can be subjective and therefore open to interpretation by the relevant tax authorities. This can result in disputes and possibly litigation.

Tax provisions require management to make judgements and estimates of exposures in relation to tax audit issues and other areas of uncertainty. Contingent liabilities, including in respect of any tax disputes or litigation, are covered in note 23 (contingent liabilities). All provisions are in current liabilities. Any liability relating to interest or penalties on tax liabilities is included in the tax charge.

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.

Further details on the Group's tax position can be found on page 184.

#### SIGNIFICANT ACCOUNTING POLICIES

The Group's significant accounting policies are set out below. These accounting policies have been applied consistently to all periods presented in these consolidated financial statements and by all Group entities.

#### Basis of consolidation

The Group consolidated financial statements include the financial statements of the Company and its subsidiary undertakings together with the Group's share of the results of joint arrangements and associates made up to 31 December. In line with common practice in Germany, a small number of immaterial subsidiaries of Rolls-Royce Power Systems are not consolidated and are carried at cost in other investments.

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.

During the year, the Group has reassessed the categorisation of joint arrangements. As a result of this review, certain entities, previously classified as joint ventures, have been reclassified as joint operations from 1 January 2016. This reclassification does not affect profit before tax or net assets, but the Group's share of the individual income statement and balance sheet categories are included on a proportional basis, rather than as a single figure. The adjustment to the opening balance was to reclassify £57m of investments in joint ventures to: property, plant and equipment (£41m), inventory (£19m), receivables (£18m), cash (£5m), payables (£17m) and borrowings (£9m). Prior year figures have not been restated.

Any subsidiary undertakings, joint arrangements or associates 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.

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.

## 1 Accounting policies continued

### Revenue recognition

Revenues comprise sales to outside customers after discounts, excluding value added taxes.

**Sales of products** (both OE and spare parts) are recognised when the significant risks and rewards of ownership of the goods are transferred to the customer, the sales price agreed and the receipt of payment can be assured – this is generally on delivery. On occasion, the Group may participate in the financing of OE, most commonly by the provision of guarantees as described in note 18. In such circumstances, the contingent obligations arising under these arrangements are taken into account in assessing when the significant risks and rewards of ownership have been transferred to the customer. As described on page 121, a sale of OE at a contractual price below its cost of manufacture is considered to give rise to revenue to the extent that an intangible asset (contractual aftermarket right) is recognised at the same time.

**Sales of services** are recognised by reference to the stage of completion based on services performed to date. As described on page 122, the assessment of the stage of completion is dependent on the nature of the contract, but will generally be based on: flying hours or equivalent for long-term aftermarket arrangements where the service is provided on a continuous basis; costs incurred to the extent these relate to services performed up to the reporting date; or achievement of contractual milestones where relevant.

As described on page 122, **sales of products and services** are treated as though they are a single contract where these components have been negotiated as a single commercial package and are so closely interrelated that they do not operate independently of each other and are considered to form a single transaction with an overall profit margin. The total revenue is allocated between the two components such that the total agreed discount to list prices is allocated to revenue for each of the two components pro rata, based on list prices. The revenue is then recognised for each component on this basis as the products are delivered and services provided, as described above. Where the contractual price of the OE component is below the revenue allocated from the combined arrangement, this will give rise to an asset included in 'amounts recoverable on contracts'. This asset reduces as services are provided, increases as costs are incurred, and reduces to zero by the end of the contract. Where the balance is a liability, it is recognised in 'accruals and deferred income'.

Provided that the outcome of construction contracts can be assessed with reasonable certainty, the revenues and costs on such contracts are recognised based on stage of completion and the overall contract profitability. Full provision is made for any estimated losses to completion of contracts, having regard to the overall substance of the arrangements.

Progress payments received, when greater than recorded revenue, are deducted from the value of work in progress except to the extent that payments on account exceed the value of work in progress on any contract where the excess is included in accruals and deferred income within trade and other payables. The amount by which recorded revenue of long-term contracts is in excess of payments on account is classified as amounts recoverable on contracts and is separately disclosed within trade and other receivables.

### TotalCare arrangements

As described above, these are accounted for on a stage of completion basis, with the stage of completion based on the proportion of flying hours completed compared to the total estimated under the contract. In making the assessment of future revenues, costs and the level of profit recognised the Group takes account of: (i) the forecast utilisation of the engines by the operator; (ii) the forecast costs to maintain the engines in accordance with the contractual requirements – the principal variables being the time between shop visits and the cost of each shop visit; and (iii) the recoverability of any contract asset arising. The Group benchmarks the forecast costs against previous programmes, recognising that the reliability of the forecasts will improve as operational experience of the engine increases. To the extent that actual costs differ from forecast costs or that forecast costs change, the cumulative impact is recognised in the period. An allowance is made against forecast contract revenues given the potential for reduced engine flying hours based on historical forecasting accuracy, the risk of aircraft being parked by the customer and the customer's creditworthiness. Again, changes in this allowance are recognised in the period.

### Risk and revenue sharing arrangements (RRSAs)

As described on page 122, the Group enters into arrangements with certain workshare partners under which these suppliers: (i) contribute to the forecast costs of developing an engine by performing their own development work, providing development parts and paying a non-refundable cash entry fee; and (ii) supply components for the production phase for which they receive consideration, which is an agreed proportion of the total programme revenues. Both the suppliers' contributions to the forecast non-recurring development costs and their consideration are determined by reference to their proportionate forecast scopes of supply relative to that of the engine overall. Once the forecast costs and the scopes of supply have been agreed at the inception of the contract, each party is then accountable for its own incurred costs. No accounting entries are recorded when the suppliers undertake development work or when development components are supplied. Cash sums received are recognised in the income statement, as a reduction in research and development costs incurred, to match the expensing of the Group's related costs – where the cash sums are received in advance of the related costs being expensed or where the related costs are capitalised as intangible assets, the recognition of the cash received is deferred (in accruals and deferred income) to match the recognition of the related expense or the amortisation of the related intangible asset respectively. The payments to suppliers of their shares of the programme revenues for their production components are charged to cost of sales as programme revenues arise.

The Group has arrangements with partners who do not undertake development work or supply parts. Such arrangements are considered to be financial instruments as defined by IAS 32 *Financial Instruments: Presentation* and are accounted for using the amortised cost method.

## Notes to the consolidated financial statements continued

### 1 Accounting policies continued

#### Government investment

Where a government or similar body has previously invested in a development programme, the Group treats payments to that body as royalty payments, which are matched to related sales.

#### 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 included in the balance sheet as deferred income. Non-monetary grants are recognised at fair value.

#### Interest

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

#### Taxation

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

- Current tax is the expected tax payable for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.
- Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of the assets and liabilities for financial reporting purposes and the amounts used for tax purposes and is calculated using the enacted or substantively enacted rates that are expected to apply when the asset or liability is settled.

Tax is charged or credited in the income statement or other comprehensive income (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.

#### 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 exchange rates ruling on the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into the relevant functional currency at the rate ruling at the year end. Exchange differences arising on foreign exchange transactions and the retranslation of assets and liabilities into functional currencies at the rate ruling at the year end are taken into account in determining 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 ruling 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.

#### Financial instruments

*IAS 39 Financial Instruments: Recognition and Measurement* requires the classification of financial instruments into separate categories for which the accounting requirement is different. The Group has classified its financial instruments as follows:

- Short-term investments are generally classified as **available for sale**.
- Short-term deposits (principally comprising funds held with banks and other financial institutions), trade receivables and short-term investments not designated as available for sale are classified as **loans and receivables**.
- Borrowings, trade payables, financial RRSAs, and C Shares are classified as **other liabilities**.
- Derivatives, comprising foreign exchange contracts, interest rate swaps and commodity swaps are classified as **fair value through profit or loss**.

Financial instruments are recognised at the contract date and initially measured at fair value. Their subsequent measurement depends on their classification:

- **Available for sale** assets are held at fair value. Changes in fair value arising from changes in exchange rates are included in the income statement. All other changes in fair value are taken to equity. On disposal, the accumulated changes in value recorded in equity are included in the gain or loss recorded in the income statement.

## 1 Accounting policies continued

- **Loans and receivables** and **other liabilities** are held at amortised cost and not revalued (except for changes in exchange rates and forecast contractual cash flows, which are included in the income statement) unless they are included in a fair value hedge accounting relationship. Where such a hedging relationship exists, the instruments are revalued in respect of the risk being hedged, with the change in value included in the income statement.
- **Fair value through profit or loss** items are held at fair value. Changes in fair value are included in the income statement unless the instrument is included in a cash flow hedge. If the instruments are included in an effective cash flow hedging relationship, changes in value are taken to equity. When the hedged forecast transaction occurs, amounts previously recorded in equity are recognised in the income statement.

Financial instruments are derecognised on expiry or when all contractual rights and obligations are transferred.

### Hedge accounting

The Group does not generally apply hedge accounting in respect of forward foreign exchange contracts or commodity swaps held to manage the cash flow exposures of forecast transactions denominated in foreign currencies or in commodities respectively.

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 and are designated as fair value or cash flow hedges of fixed and floating rate borrowings respectively.

Changes in the fair values of derivatives designated as fair value hedges and changes in fair value of the related hedged item are recognised directly in the income statement.

Changes in the fair values of derivatives that are designated as cash flow hedges and are effective are recognised directly in equity. Any ineffectiveness in the hedging relationships is included in the income statement. The amounts deferred in equity are recognised in the income statement to match the recognition of the hedged item.

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 equity is retained in equity until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss previously recognised in equity is transferred to 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 directly in equity. 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.

### Business combinations and goodwill

On the acquisition of a business, fair values are attributed to the identifiable assets and liabilities and contingent liabilities unless the fair value cannot be measured reliably, in which case the value is subsumed into goodwill. Where fair values of acquired contingent liabilities cannot be measured reliably, the assumed contingent liability is not recognised but is disclosed in the same manner as other contingent liabilities.

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.

### Certification costs and participation fees

Costs incurred in respect of meeting regulatory certification requirements for new civil aero engine/aircraft combinations including payments made to airframe manufacturers for this and participation fees are carried forward in intangible assets to the extent that they can be recovered out of future sales and are charged to the income statement over the programme life on a straight-line basis, up to a maximum of 15 years from the entry into service of the product.

### Research and development

In accordance with IAS 38 *Intangible Assets*, expenditure incurred on research and development is distinguished as relating either to a research phase or to a development phase.

All research phase expenditure is charged to the income statement. Development expenditure is capitalised as an internally generated intangible asset only if it meets strict criteria, relating in particular to technical feasibility and generation of future economic benefits. As described on page 123, the Group considers that it is not possible to distinguish reliably between research and development activities until relatively late in the programme.

Expenditure capitalised is amortised over its useful economic life on a straight-line basis, up to a maximum of 15 years from the entry into service of the product.

## Notes to the consolidated financial statements continued

### 1 Accounting policies continued

#### Contractual aftermarket rights

As described under key judgements on page 121, the Group may sell OE to customers at a price below its cost, on the basis that it also receives valuable aftermarket rights. Such a sale is considered to give rise to an intangible asset which is recognised, in accordance with IAS 38, at the same time as the revenue at an amount equal to the cash deficit and is amortised on a straight-line basis over the period that highly probable aftermarket sales are expected to be earned.

#### Customer relationships

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

#### Software

The cost of acquiring software that is not specific to an item of property, plant and equipment is classified as an intangible asset and amortised on a straight-line basis over its useful economic life, up to a maximum of five years.

#### Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and any provision for impairment in value.

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 provided on assets in the course of construction. Estimated useful lives are as follows:

- Land and buildings, as advised by the Group's professional advisers:
  - freehold buildings – five to 45 years (average 26 years);
  - leasehold buildings – lower of adviser's estimates or period of lease;
  - 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 13 years).

Where the Group obtains effective control of customers' installed engines as a result of a TotalCare Flex arrangement, the fair value of these engines is recognised as an addition (shown separately in note 10). The corresponding liability is recognised either as deferred revenue or a financial liability depending on the precise nature of the arrangement.

#### Operating leases

Payments made and rentals received under operating lease arrangements are charged/credited to the income statement on a straight-line basis.

#### Impairment of non-current assets

Impairment of non-current assets is considered in accordance with IAS 36 *Impairment of Assets*. Where the asset does not generate cash flows that are independent of other assets, impairment is considered for the cash-generating unit 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 recognised as an expense. The recoverable amount is the higher of value in use or fair value less costs to sell, 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 on a first-in, first-out basis. Cost comprises direct materials and, where applicable, direct labour costs and those 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.

#### Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, and it is probable that the Group will be required to settle that obligation. Provisions are measured at the Directors' best estimate of the expenditure required to settle the obligation at the balance sheet date, and are discounted to present value where the effect is material.

## 1 Accounting policies continued

### Post-retirement benefits

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

For defined benefit plans, obligations are measured at discounted present value, using a discount rate derived from high-quality corporate bonds denominated in the currency of the plan, whilst plan assets are recorded at fair value. Surpluses in schemes are recognised as assets only if they represent economic benefits available to the Group in the future. A liability is recognised to the extent that the minimum funding requirements in respect of past service will give rise to an unrecognisable surplus.

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.
- Financing costs are recognised in the periods in which they arise.

Actuarial gains and losses and movements in unrecognised surpluses and minimum funding liabilities are recognised immediately in OCI.

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 Performance Share Plan (PSP).

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 IAS 39 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 123, the Directors consider the likelihood of crystallisation in assessing whether provision is required for any contingent liabilities.

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

### Revisions to Adopted IFRS in 2016

There were no changes to accounting standards that had a material impact on the 2016 financial statements.

### Revisions to IFRS not applicable in 2016

Standards and interpretations issued by the IASB are only applicable if endorsed by the EU.

IFRS 9 *Financial Instruments* will simplify the classification of financial assets for measurement purposes, but is not anticipated to have a significant impact on the financial statements.

## Notes to the consolidated financial statements continued

### 1 Accounting policies continued

IFRS 15 *Revenue from Contracts with Customers* (effective for the year beginning 1 January 2018), provides a single, principles-based five-step model to be applied to all sales contracts, based on the transfer of control of goods and services to customers. It replaces the separate models for goods, services and construction contracts currently included in IAS 11 *Construction Contracts* and IAS 18 *Revenue*.

The Group has undertaken significant analysis of how IFRS 15 should be implemented and has taken tentative accounting policy decisions. Based on this analysis, we expect that adoption of IFRS 15 will have a significant impact on the timing of recognition of revenue on individual long-term contracts, most particularly in the Civil Aerospace business. The most significant changes are:

- IFRS 15 contains more specific requirements on the combination of contracts. Contracts can only be combined if they are with the same counterparty or related counterparties. The existing standards require contracts with different counterparties to be combined where that reflects the overall substance of a transaction. As a result, it will no longer be possible to link contracts entered into at the same time for: (i) installed OE, with an airframer; and (ii) long-term service agreements (LTAs), relating to that OE, with the aircraft operator.
- For similar reasons, it will no longer be possible to recognise an intangible asset in respect of contractual aftermarket rights (relating to future aftermarket business with an operator) when OE is sold to an airframer.
- For each performance obligation identified, IFRS 15 requires revenue to be recognised based on the transfer of control of the relevant goods or services. In contrast, under the existing standards, revenue is recognised based on when risk and reward is transferred. As a result it will no longer be possible to use flying hours (or equivalent) as a basis for measuring the stage of completion of LTAs.
- Compared to IAS 11, IFRS 15 includes only limited guidance on accounting for costs incurred to fulfil a performance obligation and in general these will be recognised as incurred. It is no longer possible to defer or accrue costs to report a consistent margin percentage over the term of the LTAs.

In summary, the impact of these changes will be that, upon adoption of IFRS 15:

- Revenues and costs relating to deliveries of engines will be recognised when they are delivered. The revenue recognised will comprise that included in the contract with the airframer reduced (if applicable) by any OE concession agreed with the operator (which IFRS 15 describes as a payment to a 'customer's customer'). Consequently, the revenues and costs recognised on OE deliveries will more closely match the related cash flows. No contractual aftermarket revenue will be allocated to the OE delivery (where contracts are currently combined – 'linked accounting') and no intangible asset will be recognised (where contracts are not currently combined – 'unlinked accounting'). This will result in a loss being recognised on engine deliveries when the direct costs exceed the direct revenues.
- Revenues on LTAs will be recognised as services are performed rather than as the equipment is used (engine flying hours) as is the case under the current accounting policy. The stage of completion will be measured using the actual costs incurred to date compared to the estimated costs to complete the performance obligation. In practice the bulk of the revenue and costs will relate to overhaul activity which occurs at distinct points of time during the period of the LTA. As the first major overhaul typically occurs some years after delivery, this change will generally defer the recognition of revenue on LTAs, as compared to the current accounting policy.

Taken together, had IFRS 15 been applicable with effect from 1 January 2015, the Group currently estimates the results for the year ended 31 December 2015 would have been as follows:

	IAS 11 and IAS 18		IFRS 15	
	Reported £bn	Underlying £bn	Reported £bn	Underlying £bn
<b>Revenue</b>				
Civil Aerospace original equipment		3.3		2.6
Civil Aerospace aftermarket services		3.7		3.5
Other segments		6.4		6.4
Total revenue	13.7	13.4	12.8	12.5
<b>Gross profit</b>				
Civil Aerospace		1.5		0.6
Other segments		1.7		1.7
Total gross profit	3.3	3.2	2.4	2.3
Profit before financing and taxation	1.5	1.5	0.6	0.6
Net financing	(1.3)	(0.1)	(1.3)	(0.1)
Taxation	(0.1)	(0.3)	0.1	(0.1)
Profit for the year	0.1	1.1	(0.6)	0.4
<b>Net assets</b>		5.0		2.0

## 1 Accounting policies continued

The Group plans to adopt IFRS 15 in 2018 using the 'full' retrospective approach. The comparative 2017 results included in the 2018 financial statements will be restated, with an adjustment to equity as at 1 January 2017.

The Group will continue to work during 2017 to design, implement and refine procedures to apply the new requirements of IFRS 15 and to finalise accounting policy choices. As a result of this ongoing work, it is possible that some changes to the impact above may result.

IFRS 16 *Leases* (effective for the year ending 31 December 2019, not yet endorsed by the EU) will require all leases to be recognised on the balance sheet. Currently, IAS 17 *Leases* only requires leases categorised as finance leases to be recognised on the balance sheet, with leases categorised as operating leases not recognised. In broad terms, the impact will be to recognise a lease liability and corresponding asset for the operating lease commitments set out in note 22.

The Group does not consider that any other standards, amendments or interpretations issued by the IASB, but not yet applicable, will have a significant impact on the financial statements.

## 2 Segmental analysis

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

Civil Aerospace	– development, manufacture, marketing and sales of commercial aero engines and aftermarket services.
Defence Aerospace	– development, manufacture, marketing and sales of military aero engines and aftermarket services.
Power Systems	– development, manufacture, marketing and sales of reciprocating engines and power systems.
Marine	– development, manufacture, marketing and sales of marine-power propulsion systems and aftermarket services.
Nuclear	– development, manufacture, marketing and sales of nuclear systems for civil power generation and naval propulsion systems.

The operating results are reviewed by the Board and are prepared on an underlying basis, which the Board considers reflects better the economic substance of the Group's trading during the year and provides financial measures that, together with the results prepared in accordance with Adopted IFRS, allow better analysis of the factors affecting the year's results compared to the prior year. The principles adopted to determine underlying results are:

### Underlying revenues and costs

Where revenues and costs are denominated in a currency other than the functional currency of the Group undertaking and the Group hedges the net exposure, these reflect the achieved exchange rates arising on derivative contracts settled to cover the net exposure. These achieved exchange rates are applied to all relevant revenues and costs, including those for which there is a natural offsetting position, rather than translating the offsetting transactions at spot rates. The underlying profits would be the same under both approaches, but the Board considers that the approach taken provides a better indication of trends over time.

### Underlying profit before financing

In addition to the impact of exchange rates on revenues and costs above, adjustments have been made to exclude one-off past service costs or credits on post-retirement schemes, exceptional restructuring costs (associated with the substantial closure or exit of a site, facility or line of business or other major transformation activities), the effect of acquisition accounting, the effect of business disposals, the impairment of goodwill, and in 2016 financial penalties from agreements with investigating bodies.

### Underlying profit before taxation

In addition to those adjustments in underlying profit before financing:

- Includes amounts realised from settled derivative contracts and revaluation of relevant assets and liabilities to exchange rates forecast to be achieved from future settlement of derivative contracts.
- Excludes unrealised amounts arising from revaluations required by IAS 39 *Financial Instruments: Recognition and Measurement*, changes in value of financial RRSA contracts arising from changes in forecast payments and the net impact of financing costs related to post-retirement scheme benefits.

### Taxation

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 and the impact of changes in tax rates are also excluded.

This analysis also includes a reconciliation of the underlying results to those reported in the consolidated income statement.

## Notes to the consolidated financial statements continued

### 2 Segmental analysis continued

	Civil £m	Defence £m	Power Systems £m	Marine £m	Nuclear £m	Inter- segment £m	Total reportable segments £m
<b>Year ended 31 December 2016</b>							
Underlying revenue from sale of original equipment	3,272	823	1,609	575	346	(33)	6,592
Underlying revenue from aftermarket services	3,634	1,229	751	437	415	(35)	6,431
<b>Total underlying revenue at 2015 exchange rates</b>	<b>6,906</b>	<b>2,052</b>	<b>2,360</b>	<b>1,012</b>	<b>761</b>	<b>(68)</b>	<b>13,023</b>
Translation to 2016 exchange rates	161	157	295	102	16	(8)	723
<b>Total underlying revenue</b>	<b>7,067</b>	<b>2,209</b>	<b>2,655</b>	<b>1,114</b>	<b>777</b>	<b>(76)</b>	<b>13,746</b>
Gross profit	1,129	530	628	216	117	–	2,620
Commercial and administrative costs	(339)	(127)	(305)	(207)	(67)	–	(1,045)
Restructuring	(11)	10	–	3	–	–	2
Research and development costs	(549)	(68)	(157)	(39)	(6)	–	(819)
Share of results of joint ventures and associates	96	15	1	–	–	–	112
<b>Underlying profit/(loss) before financing and taxation at 2015 exchange rates</b>	<b>326</b>	<b>360</b>	<b>167</b>	<b>(27)</b>	<b>44</b>	<b>–</b>	<b>870</b>
Translation to 2016 exchange rates	41	24	24	–	1	–	90
<b>Underlying profit/(loss) before financing and taxation</b>	<b>367</b>	<b>384</b>	<b>191</b>	<b>(27)</b>	<b>45</b>	<b>–</b>	<b>960</b>
Segment assets	13,030	1,755	3,828	1,518	351	(1,223)	19,259
Investments in joint ventures and associates	826	4	9	2	1	–	842
Segment liabilities	(14,510)	(1,996)	(1,151)	(903)	(435)	1,223	(17,772)
Net (liabilities)/assets	(654)	(237)	2,686	617	(83)	–	2,329
Investment in intangible assets, property, plant and equipment and joint ventures and associates	1,215	112	123	37	19	–	1,506
Depreciation, amortisation and impairment	491	67	207	239	39	–	1,043
<b>Year ended 31 December 2015</b>							
Underlying revenue from sale of original equipment	3,258	801	1,618	773	251	(53)	6,648
Underlying revenue from aftermarket services	3,675	1,234	767	551	436	(53)	6,610
<b>Total underlying revenue</b>	<b>6,933</b>	<b>2,035</b>	<b>2,385</b>	<b>1,324</b>	<b>687</b>	<b>(106)</b>	<b>13,258</b>
Gross profit	1,526	579	656	260	111	7	3,139
Commercial and administrative costs	(296)	(124)	(296)	(201)	(53)	–	(970)
Restructuring	(7)	(8)	(4)	(16)	(2)	–	(37)
Research and development costs	(515)	(73)	(162)	(28)	14	–	(764)
Share of results of joint ventures and associates	104	19	–	–	–	–	123
<b>Underlying profit before financing and taxation</b>	<b>812</b>	<b>393</b>	<b>194</b>	<b>15</b>	<b>70</b>	<b>7</b>	<b>1,491</b>
Segment assets	11,229	1,437	3,376	1,481	300	(850)	16,973
Investments in joint ventures and associates	545	12	8	7	3	–	575
Segment liabilities	(8,709)	(1,698)	(1,017)	(783)	(324)	850	(11,681)
Net assets/(liabilities)	3,065	(249)	2,367	705	(21)	–	5,867
Investment in intangible assets, property, plant and equipment and joint ventures and associates	668	84	108	36	18	–	914
Depreciation, amortisation and impairment	410	58	197	111	23	–	799

## 2 Segmental analysis continued

### RECONCILIATION TO REPORTED RESULTS

	Total reportable segments £m	Other business <sup>1</sup> and corporate £m	Total underlying £m	Underlying adjustments and foreign exchange £m	Group at actual exchange rates £m
<b>Year ended 31 December 2016</b>					
Revenue from sale of original equipment	6,592	20	6,612	976	7,588
Revenue from aftermarket services	6,431	15	6,446	921	7,367
<b>Total underlying revenue at 2015 exchange rates</b>	<b>13,023</b>	<b>35</b>	<b>13,058</b>	<b>1,897</b>	<b>14,955</b>
Translation to 2016 exchange rates	723	2	725	(725)	–
<b>Total revenue</b>	<b>13,746</b>	<b>37</b>	<b>13,783</b>	<b>1,172</b>	<b>14,955</b>
Gross profit	2,620	6	2,626	422	3,048
Other operating income	–	–	–	5	5
Commercial and administrative costs	(1,045)	(51)	(1,096)	(1,112)	(2,208)
Restructuring	2	–	2	(2)	–
Research and development costs	(819)	7	(812)	(106)	(918)
Share of results of joint ventures and associates	112	(5)	107	10	117
<b>Profit/(loss) before financing and taxation at 2015 exchange rates</b>	<b>870</b>	<b>(43)</b>	<b>827</b>	<b>(783)</b>	<b>44</b>
Translation to 2016 exchange rates	90	(2)	88	(88)	–
Loss on disposal of businesses	–	–	–	(3)	(3)
<b>Profit/(loss) before financing and taxation</b>	<b>960</b>	<b>(45)</b>	<b>915</b>	<b>(874)</b>	<b>41</b>
Net financing	(102)	(102)	(102)	(4,575)	(4,677)
<b>Profit/(loss) before taxation</b>	<b>(147)</b>	<b>813</b>	<b>(5,449)</b>	<b>(4,636)</b>	
Taxation	(261)	(261)	(261)	865	604
<b>Profit/(loss) for the year</b>	<b>552</b>	<b>(4,584)</b>	<b>(4,032)</b>		
<b>Attributable to:</b>					
Ordinary shareholders			552	(4,584)	(4,032)
Non-controlling interests			–	–	–
<b>Year ended 31 December 2015</b>					
Revenue from sale of original equipment	6,648	76	6,724	215	6,939
Revenue from aftermarket services	6,610	20	6,630	156	6,786
<b>Total revenue</b>	<b>13,258</b>	<b>96</b>	<b>13,354</b>	<b>371</b>	<b>13,725</b>
Gross profit	3,139	64	3,203	74	3,277
Other operating income	–	–	–	10	10
Commercial and administrative costs	(970)	(55)	(1,025)	(45)	(1,070)
Restructuring	(37)	(2)	(39)	39	–
Research and development costs	(764)	(1)	(765)	(53)	(818)
Share of results of joint ventures and associates	123	(5)	118	(18)	100
Profit on disposal of businesses	–	–	–	2	2
Profit before financing and taxation	1,491	1	1,492	9	1,501
Net financing	(60)	(60)	(60)	(1,281)	(1,341)
<b>Profit/(loss) before taxation</b>	<b>(59)</b>	<b>1,432</b>	<b>(1,272)</b>	<b>160</b>	
Taxation	(351)	(351)	(351)	275	(76)
<b>Profit/(loss) for the year</b>	<b>(410)</b>	<b>1,081</b>	<b>(997)</b>	<b>84</b>	
<b>Attributable to:</b>					
Ordinary shareholders			1,080	(997)	83
Non-controlling interests			1	–	1

<sup>1</sup> Other businesses comprise former Energy businesses not included in the disposal to Siemens in 2014.

## Notes to the consolidated financial statements continued

### 2 Segmental analysis continued

#### UNDERLYING ADJUSTMENTS

	2016				2015			
	Revenue £m	Profit before financing £m	Net financing £m	Taxation £m	Revenue £m	Profit before financing £m	Net financing £m	Taxation £m
<b>Underlying performance</b>	<b>13,783</b>	<b>915</b>	<b>(102)</b>	<b>(261)</b>	<b>13,354</b>	<b>1,492</b>	<b>(60)</b>	<b>(351)</b>
Revenue recognised at exchange rate on date of transaction	1,172	—	—	—	371	—	—	—
Realised losses/(gains) on settled derivative contracts <sup>1</sup>	—	426	162	(107)	—	287	(35)	(51)
Net unrealised fair value changes to derivative contracts <sup>2</sup>	—	—	(4,420)	792	—	(9)	(1,306)	270
Effect of currency on contract accounting	—	77	—	(14)	—	(9)	—	2
Revaluation of trading assets and liabilities	—	67	(313)	56	—	(13)	20	(6)
Financial RRSAs – foreign exchange differences and changes in forecast payments	—	—	(8)	(1)	—	—	8	(1)
Effect of acquisition accounting <sup>3</sup>	—	(115)	—	35	—	(124)	—	31
Impairment of goodwill	—	(219)	—	—	—	(75)	—	—
Pension restructuring <sup>4</sup>	—	(306)	—	107	—	—	—	—
Net post-retirement scheme financing	—	—	3	(2)	—	—	32	(12)
Disposal of businesses	—	(3)	—	—	—	2	—	15
Exceptional restructuring	—	(129)	—	34	—	(49)	—	11
Financial penalties from agreements with investigating bodies	—	(671)	—	—	—	—	—	—
Other	—	(1)	1	(5)	—	(1)	—	(2)
Reduction in rate of UK corporation tax	—	—	—	(30)	—	—	—	18
<b>Total underlying adjustments</b>	<b>1,172</b>	<b>(874)</b>	<b>(4,575)</b>	<b>865</b>	<b>371</b>	<b>9</b>	<b>(1,281)</b>	<b>275</b>
<b>Reported per consolidated income statement</b>	<b>14,955</b>	<b>41</b>	<b>(4,677)</b>	<b>604</b>	<b>13,725</b>	<b>1,501</b>	<b>(1,341)</b>	<b>(76)</b>

<sup>1</sup> Realised (gains)/losses on settled derivative contracts include adjustments to reflect the losses/(gains) in the same year as the related trading cash flows.

<sup>2</sup> Unrealised fair value changes to derivative contracts included in profit before financing: (i) include those of equity accounted joint ventures; and (ii) exclude those for which the related trading contracts have been cancelled when the fair value changes are recognised immediately in underlying profit.

<sup>3</sup> The adjustment eliminates charges recognised as a result of recognising assets in acquired businesses at fair value.

<sup>4</sup> In the UK, tax is provided on pension surpluses at a rate of 35%, which is the relevant rate if the surpluses were to be returned to the Group.

The reconciliation of underlying earnings per ordinary share is shown in note 6.

#### RECONCILIATION TO THE BALANCE SHEET

	2016 £m	2015 £m
Reportable segment assets	19,259	16,973
Investments in joint ventures and associates	844	576
Other businesses and corporate	49	119
Cash and cash equivalents and short-term investments	2,774	3,178
Fair value of swaps hedging fixed rate borrowings	358	74
Income tax assets	908	341
Post-retirement scheme surpluses	1,346	1,063
<b>Total assets</b>	<b>25,538</b>	<b>22,324</b>
Reportable segment liabilities	(17,772)	(11,681)
Other businesses and corporate	(183)	(120)
Borrowings	(3,357)	(3,302)
Fair value of swaps hedging fixed rate borrowings	—	(61)
Income tax liabilities	(987)	(1,004)
Post-retirement scheme deficits	(1,375)	(1,140)
<b>Total liabilities</b>	<b>(23,674)</b>	<b>(17,308)</b>
<b>Net assets</b>	<b>1,864</b>	<b>5,016</b>

## 2 Segmental analysis continued

### GEOGRAPHICAL SEGMENTS

The Group's revenue by destination is as follows:

	2016 £m	2015 £m
United Kingdom	1,821	1,780
Germany	850	642
Switzerland	745	782
France	294	249
Spain	289	200
Norway	279	280
Italy	232	222
Russia	75	59
Rest of Europe	700	786
<b>Europe</b>	<b>5,285</b>	5,000
United States	4,176	3,591
Canada	341	475
<b>North America</b>	<b>4,517</b>	4,066
<b>South America</b>	<b>314</b>	425
Saudi Arabia	486	365
Rest of Middle East	570	445
<b>Middle East</b>	<b>1,056</b>	810
China	1,417	1,236
Singapore	518	549
Japan	333	136
South Korea	251	278
Malaysia	117	78
India	99	99
Rest of Asia	508	546
<b>Asia</b>	<b>3,243</b>	2,922
<b>Africa</b>	<b>290</b>	144
<b>Australasia</b>	<b>188</b>	278
<b>Other</b>	<b>62</b>	80
	<b>14,955</b>	13,725

No single customer represented 10% or more of the Group's revenue.

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

	2016 £m	2015 £m
United Kingdom	4,643	4,072
Germany	2,714	2,339
United States	1,046	835
Nordic countries	512	598
Other	1,161	900
	<b>10,076</b>	8,744

## Notes to the consolidated financial statements continued

### 3 Research and development

	2016 £m	2015 £m
Expenditure in the year	(937)	(831)
Capitalised as intangible assets	99	51
Amortisation of capitalised costs	(147)	(136)
Impairment of capitalised costs	(2)	–
<b>Net research and development cost</b>	<b>(987)</b>	<b>(916)</b>
Entry fees received	73	83
Entry fees deferred in respect of charges in future years	(40)	(28)
Recognition of previously deferred entry fees	36	43
<b>Net cost recognised in the income statement</b>	<b>(918)</b>	<b>(818)</b>
Underlying adjustments relating to effects of acquisition accounting and foreign exchange	56	53
<b>Net underlying cost recognised in the income statement</b>	<b>(862)</b>	<b>(765)</b>
Translation to 2015 exchange rates	50	–
<b>Net underlying cost at 2015 exchange rates</b>	<b>(812)</b>	<b>(765)</b>

### 4 Net financing

	Notes	2016		2015	
		Per consolidated income statement £m	Underlying financing <sup>1</sup> £m	Per consolidated income statement £m	Underlying financing <sup>2</sup> £m
<b>Financing income</b>					
Interest receivable		14	14	12	12
Net fair value gains on foreign currency contracts <sup>1</sup>	17	1	–	–	–
Financial RRSAs – foreign exchange differences and changes in forecast payments	17	23	–	21	–
Net fair value gains on commodity contracts <sup>1</sup>	17	16	–	–	–
Financing on post-retirement scheme surpluses	19	42	–	65	–
Net foreign exchange gains <sup>3</sup>		–	–	17	32
		96	14	115	44
<b>Financing costs</b>					
Interest payable		(77)	(77)	(71)	(71)
Net fair value losses on foreign currency contracts <sup>1</sup>	17	(4,437)	–	(1,217)	–
Financial RRSAs – foreign exchange differences and changes in forecast payments	17	(31)	–	(13)	–
Financial charge relating to financial RRSAs	17	(6)	(6)	(8)	(8)
Net fair value losses on commodity contracts <sup>1</sup>	17	–	–	(89)	–
Financing on post-retirement scheme deficits	19	(39)	–	(33)	–
Net foreign exchange losses		(145)	–	–	–
Other financing charges		(38)	(33)	(25)	(25)
		(4,773)	(116)	(1,456)	(104)
<b>Net financing</b>		<b>(4,677)</b>	<b>(102)</b>	<b>(1,341)</b>	<b>(60)</b>

#### Analysed as:

Net interest payable	(63)	(63)	(59)	(59)
Net fair value losses on derivative contracts	(4,420)	–	(1,306)	–
Net post-retirement scheme financing	3	–	32	–
Net other financing	(197)	(39)	(8)	(1)
<b>Net financing</b>	<b>(4,677)</b>	<b>(102)</b>	<b>(1,341)</b>	<b>(60)</b>

<sup>1</sup> Net loss on fair value items through profit or loss (4,420) – (1,306) –

<sup>2</sup> See note 2.

<sup>3</sup> The underlying financing income includes nil (2015: £34m) from gains on settlement of foreign exchange contracts following the receipt in the UK of dividends from overseas subsidiaries.

## 5 Taxation

	UK		Overseas		Total	
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
<b>Current tax</b>						
Current tax charge for the year	12	9	187	157	199	166
Less double tax relief	—	—	—	—	—	—
	12	9	187	157	199	166
Adjustments in respect of prior years	(8)	6	4	(23)	(4)	(17)
	4	15	191	134	195	149
<b>Deferred tax</b>						
Deferred tax credit for the year	(804)	(37)	(44)	(23)	(848)	(60)
Adjustments in respect of prior years	(5)	10	24	(5)	19	5
Deferred tax charge/(credit) resulting from reduction in tax rates	30	(18)	—	—	30	(18)
	(779)	(45)	(20)	(28)	(799)	(73)
Recognised in the income statement	(775)	(30)	171	106	(604)	76
<b>OTHER TAX (CHARGES)/CREDITS</b>						
	OCI		Equity			
	Items that will not be reclassified		Items that may be reclassified			
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
<b>Deferred tax:</b>						
Movement in post-retirement schemes	(179)	257				
Share-based payments – direct to equity					(2)	(6)
Net investment hedge			4	(2)		
	(179)	257	4	(2)	(2)	(6)
<b>TAX RECONCILIATION</b>						
			2016 £m		2015 £m	
(Loss)/profit before taxation			(4,636)		160	
Less share of results of joint ventures and associates (note 11)			(117)		(100)	
(Loss)/profit before taxation excluding joint ventures and associates			(4,753)		60	
Nominal tax (credit)/charge at UK corporation tax rate 20% (2015: 20.25%)			(951)		12	
UK tax rate differential <sup>1</sup>			41		20	
Overseas rate differences <sup>2</sup>			25		43	
Impairment of goodwill			44		13	
Financial penalties from agreements with investigating bodies			153		—	
Other permanent differences			11		5	
Benefit to deferred tax from previously unrecognised tax losses and temporary differences			(2)		(7)	
Tax losses in year not recognised in deferred tax			30		20	
Adjustments in respect of prior years <sup>3</sup>			15		(12)	
Reduction in closing deferred taxes resulting from decrease in tax rates			30		(18)	
			(604)		76	
Underlying items (note 2)			261		351	
Non-underlying items			(865)		(275)	
			(604)		76	

<sup>1</sup>The UK tax rate differential arises on the difference between the appropriate deferred tax rate and the UK statutory tax rate.

<sup>2</sup>Overseas rate differences mainly relate to tax on profits in countries, such as the US, which have higher tax rates than the UK.

<sup>3</sup>The adjustments in respect of prior years include a £14m charge relating to losses in Norway no longer recognised due to the current uncertainty in the oil & gas market (see note 9).

## Notes to the consolidated financial statements continued

### 5 Taxation continued

#### DEFERRED TAXATION ASSETS AND LIABILITIES

		2016 £m	2015 £m
At 1 January		(521)	(859)
Amount credited to income statement		799	73
Amount (charged)/credited to other comprehensive income		(175)	255
Amount charged to equity		(2)	(6)
Exchange differences		(1)	16
<b>At 31 December</b>		<b>100</b>	<b>(521)</b>
Deferred tax assets		876	318
Deferred tax liabilities		(776)	(839)
		<b>100</b>	<b>(521)</b>

The analysis of the deferred tax position is as follows:

	At 1 January 2016 £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Exchange differences £m	At 31 December 2016 £m
Intangible assets	(392)	11	—	—	(8)	(389)
Property, plant and equipment	(190)	14	—	—	(15)	(191)
Other temporary differences	21	15	4	—	(12)	28
Amounts recoverable on contracts	(539)	27	—	—	—	(512)
Pensions and other post-retirement scheme benefits	(90)	103	(179)	—	35	(131)
Foreign exchange and commodity financial assets and liabilities	306	620	—	—	—	926
Losses	343	(1)	—	(2)	(1)	339
R&D expenditure credit	20	10	—	—	—	30
	<b>(521)</b>	<b>799</b>	<b>(175)</b>	<b>(2)</b>	<b>(1)</b>	<b>100</b>

	At 1 January 2015 £m	Recognised in income statement £m	Recognised in OCI £m	Recognised in equity £m	Exchange differences £m	At 31 December 2015 £m
Intangible assets	(455)	52	—	—	11	(392)
Property, plant and equipment	(195)	7	—	—	(2)	(190)
Other temporary differences	97	(69)	(2)	(7)	2	21
Amounts recoverable on contracts	(526)	(13)	—	—	—	(539)
Pensions and other post-retirement scheme benefits	(324)	(30)	257	—	7	(90)
Foreign exchange and commodity financial assets and liabilities	135	171	—	—	—	306
Losses	393	(49)	—	1	(2)	343
R&D expenditure credit	16	4	—	—	—	20
	<b>(859)</b>	<b>73</b>	<b>255</b>	<b>(6)</b>	<b>16</b>	<b>(521)</b>

#### UNRECOGNISED DEFERRED TAX ASSETS

	2016 £m	2015 £m
Advance corporation tax	182	182
Losses and other unrecognised deferred tax assets	71	36
Deferred tax not recognised on unused tax losses and other items on the basis that future economic benefit is uncertain <sup>1</sup>	253	218

<sup>1</sup> Advance corporation tax, tax losses and other deductible temporary differences are not expected to expire under current legislation.

#### DEFERRED TAXATION ASSETS AND LIABILITIES

Following announcements in the Summer Budget 2015 and the Budget 2016, the UK corporation tax rate will reduce to 19% from 1 April 2017 and 17% from 1 April 2020. The Summer Budget 2015 had originally announced that the rate would reduce to 18% from 1 April 2020. This reduction was substantively enacted on 26 October 2015 and so the prior year deferred tax assets and liabilities were calculated at this rate. The subsequent announcement in the Budget 2016 that the rate will reduce to 17% from 1 April 2020 was substantively enacted on 6 September 2016. As this reduction was substantively enacted prior to the year end, the closing deferred tax assets and liabilities have been calculated at this rate.

The resulting charges or credits have been recognised in the income statement except to the extent that they relate to items previously charged or credited to OCI or equity. Accordingly, in 2016, £30m has been charged to the income statement (2015: £18m credited) and £2m has been charged directly to equity (2015: £3m).

## 5 Taxation continued

The temporary differences associated with investments in subsidiaries, joint ventures and associates, for which a deferred tax liability has not been recognised, aggregate to £276m (2015: £347m). 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.

	2016		2015		
	Basic	Potentially dilutive share options <sup>1</sup>	Diluted	Basic	Potentially dilutive share options
(Loss)/profit attributable to ordinary shareholders (£m)	(4,032)		(4,032)	83	
Weighted average number of ordinary shares (millions)	1,832	–	1,832	1,839	12
EPS (pence)	(220.08)	–	(220.08)	4.51	(0.03)
					4.48

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

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

	2016		2015	
	Pence	£m	Pence	£m
Underlying EPS/Underlying profit attributable to ordinary shareholders	30.13	552	58.73	1,080
Total underlying adjustments to profit before tax (note 2)	(297.43)	(5,449)	(69.17)	(1,272)
Related tax effects	47.22	865	14.95	275
EPS/(Loss)/profit attributable to ordinary shareholders	(220.08)	(4,032)	4.51	83
Diluted underlying EPS	30.08		58.35	

## 7 Employee information

	2016	2015
<b>Average number of employees</b>		
United Kingdom	22,300	23,200
Germany	10,700	10,700
United States	6,300	6,400
Nordics	3,400	3,800
Canada	1,000	1,100
Rest of world	6,200	5,300
	49,900	50,500
Civil Aerospace	23,800	23,100
Defence Aerospace	6,000	6,300
Power Systems	10,300	10,600
Marine	5,300	6,000
Nuclear	4,300	4,100
Other businesses and corporate <sup>1,2</sup>	200	400
	49,900	50,500
 <b>Group employment costs<sup>3</sup></b>		
Wages, salaries and benefits	2,788	2,514
Social security costs	376	334
Share-based payments (note 21)	35	5
Pensions and other post-retirement scheme benefits (note 19)	623	299
	3,822	3,152

<sup>1</sup> Other businesses and corporate includes the Energy businesses not sold to Siemens in 2014 and corporate 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. 2015 figures have been restated on this basis.

<sup>2</sup> As described in note 1, the Group has reclassified certain joint ventures to joint operations from 1 January 2016. This increased the reported Group employees by 800.

<sup>3</sup> Remuneration of key management personnel is shown in note 24.

## Notes to the consolidated financial statements continued

### 8 Auditors' remuneration

Fees payable to the Company's auditors and its associates were as follows:

	2016 £m	2015 £m
Fees payable to the Company's auditors for the audit of the Company's annual financial statements <sup>1</sup>	0.3	0.3
Fees payable to the Company's auditors and its associates for the audit of the Company's subsidiaries pursuant to legislation <sup>2</sup>	6.5	5.6
Total fees payable for audit services	6.8	5.9
Fees payable to the Company's auditors and its associates for other services:		
Audit related assurance services <sup>3</sup>	0.6	1.3
Taxation compliance services	0.5	0.4
All other services	0.1	–
	8.0	7.6
Fees payable in respect of the Group's pension schemes:		
Audit	0.3	0.2

<sup>1</sup> The level of fees payable to the Company's auditors 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 auditors 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.

<sup>2</sup> Audit fees for overseas entities are reported at the average exchange rate for the year. The weakening of sterling during 2016 gave rise to an increase of £0.4m compared to 2015.

<sup>3</sup> This includes £0.3m (2015: £0.3m) for the review of the half-year report.

### 9 Intangible assets

	Goodwill £m	Certification costs and participation fees £m	Development expenditure £m	Contractual aftermarket rights £m	Customer relationships £m	Software £m	Other £m	Total £m
<b>Cost</b>								
At 1 January 2015	1,675	1,079	1,707	638	469	543	518	6,629
Exchange differences	(87)	(7)	(32)	–	(14)	–	(16)	(156)
Additions	–	73	55	161	–	79	40	408
Acquisitions of businesses	1	–	–	–	1	–	1	3
Disposals	–	–	–	–	–	(6)	–	(6)
<b>At 1 January 2016</b>	<b>1,589</b>	<b>1,145</b>	<b>1,730</b>	<b>799</b>	<b>456</b>	<b>616</b>	<b>543</b>	<b>6,878</b>
Exchange differences	284	26	116	–	84	16	66	592
Additions	–	154	100	208	–	116	53	631
Acquisitions of businesses	1	–	–	–	–	–	1	2
Disposals	–	–	(2)	–	–	(6)	–	(8)
<b>At 31 December 2016</b>	<b>1,874</b>	<b>1,325</b>	<b>1,944</b>	<b>1,007</b>	<b>540</b>	<b>742</b>	<b>663</b>	<b>8,095</b>
<b>Accumulated amortisation</b>								
At 1 January 2015	16	311	564	389	96	259	190	1,825
Exchange differences	(5)	(1)	(10)	–	(3)	–	(3)	(22)
Charge for the year <sup>1</sup>	–	63	137	55	46	68	38	407
Impairment	75	–	–	–	–	–	–	75
Reversal of impairment	–	–	–	(50)	–	–	–	(50)
Disposals	–	–	–	–	–	(2)	–	(2)
<b>At 1 January 2016</b>	<b>86</b>	<b>373</b>	<b>691</b>	<b>394</b>	<b>139</b>	<b>325</b>	<b>225</b>	<b>2,233</b>
Exchange differences	32	3	48	–	28	8	35	154
Charge for the year <sup>1</sup>	–	64	147	39	42	81	33	406
Impairment	219	–	2	–	–	–	1	222
<b>At 31 December 2016</b>	<b>337</b>	<b>440</b>	<b>888</b>	<b>433</b>	<b>209</b>	<b>414</b>	<b>294</b>	<b>3,015</b>
<b>Net book value</b>								
<b>At 31 December 2016</b>	<b>1,537</b>	<b>885</b>	<b>1,056</b>	<b>574</b>	<b>331</b>	<b>328</b>	<b>369</b>	<b>5,080</b>
<b>At 31 December 2015</b>	<b>1,503</b>	<b>772</b>	<b>1,039</b>	<b>405</b>	<b>317</b>	<b>291</b>	<b>318</b>	<b>4,645</b>
<b>At 1 January 2015</b>	<b>1,659</b>	<b>768</b>	<b>1,143</b>	<b>249</b>	<b>373</b>	<b>284</b>	<b>328</b>	<b>4,804</b>

<sup>1</sup> 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	2016 £m	2015 £m
Rolls-Royce Power Systems AG	Power Systems	871	739
Marine – arising from the acquisitions of Vinters Limited, Scandinavian Electric Holding AS and ODIM ASA	Marine	401	516
Rolls-Royce Deutschland Ltd & Co KG	Civil Aerospace	236	202
Other	Various	29	46
		1,537	1,503

Goodwill has been tested for impairment during 2016 on the following basis:

- The carrying values of goodwill have been assessed by reference to value in use. These have been estimated using cash flows from the most recent forecasts prepared by management, which are consistent with past experience and external sources of information on market conditions. Given the long-term and established nature of many of the Group's products (product lives are often measured in decades), these forecasts generally cover the next five-ten years. Growth rates for the period not covered by the forecasts are based on a range of growth rates (2.0-3.5%) 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.

Prior to 2016, goodwill in the Marine business was considered as separate CGUs, based on the original acquisitions (including ODIM ASA, Scandinavian Electric Holdings and Vinters Limited (formerly Vickers plc)). However, following re-organisations, including those resulting from the current transformation programme, we now consider that the Marine business (excluding the UK marine defence business) is a single CGU.

The Marine business has continued to be impacted by the low crude oil price and over supply of vessels to its offshore support customers. The downturn has been deeper and more prolonged than forecast a year ago and, as a consequence, the Group has recognised an impairment loss of £200m to the carrying value of goodwill of the CGU. This is included in cost of sales in the income statement, but excluded from the underlying results. The impairment loss is based on a value in use calculation using cash flows forecast over a ten-year period (which is considered to take account of the cyclical nature of the market). The impairment test indicated a recoverable amount of £473m (including allowance for identified risks of £18m) compared with a pre-impairment carrying value of £673m.

The Group has also recognised other impairments to goodwill of £19m, including £14m in relation to its North American civil nuclear business. This reflects the current weakness in the services market, although the Directors expect these to recover in the medium term.

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

- Rolls-Royce Power Systems AG** – Discount rate **11.7%** (2015: 11.7%). Volume of equipment deliveries, pricing achieved and cost escalation. These are based on current and known future programmes, estimates of capture of market share and long-term economic forecasts. The principal foreign exchange exposures are on translating income in a variety of non-functional currencies into euros. For the purposes of the impairment only, cash flows from recent management forecasts for a five-year period have been included. Cash flows beyond five years are assumed to grow at **2%** (2015: 2%). Reasonably possible changes in the key assumptions would cause the value in use of the goodwill to fall below its carrying value, which include a reduction in the level of cash generation of 13%, or an increase in the assumed discount rate of 1.5%. At 31 December 2016, the value in use exceeded the carrying value by £440m.
- Marine business** – Discount rate **13%**, including an allowance of 0.8% to reflect uncertainties in market recovery and the achievement of cost savings, (2015: 13%). Volume of equipment deliveries, capture of aftermarket and cost escalation. These are based on current and known future programmes, estimates of customers' fleet requirements and long-term economic forecasts. The principal foreign exchange exposures are on translating income in a variety of non-functional currencies into Norwegian kroner. For the purposes of the impairment test only, cash flows beyond the ten-year forecasts are assumed to grow at **2.5%** (2015: 2.5%). Any further deterioration of the market would require additional impairment. For example if the market recovery were delayed by one year, compared to that assumed, this would result in an additional impairment of around £60m.
- Rolls-Royce Deutschland Ltd & Co KG** – Discount rate **13%** (2015: 13%). Volume of engine deliveries, flying hours of installed fleet and cost escalation. These are based on current and known future programmes, estimates of customers' fleet requirements and long-term economic forecasts. The principal foreign exchange exposure is on translating US dollar income into euros. For the purposes of the impairment test only, cash flows beyond the ten-year forecasts are assumed to grow at **2.5%** (2015: 2.5%). The Directors do not consider that any reasonably possible change in the key assumptions would cause the value in use of the goodwill to fall below its carrying value. The overall level of business would need to reduce by around 70% to cause an impairment of this balance.

## Notes to the consolidated financial statements continued

### 9 Intangible assets continued

#### OTHER INTANGIBLE ASSETS

Certification costs and participation fees, development costs and contractual aftermarket rights 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 **9-13%** (2015: 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.

No impairment is required on this basis. However, a combination of adverse changes in assumptions (eg. market size and share, unit costs and programme delays) and other variables (eg. 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
<b>Cost</b>					
At 1 January 2015	1,334	3,600	321	795	6,050
Exchange differences	(20)	(39)	(2)	(3)	(64)
Additions	18	117	19	340	494
Acquisitions of businesses	—	1	—	—	1
Disposals of businesses	—	(1)	—	—	(1)
Reclassifications	81	335	7	(423)	—
Transferred to assets held for sale	(8)	(23)	(2)	—	(33)
Disposals/write-offs	(30)	(96)	(4)	(1)	(131)
<b>At 1 January 2016</b>	<b>1,375</b>	<b>3,894</b>	<b>339</b>	<b>708</b>	<b>6,316</b>
Exchange differences	141	352	12	55	560
Reclassification of joint ventures to joint operations	7	87	—	—	94
Additions – purchased	25	124	51	426	626
Additions – arising from TotalCare Flex contracts (non-cash)	—	—	75	—	75
Disposals of businesses	(1)	(3)	—	—	(4)
Reclassifications	131	230	63	(424)	—
Disposals/write-offs	(11)	(85)	(49)	—	(145)
<b>At 31 December 2016</b>	<b>1,667</b>	<b>4,599</b>	<b>491</b>	<b>765</b>	<b>7,522</b>
<b>Accumulated depreciation</b>					
At 1 January 2015	391	2,109	103	1	2,604
Exchange differences	(7)	(24)	(1)	—	(32)
Charge for the year <sup>1</sup>	48	299	26	—	373
Impairment	3	2	—	—	5
Disposals of businesses	—	(1)	—	—	(1)
Transferred to assets held for sale	(5)	(20)	(1)	—	(26)
Disposals/write-offs	(14)	(81)	(2)	—	(97)
<b>At 1 January 2016</b>	<b>416</b>	<b>2,284</b>	<b>125</b>	<b>1</b>	<b>2,826</b>
Exchange differences	44	182	4	—	230
Reclassification of joint ventures to joint operations	1	52	—	—	53
Charge for the year <sup>1</sup>	63	333	28	—	424
Impairment	1	—	—	1	2
Disposals of businesses	—	(2)	—	—	(2)
Reclassifications	—	(9)	9	—	—
Disposals/write-offs	(10)	(75)	(40)	—	(125)
<b>At 31 December 2016</b>	<b>515</b>	<b>2,765</b>	<b>126</b>	<b>2</b>	<b>3,408</b>
<b>Net book value</b>					
<b>At 31 December 2016</b>	<b>1,152</b>	<b>1,834</b>	<b>365</b>	<b>763</b>	<b>4,114</b>
At 31 December 2015	959	1,610	214	707	3,490
At 1 January 2015	943	1,491	218	794	3,446

<sup>1</sup> Depreciation charged during the year is included in the income statement or included in the cost of inventory as appropriate.

## Notes to the consolidated financial statements continued

### 10 Property, plant and equipment continued

Property, plant and equipment includes:

	2016 £m	2015 £m
<b>Net book value of finance leased assets:</b>		
Land and buildings	5	5
Plant and equipment	6	7
Aircraft and engines	42	40
<b>Assets held for use in operating leases:</b>		
Cost	413	321
Depreciation	(108)	(87)
Net book value	305	234
<b>Capital expenditure commitments</b>		
Cost of fully depreciated assets	252	167
	<b>1,059</b>	853

The Group's share of equity accounted entities' capital commitments is £72m (2015: £75m).

### 11 Investments

#### COMPOSITION OF THE GROUP

The entities contributing to the Group's financial results are listed on pages 170 to 175.

#### 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 2015	535	4	539	31
Exchange differences	7	–	7	(2)
Additions	12	3	15	6
Taxation paid by the Group	(3)	–	(3)	–
Share of retained profit/(loss)	42	(5)	37	–
Impairment	–	–	–	(2)
Share of OCI – may be reclassified to profit or loss	(19)	–	(19)	–
<b>At 1 January 2016</b>	<b>574</b>	<b>2</b>	<b>576</b>	<b>33</b>
Exchange differences	109	(2)	107	5
Increase in share in joint ventures	154	–	154	–
Other additions	20	10	30	–
Reclassification of joint ventures to joint operations	(57)	–	(57)	–
Share of retained profit/(loss)	44	(1)	43	–
Share of OCI – will not be reclassified to profit or loss	(2)	–	(2)	–
Share of OCI – may be reclassified to profit or loss	(7)	–	(7)	–
<b>At 31 December 2016</b>	<b>835</b>	<b>9</b>	<b>844</b>	<b>38</b>

## 11 Investments continued

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

	Principal location	Activity	Ownership interest <sup>1</sup>
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% (45.0%)
Singapore Aero Engine Services Pte Limited (SAESL)	Singapore	Aero engine repair and overhaul	50.0% (39.0%)
Industria de Turbo Propulsores SA (ITP)	Spain	Aero engine component manufacture and maintenance	46.9%

<sup>1</sup> Figures in brackets are 2015 ownership interest, if different. During 2016, the Group completed the changes to the Approved Maintenance Centres announced in November 2015, resulting in increases in the ownership interests in HAESL and SAESL.

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

	APL		HAESL		SAESL		ITP	
	2016 £m	2015 £m						
Revenue	151	130	799	652	763	626	615	520
Profit for the year	58	65	233	27	33	46	50	40
Other comprehensive income	—	—	—	—	—	—	—	—
Total comprehensive income for the year	58	65	233	27	33	46	50	40
Dividends received during the year	(27)	(29)	(237)	(23)	(24)	(35)	(19)	(19)
Profit for the year included the following:								
Depreciation and amortisation	(82)	(59)	(10)	(8)	(12)	(5)	(45)	(37)
Interest income	—	—	—	—	—	—	11	10
Interest expense	(24)	(17)	(1)	(1)	(2)	—	(16)	(16)
Income tax expense	(5)	(7)	(8)	(5)	—	—	7	7
Current assets	176	129	248	223	307	218	731	576
Non-current assets	1,888	1,349	105	85	167	125	701	626
Current liabilities	(348)	(70)	(88)	(116)	(146)	(75)	(497)	(416)
Non-current liabilities	(1,296)	(1,123)	(79)	(38)	(143)	(136)	(485)	(431)
Net assets	420	285	186	154	185	132	450	355
Included in the above:								
Cash and cash equivalents	21	20	12	4	7	10	274	225
Current financial liabilities <sup>1</sup>	(292)	(19)	(7)	—	—	—	(12)	(25)
Non-current financial liabilities <sup>1</sup>	(1,111)	(969)	(71)	(30)	(143)	(136)	(331)	(273)

<sup>1</sup> Excluding trade and other payables.

Reconciliation to the carrying amount recognised in the consolidated financial statements

Ownership interest	50.0%	50.0%	50.0%	45.0%	50.0%	39.0%	46.9%	46.9%
Group share of net assets above	210	143	93	69	93	51	211	166
Goodwill	—	—	38	—	100	—	—	—
Adjustments for intercompany trading	—	—	—	—	—	—	(43)	(33)
Included in the consolidated balance sheet	210	143	131	69	193	51	168	133

On 11 July 2016, the Group announced that it will purchase the outstanding 53.1% shareholding in ITP owned by SENER Grupo de Ingeniería SA (SENER). This follows a decision by SENER to exercise its put option. On 28 November 2016, and following due diligence, the Group confirmed the valuation of €720m. Under the agreement, consideration will be settled over a two-year period following completion in eight evenly spaced instalments of equal value. The updated agreement allows flexibility to settle the consideration either in cash, in the form of Rolls-Royce shares or any mixture of the two, as preferred by Rolls-Royce. A decision as to whether each payment will be settled in cash, shares or cash and shares will be determined by Rolls-Royce during the payment period.

Completion remains subject to regulatory clearances and is expected in 2017.

## Notes to the consolidated financial statements continued

### 11 Investments continued

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

	Individually material joint ventures (above)		Other joint ventures		Associates		Total	
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
<b>Assets:</b>								
Non-current assets	1,503	1,016	921	982	8	—	2,432	1,998
Current assets	710	523	383	320	1	2	1,094	845
<b>Liabilities:</b> <sup>1</sup>								
Current liabilities	(524)	(312)	(266)	(229)	—	—	(790)	(541)
Non-current liabilities	(987)	(831)	(905)	(895)	—	—	(1,892)	(1,726)
	702	396	133	178	9	2	844	576
<sup>1</sup> Liabilities include borrowings of	(970)	(700)	(761)	(773)	—	—	(1,731)	(1,473)
Profit for the year	84	82	34	23	(1)	(5)	117	100
Other comprehensive income	—	—	(7)	(19)	—	—	(7)	(19)
Total comprehensive income for the year	84	82	27	4	(1)	(5)	110	81

### 12 Inventories

	2016 £m	2015 £m
Raw materials	529	509
Work in progress	1,199	882
Long-term contracts work in progress	18	23
Finished goods	1,312	1,173
Payments on account	28	50
	3,086	2,637
Inventories stated at net realisable value	271	221
Amount of inventory write-down	74	64
Reversal of inventory write-down	8	14

### 13 Trade and other receivables

	2016 £m	2015 £m
Trade receivables	1,945	1,612
Amounts recoverable on contracts <sup>1</sup>	3,514	3,179
Amounts owed by joint ventures and associates	297	252
Other receivables	1,003	1,006
Prepayments and accrued income	197	195
	6,956	6,244

Analysed as:

Financial instruments (note 17):		
Trade receivables and similar items	2,470	2,061
Other non-derivative financial assets	811	843
Non-financial instruments	3,675	3,340
	6,956	6,244

Trade and other receivables expected to be recovered in more than one year:

Trade receivables	81	57
Amounts recoverable on contracts	3,020	2,768
Amounts owed by joint ventures and associates	—	1
Other receivables	109	131
Prepayments and accrued income	69	68
	3,279	3,025

<sup>1</sup> Amounts recoverable on contracts include £3,348m (2015: £2,994m) of TotalCare assets.

## 14 Cash and cash equivalents

	2016 £m	2015 £m
Cash at bank and in hand	872	662
Money-market funds	552	783
Short-term deposits	1,347	1,731
	<b>2,771</b>	3,176
Overdrafts (note 15)	—	—
Cash and cash equivalents per cash flow statement (page 118)	<b>2,771</b>	3,176
Cash held as collateral against third party obligations (note 18)	38	35

Cash and cash equivalents at 31 December 2016 include £34m (2015: £21m) that is not available for general use by the Group. This balance relates to cash held in non-wholly owned subsidiaries and the Group's captive insurance company.

## 15 Borrowings

	Current		Non-current		Total	
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
<b>Unsecured</b>						
Overdrafts	—	—	—	—	—	—
Bank loans	169	217	271	330	440	547
7 3/8% Notes 2016 £200m	—	200	—	—	—	200
6.75% Notes 2019 £500m <sup>1</sup>	—	—	534	536	534	536
2.375% Notes 2020 US\$500m <sup>2</sup>	—	—	403	333	403	333
2.125% Notes 2021 €750m <sup>2</sup>	—	—	682	576	682	576
3.625% Notes 2025 US\$1,000m <sup>2</sup>	—	—	814	668	814	668
3.375% Notes 2026 £375m <sup>1</sup>	—	—	417	390	417	390
<b>Secured</b>						
Obligations under finance leases <sup>3</sup>	3	2	64	50	67	52
	<b>172</b>	419	<b>3,185</b>	2,883	<b>3,357</b>	3,302

<sup>1</sup>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.

<sup>2</sup>These notes are the subject of interest rate swap agreements under which the Group has undertaken to pay floating rates of interest, and currency swaps which form a fair value hedge.

<sup>3</sup>Obligations under finance leases are secured by related leased assets.

## 16 Trade and other payables

	Current		Non-current		Total	
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
Payments received on account <sup>1</sup>	1,246	1,491	1,024	516	2,270	2,007
Trade payables	1,981	1,397	—	23	1,981	1,420
Amounts owed to joint ventures and associates	268	197	3	2	271	199
Other taxation and social security	93	90	—	1	93	91
Other payables	2,243	1,784	784	361	3,027	2,145
Accruals and deferred income	2,126	1,964	1,648	1,414	3,774	3,378
	<b>7,957</b>	6,923	<b>3,459</b>	2,317	<b>11,416</b>	9,240
<sup>1</sup> Includes payments received on account from joint ventures and associates	140	161	17	35	157	196

Included within trade and other payables are government grants of £75m (2015: £64m). During the year, £11m (2015: £21m) of government grants were released to the income statement.

Included in accruals and deferred income are deferred receipts from RRSA workshare partners of £233m (2015: £228m), £907m (2015: £783m) of TotalCare liabilities and £671m (2015: nil) for financial penalties from agreements with investigating bodies.

Trade and other payables are analysed as follows:

	2016 £m	2015 £m
Financial instruments (note 17):		
Trade payables and similar items	3,889	3,101
Other non-derivative financial liabilities	1,660	817
Non-financial instruments	5,867	5,322
	<b>11,416</b>	9,240

## Notes to the consolidated financial statements continued

### 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	Loans and receivables £m	Available for sale £m	Cash £m	Fair value through profit or loss £m	Other £m	
<b>2016</b>									
Unlisted non-current asset investments	11	A	—	38	—	—	—	—	38
Trade receivables and similar items	13	B	—	2,470	—	—	—	—	2,470
Other non-derivative financial assets	13	B	—	811	—	—	—	—	811
Derivative financial assets <sup>1</sup>		C	387	—	—	—	—	—	387
Short-term investments		B	—	3	—	—	—	—	3
Cash and cash equivalents	14	B	—	1,347	552	872	—	—	2,771
Borrowings	15	D	—	—	—	—	—	(3,357)	(3,357)
Derivative financial liabilities <sup>1</sup>		C	—	—	—	—	(5,636)	—	(5,636)
Financial RRSAs	E	—	—	—	—	—	(101)	(101)	
TotalCare Flex	D	—	—	—	—	—	(15)	(15)	
C Shares	B	—	—	—	—	—	(28)	(28)	
Trade payables and similar items	16	B	—	—	—	—	(3,889)	(3,889)	
Other non-derivative financial liabilities	16	B	—	—	—	—	(1,660)	(1,660)	
			387	4,669	552	872	(5,636)	(9,050)	(8,206)
<b>2015</b>									
Unlisted non-current asset investments	11	A	—	33	—	—	—	—	33
Trade receivables and similar items	13	B	—	2,061	—	—	—	—	2,061
Other non-derivative financial assets	13	B	—	843	—	—	—	—	843
Derivative financial assets <sup>1</sup>		C	112	—	—	—	—	—	112
Short-term investments		B	—	2	—	—	—	—	2
Cash and cash equivalents	14	B	—	1,731	783	662	—	—	3,176
Borrowings	15	D	—	—	—	—	—	(3,302)	(3,302)
Derivative financial liabilities <sup>1</sup>		C	—	—	—	—	(1,843)	—	(1,843)
Financial RRSAs	E	—	—	—	—	—	(110)	(110)	
C Shares	B	—	—	—	—	—	(29)	(29)	
Trade payables and similar items	16	B	—	—	—	—	(3,101)	(3,101)	
Other non-derivative financial liabilities	16	B	—	—	—	—	(817)	(817)	
			112	4,670	783	662	(1,843)	(7,359)	(2,975)

<sup>1</sup>In the event of counterparty default relating to derivative financial assets and liabilities, offsetting would apply and financial assets and liabilities held with the same counterparty would net off. If this occurred with every counterparty, total financial assets would be nil and liabilities £5,249m.

Fair values equate to book values for both 2016 and 2015, with the following exceptions:

	2016		2015	
	Book value £m	Fair value £m	Book value £m	Fair value £m
Borrowings	(3,357)	(3,413)	(3,302)	(3,312)
Financial RRSAs	(101)	(109)	(110)	(110)

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 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 and TotalCare Flex liabilities 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 *Fair Value Measurement*).

E The fair value of RRSAs is 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 *Fair Value Measurement* 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

## 17 Financial instruments continued

### CARRYING VALUES OF OTHER FINANCIAL ASSETS AND LIABILITIES

	Foreign exchange contracts £m	Commodity contracts £m	Interest rate contracts <sup>1</sup> £m	Total derivatives £m	Financial RRSAs £m	TotalCare Flex £m	C Shares £m	Total £m
<b>2016</b>								
Non-current assets	13	5	364	382	—	—	—	382
Current assets	4	1	—	5	—	—	—	5
<b>Assets</b>	<b>17</b>	<b>6</b>	<b>364</b>	<b>387</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>387</b>
Current liabilities	(566)	(24)	—	(590)	(33)	—	(28)	(651)
Non-current liabilities	(5,002)	(38)	(6)	(5,046)	(68)	(15)	—	(5,129)
<b>Liabilities</b>	<b>(5,568)</b>	<b>(62)</b>	<b>(6)</b>	<b>(5,636)</b>	<b>(101)</b>	<b>(15)</b>	<b>(28)</b>	<b>(5,780)</b>
	<b>(5,551)</b>	<b>(56)</b>	<b>358</b>	<b>(5,249)</b>	<b>(101)</b>	<b>(15)</b>	<b>(28)</b>	<b>(5,393)</b>
<b>2015</b>								
Non-current assets	3	—	80	83	—	—	—	83
Current assets	29	—	—	29	—	—	—	29
<b>Assets</b>	<b>32</b>	<b>—</b>	<b>80</b>	<b>112</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>112</b>
Current liabilities	(244)	(39)	—	(283)	(19)	—	(29)	(331)
Non-current liabilities	(1,428)	(65)	(67)	(1,560)	(91)	—	—	(1,651)
<b>Liabilities</b>	<b>(1,672)</b>	<b>(104)</b>	<b>(67)</b>	<b>(1,843)</b>	<b>(110)</b>	<b>—</b>	<b>(29)</b>	<b>(1,982)</b>
	<b>(1,640)</b>	<b>(104)</b>	<b>13</b>	<b>(1,731)</b>	<b>(110)</b>	<b>—</b>	<b>(29)</b>	<b>(1,870)</b>

<sup>1</sup> 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 US dollars, 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.

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

	Foreign exchange instruments		Commodity instruments		Interest rate instruments		Total	
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
At 1 January	(1,640)	(639)	(104)	(43)	13	52	(1,731)	(630)
Currency options at inception <sup>1</sup>	(33)	(20)	—	—	—	—	(33)	(20)
Movements in fair value hedges <sup>2</sup>	—	1	—	—	345	(36)	345	(35)
Movements in other derivative contracts <sup>3</sup>	(4,436)	(1,217)	16	(89)	—	—	(4,420)	(1,306)
Contracts settled <sup>4</sup>	558	235	32	28	—	(3)	590	260
<b>At 31 December</b>	<b>(5,551)</b>	<b>(1,640)</b>	<b>(56)</b>	<b>(104)</b>	<b>358</b>	<b>13</b>	<b>(5,249)</b>	<b>(1,731)</b>

<sup>1</sup> The Group has written currency options to sell USD and buy GBP as part of a commercial agreement. The fair values of these options on inception are treated as a discount to the customer.

<sup>2</sup> Loss on related hedged items £345m (2015: £35m gain).

<sup>3</sup> Included in financing.

<sup>4</sup> Includes nil contracts settled in fair value hedges (2015: £8m).

### 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.

## Notes to the consolidated financial statements continued

### 17 Financial instruments continued

Movements in the carrying values were as follows:

	Financial RRSAs		TotalCare Flex
	2016 £m	2015 £m	2016 £m
<b>At 1 January</b>	<b>(110)</b>	<b>(145)</b>	<b>–</b>
Exchange adjustments included in OCI	5	–	–
Additions	–	–	(14)
Financing charge <sup>1</sup>	(6)	(8)	(1)
Excluded from underlying profit:			
Changes in forecast payments <sup>1</sup>	5	11	–
Exchange adjustments <sup>1</sup>	(13)	(3)	(3)
Cash paid to partners	18	35	–
Other	–	–	3
<b>At 31 December</b>	<b>(101)</b>	<b>(110)</b>	<b>(15)</b>

<sup>1</sup> Included in financing.

### 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. For accounting purposes, these derivative contracts are not designated as hedging instruments.

The Group also has exposures to the fair values of non-derivative financial instruments denominated in foreign currencies. To manage the risk of changes in these fair values, the Group enters into derivative forward foreign exchange contracts, which are designated as fair value hedges for accounting purposes.

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. Where appropriate, foreign currency financial liabilities may be designated as hedges of the net investment.

**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 within the Group policy, which is to maintain a higher proportion of net debt at floating rates of interest as a natural hedge to the net cash position. These are designated as either fair value or cash flow hedges as appropriate.

**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. For accounting purposes, these derivative contracts are not designated as hedging instruments.

**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
<b>At 31 December 2016</b>							
Foreign exchange contracts:							
Non-hedge accounted	29,327	5,826	4,867	15,011	3,623	17	(5,568)
Interest rate contracts:							
Fair value hedges	2,735	–	–	1,548	1,187	358	–
Non-hedge accounted	–	–	–	–	–	6	(6)
Commodity contracts:							
Non-hedge accounted	300	83	80	122	15	6	(62)
	32,362	5,909	4,947	16,681	4,825	387	(5,636)
<b>At 31 December 2015</b>							
Foreign exchange contracts:							
Non-hedge accounted	22,418	5,736	4,266	11,637	779	32	(1,672)
Interest rate contracts:							
Fair value hedges	2,437	–	–	500	1,937	74	(61)
Non-hedge accounted	–	–	–	–	–	6	(6)
Commodity contracts:							
Non-hedge accounted	268	90	72	83	23	–	(104)
	25,123	5,826	4,338	12,220	2,739	112	(1,843)

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

Derivative financial instruments related to foreign exchange risks are denominated in the following currencies:

	Currencies purchased forward				Total £m
	Sterling £m	US dollar £m	Euro £m	Other £m	
<b>At 31 December 2016</b>					
Currencies sold forward:					
Sterling	–	–	246	274	520
US dollar	25,330	–	1,885	984	28,199
Euro	36	148	–	196	380
Other	13	101	105	9	228
<b>At 31 December 2015</b>					
Currencies sold forward:					
Sterling	–	383	–	221	604
US dollar	18,869	–	1,552	902	21,323
Euro	2	76	–	125	203
Other	131	12	143	2	288

Other derivative financial instruments are denominated in the following currencies:

	2016 £m	2015 £m
Sterling	875	875
US dollar	1,515	1,279
Euro	645	550

## Notes to the consolidated financial statements continued

### 17 Financial instruments continued

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

	Sterling £m	US dollar £m	Euro £m	Other £m	Total £m
<b>At 31 December 2016</b>					
Unlisted non-current investments	–	1	36	1	38
Trade receivables and similar items	160	1,567	653	90	2,470
Other non-derivative financial assets	284	271	123	133	811
Short-term investments	–	–	–	3	3
Cash and cash equivalents	1,134	831	507	299	2,771
<b>Assets</b>	<b>1,578</b>	<b>2,670</b>	<b>1,319</b>	<b>526</b>	<b>6,093</b>
Borrowings	(1,194)	(1,374)	(783)	(6)	(3,357)
Financial RRSAs	9	(78)	(32)	–	(101)
TotalCare Flex	–	(15)	–	–	(15)
C Shares	(28)	–	–	–	(28)
Trade payables and similar items	(1,730)	(1,437)	(573)	(149)	(3,889)
Other non-derivative financial liabilities	(889)	(588)	(138)	(45)	(1,660)
<b>Liabilities</b>	<b>(3,832)</b>	<b>(3,492)</b>	<b>(1,526)</b>	<b>(200)</b>	<b>(9,050)</b>
	(2,254)	(822)	(207)	326	(2,957)
 <b>At 31 December 2015</b>					
Unlisted non-current investments	–	1	31	1	33
Trade receivables and similar items	131	1,228	613	89	2,061
Other non-derivative financial assets	280	350	102	111	843
Short-term investments	–	–	–	2	2
Cash and cash equivalents	1,554	959	446	217	3,176
<b>Assets</b>	<b>1,965</b>	<b>2,538</b>	<b>1,192</b>	<b>420</b>	<b>6,115</b>
Borrowings	(1,369)	(1,162)	(768)	(3)	(3,302)
Financial RRSAs	–	(75)	(35)	–	(110)
C Shares	(29)	–	–	–	(29)
Trade payables and similar items	(1,536)	(859)	(523)	(183)	(3,101)
Other non-derivative financial liabilities	(242)	(303)	(139)	(133)	(817)
<b>Liabilities</b>	<b>(3,176)</b>	<b>(2,399)</b>	<b>(1,465)</b>	<b>(319)</b>	<b>(7,359)</b>
	(1,211)	139	(273)	101	(1,244)

### 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
<b>At 31 December 2016</b>					
Sterling	–	(1)	3	–	2
US dollar	(22)	–	(2)	19	(5)
Euro	(2)	(1)	–	1	(2)
Other	3	9	18	2	32
 <b>At 31 December 2015</b>					
Sterling	–	–	1	27	28
US dollar	(12)	1	–	8	(3)
Euro	4	–	–	–	4
Other	–	3	1	(1)	3

## 17 Financial instruments continued

### 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
<b>At 31 December 2016</b>					
Unlisted non-current asset investments	38	—	—	—	38
Trade receivables and similar items	2,133	218	85	34	2,470
Other non-derivative financial assets	796	13	—	2	811
Derivative financial assets	387	—	—	—	387
Short-term investments	3	—	—	—	3
Cash and cash equivalents	2,771	—	—	—	2,771
	6,128	231	85	36	6,480
<b>At 31 December 2015</b>					
Unlisted non-current asset investments	33	—	—	—	33
Trade receivables and similar items	1,745	184	98	34	2,061
Other non-derivative financial assets	835	5	1	2	843
Derivative financial assets	112	—	—	—	112
Short-term investments	2	—	—	—	2
Cash and cash equivalents	3,176	—	—	—	3,176
	5,903	189	99	36	6,227

### CONTRACTUAL MATURITY ANALYSIS OF FINANCIAL LIABILITIES

	Gross values					
	Within one year £m	Between one and two years £m	Between two and five years £m	After five years £m	Discounting £m	Carrying value £m
<b>At 31 December 2016</b>						
Borrowings	(276)	(114)	(2,007)	(1,458)	498	(3,357)
Derivative financial liabilities	(604)	(1,297)	(3,190)	(1,418)	873	(5,636)
Financial RRSAs	(24)	(26)	(66)	(2)	17	(101)
TotalCare Flex	—	—	(18)	—	3	(15)
C Shares	(28)	—	—	—	—	(28)
Trade payables and similar items	(3,860)	(15)	—	(14)	—	(3,889)
Other non-derivative financial liabilities	(1,080)	(68)	(438)	(74)	—	(1,660)
	(5,872)	(1,520)	(5,719)	(2,966)	1,391	(14,686)
<b>At 31 December 2015</b>						
Borrowings	(530)	(161)	(1,317)	(1,897)	603	(3,302)
Derivative financial liabilities	(286)	(329)	(1,026)	(314)	112	(1,843)
Financial RRSAs	(16)	(20)	(76)	(10)	12	(110)
C Shares	(29)	—	—	—	—	(29)
Trade payables and similar items	(3,059)	(38)	(4)	—	—	(3,101)
Other non-derivative financial liabilities	(640)	(43)	(74)	(60)	—	(817)
	(4,560)	(591)	(2,497)	(2,281)	727	(9,202)

## Notes to the consolidated financial statements continued

### 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.

	Effective interest rate %	Total £m	Period in which interest rate reprices	
			6 months or less £m	6-12 months £m
<b>At 31 December 2016</b>				
Short-term investments <sup>1</sup>		3	1	2
Cash and cash equivalents <sup>2</sup>		2,771	2,771	—
<b>Unsecured bank loans</b>				
Other borrowings		(107)	—	—
£200m floating rate loan	GBP LIBOR + 1.26	(200)	(200)	—
£43m floating rate loan	GBP LIBOR + 0.402	(43)	(43)	—
€125m fixed rate loan	2.6000%	—	—	—
€75m fixed rate loan	2.0600%	(64)	—	—
€50m fixed rate loan	2.3500%	(26)	—	—
<b>Unsecured bond issues</b>				
6.75% Notes 2019 £500m	6.7500%	(534)	—	—
Effect of interest rate swaps	GBP LIBOR + 2.9824	—	(534)	—
2.375% Notes 2020 \$500m	2.3750%	(403)	—	—
Effect of interest rate swaps	GBP LIBOR + 0.8410	—	(403)	—
2.125% Notes 2021 €750m	2.1250%	(682)	—	—
Effect of interest rate swaps	GBP LIBOR + 0.7005	—	(682)	—
3.625% Notes 2025 \$1,000m	3.6250%	(814)	—	—
Effect of interest rate swaps	GBP LIBOR + 1.4658	—	(814)	—
3.375% Notes 2026 £375m	3.3750%	(417)	—	—
Effect of interest rate swaps	GBP LIBOR + 0.8930	—	(417)	—
<b>Other secured</b>				
Obligations under finance leases	4.5488%	(67)	—	—
		(583)		

	Effective interest rate %	Total £m	Period in which interest rate reprices	
			6 months or less £m	6-12 months £m
<b>At 31 December 2015</b>				
Short-term investments <sup>1</sup>		2	2	—
Cash and cash equivalents <sup>2</sup>		3,176	3,176	—
<b>Unsecured bank loans</b>				
Other borrowings		(129)	(1)	—
£200m floating rate loan	GBP LIBOR + 1.26	(200)	(200)	—
£43m floating rate loan	GBP LIBOR + 0.402	(43)	(43)	—
€125m fixed rate loan	2.6000%	(92)	—	—
€75m fixed rate loan	2.0600%	(55)	—	—
€50m fixed rate loan	2.3500%	(28)	—	—
<b>Unsecured bond issues</b>				
7 3/8% Notes 2016 £200m	7.3750%	(200)	—	—
6.75% Notes 2019 £500m	6.7500%	(536)	—	—
Effect of interest rate swaps	GBP LIBOR + 2.9824	—	(536)	—
2.375% Notes 2020 \$500m	2.3750%	(333)	—	—
Effect of interest rate swaps	GBP LIBOR + 0.8410	—	(333)	—
2.125% Notes 2021 €750m	2.1250%	(576)	—	—
Effect of interest rate swaps	GBP LIBOR + 0.7005	—	(576)	—
3.625% Notes 2025 \$1,000m	3.6250%	(668)	—	—
Effect of interest rate swaps	GBP LIBOR + 1.4658	—	(668)	—
3.375% Notes 2026 £375m	3.3750%	(390)	—	—
Effect of interest rate swaps	GBP LIBOR + 0.8930	—	(390)	—
<b>Other secured</b>				
Obligations under finance leases	4.1089%	(52)		
		(124)		

<sup>1</sup> Interest on the short-term investments are at fixed rates.

<sup>2</sup> Cash and cash equivalents comprise bank balances and demand deposits and earn interest at rates based on daily deposit rates.

## 17 Financial instruments continued

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. 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 £2,280m (2015: £1,780m) of undrawn committed borrowing facilities available for at least the next two years.

### SENSITIVITY ANALYSIS

Sensitivities at 31 December (all other variables held constant) – impact on profit after tax and equity	2016 £m	2015 £m
Sterling 10% weaker against the US dollar	(2,552)	(1,574)
Sterling 10% stronger against the US dollar	2,089	1,288
Euro 10% weaker against the US dollar	(158)	(130)
Euro 10% stronger against the US dollar	133	111
Sterling 10% weaker against the Euro	26	18
Sterling 10% stronger against the Euro	(21)	(15)
Commodity prices 10% lower	(19)	(13)
Commodity prices 10% higher	19	13

At 31 December 2016 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 185.

### 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:

	2016		2015	
	Millions	Nominal value £m	Millions	Nominal value £m
At 1 January	28,960	29	22,005	22
Issued	300,993	301	429,536	430
Redeemed	(301,828)	(302)	(422,581)	(423)
<b>At 31 December</b>	<b>28,125</b>	<b>28</b>	<b>28,960</b>	<b>29</b>

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:

	2016		2015	
	Pence per share	£m	Pence per share	£m
Interim	4.60	85	9.27	170
Final	7.10	130	7.10	131
	<b>11.70</b>	<b>215</b>	<b>16.37</b>	<b>301</b>

## Notes to the consolidated financial statements continued

### 18 Provisions for liabilities and charges

	At 1 January 2016 £m	Exchange differences £m	Unused amounts reversed £m	Charged to income statement £m	Utilised £m	At 31 December 2016 £m
Warranties and guarantees <sup>1</sup>	381	55	(24)	171	(109)	474
Contract loss	36	7	(4)	18	(3)	54
Restructuring	66	3	(19)	35	(41)	44
Customer financing	20	—	—	5	(6)	19
Insurance	67	—	(24)	36	(11)	68
Other	70	10	(27)	104	(57)	100
	640	75	(98)	369	(227)	759
Current liabilities	336					543
Non-current liabilities	304					216

<sup>1</sup> During 2016, following a review of consistency, £92m of accruals have been reclassified as provisions. Prior figures have not been restated.

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

Provisions for contract loss and restructuring are generally expected to be utilised within two years.

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\$3.2bn (2015: US\$3.1bn) to provide borrowing facilities to enable customers to purchase aircraft (of which approximately US\$421m could be called during 2017). 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.

Customer financing provisions cover guarantees provided for asset value and/or financing. These guarantees, the risks arising and the process used to assess the extent of the risk are described under the heading 'Customer financing' in the Financial review on page 39. It is estimated that the provision will be utilised as follows:

	2016 £m	2015 £m
Potential claims with specific claim dates:		
In one year or less	2	3
In more than one year but less than five years	12	12
In more than five years	5	5
	19	20

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.

	2016		2015	
	£m	\$m	£m	\$m
Gross commitments	238	293	269	399
Value of security <sup>1</sup>	(103)	(126)	(136)	(201)
Indemnities	(74)	(91)	(79)	(118)
Net commitments	61	76	54	80
Net commitments with security reduced by 20%	86	106	78	115
<sup>1</sup> Security includes unrestricted cash collateral of:	38	47	35	52

<sup>2</sup> 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.

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

## 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 funds. 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 2016.

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 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 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.

During the year, the Group has restructured its UK defined benefit arrangements. Four of the five UK schemes have been merged together into a consolidated scheme, renamed the 'Rolls-Royce UK Pension Fund'. All future defined benefit accrual will be provided from this scheme, limited to employees who joined the Company before 1 April 2007. The scheme merger will simplify future administration and governance. As part of this merger, the three transferring schemes are being wound up. Members of these schemes with benefits below statutory limits were offered lump sums in exchange for their existing benefits, which resulted in a settlement charge of £2m.

The liabilities of the fifth scheme, the Vickers Group Pension Scheme, have been fully bought-out with a UK insurance company, Legal & General Assurance Company Limited, resulting in a settlement charge of £301m. This scheme is expected to be wound up in 2017.

Neither of these transactions required any additional funding by the Group.

### AMOUNTS RECOGNISED IN THE INCOME STATEMENT

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
<b>Defined benefit schemes:</b>						
Current service cost and administrative expenses <sup>1</sup>	<b>169</b>	<b>50</b>	<b>219</b>	169	52	221
Past-service (credit)/cost	(22)	1	(21)	(16)	8	(8)
Settlements <sup>1</sup>	<b>302</b>	<b>10</b>	<b>312</b>	—	—	—
	<b>449</b>	<b>61</b>	<b>510</b>	153	60	213
<b>Defined contribution schemes</b>	<b>29</b>	<b>87</b>	<b>116</b>	33	85	118
<b>Operating cost</b>	<b>478</b>	<b>148</b>	<b>626</b>	186	145	331
Net financing (credit)/charge in respect of defined benefit schemes	(41)	38	(3)	(65)	33	(32)
<b>Total income statement charge</b>	<b>437</b>	<b>186</b>	<b>623</b>	121	178	299

<sup>1</sup> £306m of costs have been excluded from the underlying results, comprising: £301m settlement cost on the buy-out of the Vickers Group Pension Scheme; £3m of administrative expenses on the restructuring all the UK defined benefit plans; and £2m settlement cost in relation to winding-up lump sums on small pensions as a consequence of the restructuring.

The operating cost is charged as follows:

	Defined benefit		Defined contribution		Total	
	2016 £m	2015 £m	2016 £m	2015 £m	2016 £m	2015 £m
Cost of sales	<b>133</b>	147	<b>72</b>	80	<b>205</b>	227
Commercial and administrative costs	<b>343</b>	32	<b>27</b>	21	<b>370</b>	53
Research and development	<b>34</b>	34	<b>17</b>	17	<b>51</b>	51
	<b>510</b>	213	<b>116</b>	118	<b>626</b>	331

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 (2015 £32m) in the year.

## Notes to the consolidated financial statements continued

### 19 Post-retirement benefits continued

Net financing comprises:

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Financing on scheme obligations	385	65	450	375	57	432
Financing on scheme assets	(426)	(27)	(453)	(440)	(24)	(464)
<b>Net financing (income)/charge in respect of defined benefit schemes</b>	<b>(41)</b>	<b>38</b>	<b>(3)</b>	<b>(65)</b>	<b>33</b>	<b>(32)</b>
Financing income on scheme surpluses	(41)	(1)	(42)	(65)	–	(65)
Financing cost on scheme deficits	–	39	39	–	33	33

### AMOUNTS RECOGNISED IN OCI IN RESPECT OF DEFINED BENEFIT SCHEMES

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Actuarial gains and losses arising from demographic assumptions	566	12	578	(185)	8	(177)
Actuarial gains and losses arising from financial assumptions	(2,360)	(90)	(2,450)	(70)	70	–
Actuarial gains and losses arising from experience adjustments	(16)	52	36	56	8	64
Return on scheme assets excluding financing income	2,326	5	2,331	(593)	(16)	(609)
	516	(21)	495	(792)	70	(722)

### AMOUNTS RECOGNISED IN THE BALANCE SHEET IN RESPECT OF DEFINED BENEFIT SCHEMES

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Present value of funded obligations	(12,014)	(798)	(12,812)	(10,914)	(650)	(11,564)
Fair value of scheme assets	13,350	747	14,097	11,957	597	12,554
Net asset/(liability) on funded schemes	1,336	(51)	1,285	1,043	(53)	990
Present value of unfunded obligations	–	(1,314)	(1,314)	–	(1,067)	(1,067)
<b>Net asset<sup>1</sup>/(liability) recognised in the balance sheet</b>	<b>1,336</b>	<b>(1,365)</b>	<b>(29)</b>	<b>1,043</b>	<b>(1,120)</b>	<b>(77)</b>
Post-retirement scheme surpluses	1,336	10	1,346	1,059	4	1,063
Post-retirement scheme deficits	–	(1,375)	(1,375)	(16)	(1,124)	(1,140)

<sup>1</sup> The surplus in the UK scheme is recognised as, on ultimate wind-up when there are no longer any remaining beneficiaries, 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:

	2016			2015		
	Assets £m	Obligations £m	Net £m	Assets £m	Obligations £m	Net £m
Canada	194	(243)	(49)	152	(188)	(36)
Germany	–	(717)	(717)	–	(553)	(553)
US pension schemes	553	(631)	(78)	429	(513)	(84)
US healthcare schemes	–	(497)	(497)	–	(426)	(426)
Other	–	(24)	(24)	16	(37)	(21)
<b>Net asset/(liability) recognised in the balance sheet</b>	<b>747</b>	<b>(2,112)</b>	<b>(1,365)</b>	<b>597</b>	<b>(1,717)</b>	<b>(1,120)</b>

## 19 Post-retirement benefits continued

### DEFINED BENEFIT SCHEMES' ASSUMPTIONS

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

	2016	2015
Discount rate	<b>2.70%</b>	3.60%
Inflation assumption (RPI) <sup>1</sup>	<b>3.50%</b>	3.25%
Rate of increase in salaries	<b>4.25%</b>	4.00%
Life expectancy from age 65: current male pensioner	<b>22.7 years</b>	22.8 years
future male pensioner currently aged 45	<b>24.3 years</b>	24.8 years
current female pensioner	<b>24.1 years</b>	24.2 years
future female pensioner currently aged 45	<b>26.4 years</b>	27.0 years

<sup>1</sup> 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 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 SAP actuarial tables, with future improvements in line with the CMI 2016 Proposed 2015 core projections and long-term improvements of 1.5%. Where appropriate, these are adjusted to take account of the relevant scheme's actual experience.

Other assumptions have been set on advice from the relevant 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 relevant 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:

	2016	2015
Discount rate	<b>3.3%</b>	3.6%
Inflation assumption	<b>2.1%</b>	2.2%
Long-term healthcare cost trend rate	<b>4.8%</b>	5.0%
Male life expectancy from age 65: current pensioner	<b>21.0 years</b>	21.1 years
future pensioner currently aged 45	<b>22.5 years</b>	23.3 years

### Changes in present value of defined benefit obligations

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	<b>(10,914)</b>	<b>(1,717)</b>	<b>(12,631)</b>	(10,606)	(1,773)	(12,379)
Exchange differences	–	(339)	(339)	–	17	17
Current service cost	(160)	(48)	(208)	(164)	(50)	(214)
Past service cost	22	(1)	21	16	(5)	11
Finance cost	(385)	(64)	(449)	(375)	(58)	(433)
Contributions by employees	(3)	(2)	(5)	(3)	(4)	(7)
Benefits paid out	430	79	509	417	75	492
Actuarial (losses)/gains	(1,810)	(27)	(1,837)	(199)	84	(115)
Settlement	806	10	816	–	–	–
Other movements	–	(3)	(3)	–	(3)	(3)
<b>At 31 December</b>	<b>(12,014)</b>	<b>(2,112)</b>	<b>(14,126)</b>	(10,914)	(1,717)	(12,631)
Funded schemes	(12,014)	(798)	(12,812)	(10,914)	(650)	(11,564)
Unfunded schemes	–	(1,314)	(1,314)	–	(1,067)	(1,067)

The defined benefit obligations are in respect of:

Active plan participants	(5,279)	(1,120)	(6,399)	(4,273)	(921)	(5,194)
Deferred plan participants	(2,146)	(154)	(2,300)	(1,946)	(130)	(2,076)
Pensioners	(4,589)	(838)	(5,427)	(4,695)	(666)	(5,361)
Weighted average duration of obligations (years)	20	16	19	18	16	17

## Notes to the consolidated financial statements continued

### 19 Post-retirement benefits continued

#### Changes in fair value of scheme assets

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
At 1 January	11,957	597	12,554	12,341	593	12,934
Exchange differences	–	131	131	–	(2)	(2)
Administrative expenses	(9)	(2)	(11)	(5)	(2)	(7)
Financing	426	27	453	440	24	464
Return on plan assets excluding financing	2,326	5	2,331	(593)	(16)	(609)
Contributions by employer	185	86	271	188	71	259
Contributions by employees	3	2	5	3	4	7
Benefits paid out	(430)	(79)	(509)	(417)	(75)	(492)
Settlements/curtailment	(1,108)	(20)	(1,128)	–	–	–
<b>At 31 December</b>	<b>13,350</b>	<b>747</b>	<b>14,097</b>	<b>11,957</b>	<b>597</b>	<b>12,554</b>
Total return on scheme assets	2,752	32	2,784	(153)	8	(145)

#### Fair value of scheme assets at 31 December

	2016			2015		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Sovereign debt	7,574	335	7,909	7,283	297	7,580
Derivatives on sovereign debt	–	3	3	(5)	(1)	(6)
Corporate debt instruments	3,061	297	3,358	1,977	239	2,216
Interest rate swaps	2,063	–	2,063	1,868	–	1,868
Inflation swaps	(420)	–	(420)	(477)	–	(477)
Cash and similar instruments	(51)	18	(33)	118	21	139
<b>Liability driven investment (LDI) portfolios<sup>1</sup></b>	<b>12,227</b>	<b>653</b>	<b>12,880</b>	<b>10,764</b>	<b>556</b>	<b>11,320</b>
Longevity swap <sup>2</sup>	(175)	–	(175)	(142)	–	(142)
Listed equities	969	82	1,051	810	1	811
Unlisted equities	214	–	214	232	–	232
Sovereign debt	–	4	4	110	3	113
Corporate debt instruments	–	–	–	24	–	24
Cash	25	9	34	68	21	89
Other	90	(1)	89	91	16	107
	<b>13,350</b>	<b>747</b>	<b>14,097</b>	<b>11,957</b>	<b>597</b>	<b>12,554</b>

<sup>1</sup> 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.

<sup>2</sup> 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).

The investment strategy for the UK scheme is controlled by the Trustee in consultation with the Company. The scheme assets do not include any of the Group's own financial instruments, nor any property occupied by, or other assets used by, the Group. 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 (eg. 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.

#### FUTURE CONTRIBUTIONS

The Group expects to contribute approximately £210m to its defined benefit schemes in 2017.

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 or TPs) which may differ from those used for accounting set out above. In particular, the discount rate used to value TPs must be prudent and take account of the investment strategy, 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. If the scheme is in deficit, the SoC must also include agreed contributions from the employer to eliminate any deficit. The most recent update provided to the Trustee, as at 30 September 2016, showed that the UK scheme was estimated to be 108% funded on a provisional TPs basis calculated using a discount rate equal to UK Government bond yields plus 0.5%. Contributions to this scheme are currently being paid in line with the SoCs of the predecessor schemes in place pre-merger, which result in an average contribution rate of 30.8% of salary.

## 19 Post-retirement benefits continued

The first consolidated funding valuation is planned to be undertaken as at 31 March 2017. Any adjustment to contributions payable following this valuation are expected to take effect in 2018.

### 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 2016, 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.

		2016 £m	2015 £m
Reduction in the discount rate of 0.25% <sup>1</sup>	Obligation	(625)	(524)
	Plan assets (LDI portfolio)	630	569
Increase in inflation of 0.25% <sup>1</sup>	Obligation	(320)	(249)
	Plan assets (LDI portfolio)	272	231
Real increase in salaries of 0.25%	Obligations	(115)	(91)
One year increase in life expectancy	Obligations	415	(308)

<sup>1</sup> 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. On a UK Government bond yield basis the correlation is approximately 86% for discount rates and 89% for inflation.

## 20 Share capital

	Non-equity		Equity	
	Special Share of £1	Nominal value £m	Ordinary shares of 20p each millions	Nominal value £m
<b>Issued and fully paid</b>				
At 1 January 2015	1	—	1,882	376
Purchase and cancellation of ordinary shares			(44)	(9)
<b>At 1 January 2016</b>	<b>1</b>	<b>—</b>	<b>1,838</b>	<b>367</b>
Purchase and cancellation of ordinary shares	—	—	—	—
<b>At 31 December 2016</b>	<b>1</b>	<b>—</b>	<b>1,838</b>	<b>367</b>

The rights attaching to each class of share are set out on page 186.

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

	2016 £m	2015 £m
Total expense recognised for equity-settled share-based payments transactions	34	6
Total credit recognised for cash-settled share-based payments transactions	1	(1)
Share-based payments recognised in the consolidated income statement	35	5
Liability for cash-settled share-based payment transactions	1	—

A description of the share-based payment plans is included in the Directors' remuneration report on pages 83 to 95.

## Notes to the consolidated financial statements continued

### 21 Share-based payments continued

#### MOVEMENTS IN THE GROUP'S SHARE-BASED PAYMENT PLANS DURING THE YEAR

	ShareSave	PSP	APRA
	Number Millions	Weighted average exercise price Pence	Number Millions
Outstanding at 1 January 2015	24.5	660	9.8
Granted	13.0	617	3.0
Additional entitlements arising from TSR performance	—	—	0.5
Forfeited	(4.6)	908	(2.9)
Exercised	(9.7)	445	(1.7)
<b>Outstanding at 1 January 2016</b>	<b>23.2</b>	<b>677</b>	<b>8.7</b>
Granted	—	—	7.3
Forfeited	(1.7)	752	(3.4)
Exercised	(0.1)	538	(1.0)
<b>Outstanding 31 December 2016</b>	<b>21.4</b>	<b>672</b>	<b>11.6</b>
Exercisable at 31 December 2016	—	—	—
Exercisable at 31 December 2015	—	—	—

As share options are exercised throughout the year, the weighted average share price during the year of **682p** (2015: 820p) is representative of the weighted average share price at the date of exercise. The closing price at 31 December 2016 was **668p** (2015: 575p).

#### 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:

	2016	2015
PSP – 25% TSR uplift	<b>714p</b>	1,015p
PSP – 30% TSR uplift	<b>731p</b>	n/a
PSP – 50% TSR uplift	<b>795p</b>	1,036p
ShareSave – three-year grant	<b>n/a</b>	192p
ShareSave – five-year grant	<b>n/a</b>	219p
APRA	<b>n/a</b>	n/a

#### PSP

The fair value of shares awarded under the PSP 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 increases the fair value of the award relative to the share price at the date of grant.

#### ShareSave

The fair value of the options granted under the ShareSave plan is calculated using a binomial 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

	2016 £m	2015 <sup>1</sup> £m
Rentals paid – hire of plant and machinery	<b>48</b>	24
– hire of other assets	<b>176</b>	222
Non-cancellable operating lease rentals are payable as follows:		
Within one year	<b>200</b>	190
Between one and five years	<b>548</b>	488
After five years	<b>469</b>	496
	<b>1,217</b>	1,174

<sup>1</sup> 2015 figures have been re-presented to follow the 'property, plant and equipment' classification of aero engines, with aero engine costs of £98m previously reported as 'hire of plant and machinery' being reclassified as 'hire of other assets' to ensure consistent treatment with 2016.

## 22 Leases continued

### Leases as lessor

	2016 £m	2015 £m
Rentals received – credited within revenue from aftermarket services	<b>35</b>	25
Non-cancellable operating lease rentals are receivable as follows:		
Within one year	<b>11</b>	12
Between one and five years	<b>35</b>	18
After five years	<b>27</b>	8
	<b>73</b>	38

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 (2015: £1m) and sublease receipts of £35m (2015: £25m) were recognised in the income statement in the year.
- Purchase options exist on aero engines, land and buildings and plant and equipment with the period to the purchase option date varying between one to eight years.
- Renewal options exist on aero engines, land and buildings and plant and equipment with the period to the renewal option varying between one to 51 years at terms to be negotiated upon renewal.
- Escalation clauses exist on some leases and are linked to LIBOR.
- The total future minimum sublease payments expected to be made is £2m (2015: £3m) and sublease receipts expected to be received are £49m (2015: £24m).

### FINANCE LEASES

Finance lease liabilities are payable as follows:

	2016			2015		
	Payments £m	Interest £m	Principal £m	Payments £m	Interest £m	Principal £m
Within one year	<b>7</b>	3	<b>4</b>	5	2	3
Between one and five years	<b>30</b>	<b>10</b>	<b>20</b>	18	8	10
After five years	<b>54</b>	<b>8</b>	<b>46</b>	46	7	39
	<b>91</b>	<b>21</b>	<b>70</b>	69	17	52

## 23 Contingent liabilities

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

On 6 December 2012, the Company announced that it had passed information to the Serious Fraud Office (SFO), following a request from the SFO for information about allegations of malpractice in overseas markets. On 23 December 2013, the Company announced that it had been informed by the SFO that it had commenced a formal investigation. Since the initial announcement, the Company continued its investigations and engaged with the SFO and other authorities in the UK, the US and elsewhere in relation to the matters of concern.

In January 2017, after full cooperation, 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 which are described on page 8. Prosecutions of individuals may follow and investigations may be commenced in other jurisdictions. 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 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 £12m (2015: £11m).

## Notes to the consolidated financial statements continued

### 24 Related party transactions

	2016 £m	2015 £m
Sales of goods and services to joint ventures and associates	2,022	1,896
Purchases of goods and services from joint ventures and associates	(1,881)	(2,266)
Operating lease payments to joint ventures and associates	(101)	(88)
Guarantees of joint ventures' and associates' borrowings	5	9
Dividends received from joint ventures and associates	74	63
RRSA receipts from joint ventures and associates	22	16
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 £356m (2015: £189m). Profit recognised in the year on such sales amounted to £119m (2015: £71m), 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 £97m (2015: £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 and the members of the ELT as set out on pages 54 to 57 and 64. Remuneration for key management personnel is shown below:

	2016 £m	2015 £m
Salaries and short-term benefits	13	8
Post-retirement schemes	—	—
Share-based payments	1	—
	<b>14</b>	8

More detailed information regarding the Directors' remuneration, shareholdings, pension entitlements, share options and other long-term incentive plans is shown in the Directors' Remuneration Report on pages 83 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

During 2016, the Group acquired trade and assets from Fluid Mechanics Inc. for £6m, giving rise to goodwill of £1m.

#### DISPOSALS

During 2016, the Group completed the sales of: its rigid pipes business in the UK and China to Sigma Precision Components Limited for consideration of £4m; and Allen Diesels for consideration of £3m.

## 26 Derivation of summary funds flow statement

	2016		2015		Source
	£m	£m	£m	£m	
<b>*Underlying profit before tax (PBT) – page 166</b>		<b>813</b>		<b>1,432</b>	
Depreciation of property, plant and equipment	<b>426</b>		378		Cash flow statement (CFS)
Amortisation of intangible assets	<b>628</b>		432		CFS
Impairment of goodwill	(219)		(75)		Reversal of adjustment in underlying PBT
Impairment of investments	–		2		CFS
Acquisition accounting	(115)		(124)		Reversal of adjustment in underlying PBT
<b>*Depreciation and amortisation</b>		<b>720</b>		<b>613</b>	
(Increase)/decrease in inventories	(161)		63		CFS
Decrease/(increase) in trade and other receivables	<b>312</b>		(836)		CFS adjusted for non-underlying exchanges differences of £258m
(Decrease)/increase in trade and other payables	(273)		242		CFS adjusted for non-underlying exchanges differences of £507m
Revaluation of trading assets	<b>67</b>		(13)		Reversal of adjustment in underlying PBT
<b>*Movement on net working capital</b>		<b>(55)</b>		<b>(544)</b>	
Additions of intangible assets	(631)		(408)		CFS
Purchases of property, plant and equipment	(585)		(487)		CFS
Government grants received	<b>15</b>		8		CFS
<b>*Expenditure on PP&amp;E and intangible assets</b>		<b>(1,201)</b>		<b>(887)</b>	
Realised losses on hedging instruments	<b>426</b>		287		Reversal of adjustment in underlying PBT
Net unrealised fair value to changes to derivatives	–		(9)		Reversal of adjustment in underlying PBT
Foreign exchange on contract accounting	<b>77</b>		(9)		Reversal of adjustment in underlying PBT
Exceptional restructuring	(129)		(49)		Reversal of adjustment in underlying PBT
Other	(1)		(1)		Reversal of adjustment in underlying PBT
Underlying financing	<b>102</b>		60		Reversal of charge in underlying PBT
Non-underlying exchange differences on receivables	(258)		–		Reversal of adjustment above
Non-underlying exchange differences on payables	<b>507</b>		–		Reversal of adjustment above
Loss on disposal of property, plant and equipment	5		8		CFS
Joint ventures	(43)		(37)		JV dividends less share of results – CFS
Increase/(decrease) in provisions	<b>44</b>		(151)		CFS
Cash flows on other financial assets and liabilities	(608)		(305)		CFS
Share-based payments	<b>35</b>		5		CFS
Additions of unlisted investments	–		(6)		CFS
Disposal of intangible assets	<b>8</b>		4		CFS
Disposal of property, plant and equipment	<b>8</b>		33		CFS
Investments in joint ventures and associates	(30)		(15)		CFS
Net interest	(72)		(55)		Interest received and paid – CFS
Net funds of JVs reclassified to joint operations	(4)				Net cash and borrowings reclassified – CFS
Issue of ordinary shares	<b>1</b>		32		CFS
Purchase of ordinary shares for share schemes	(21)		(21)		CFS, 2015 includes £19m from share buyback
<b>*Other</b>	<b>47</b>		(229)		
<b>*Trading cash flow</b>		<b>324</b>		<b>385</b>	
Net defined benefit plans – underlying operating charge	<b>204</b>		213		CFS
Cash funding of defined benefit plans	(271)		(259)		CFS
<b>*Contributions to defined benefit schemes in excess of underlying PBT charge</b>		<b>(67)</b>		<b>(46)</b>	
<b>*Tax</b>		<b>(157)</b>		<b>(160)</b>	
<b>*Free cash flow</b>		<b>100</b>		<b>179</b>	
<b>*Shareholder payments</b>		<b>(301)</b>		<b>(421)</b>	Redemption of C Shares – CFS
<b>*Share buyback</b>		–	(414)		CFS, 2015 excludes £19m retained for share incentive schemes
<b>*Increase in share of JVs and other acquisitions and disposals</b>		<b>(153)</b>		<b>(3)</b>	CFS
<b>*Discontinued operations</b>		–	(121)		CFS
<b>*Foreign exchange</b>		<b>240</b>		<b>3</b>	CFS
<b>*Change in net funds</b>		<b>(114)</b>		<b>(777)</b>	

This table shows the derivation of the summary funds flow statement (lines marked \*) on page 39 from the cash flow statement on page 118.

## Notes to the consolidated financial statements continued

### 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 excluding capital expenditures, 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.

	2016		2015		Source
	£m	£m	£m	£m	
Reported operating profit		44		1,499	
Realised losses on hedging instruments	(426)		(287)		Reported to underlying adjustment (note 2)
Net unrealised fair value to changes to derivatives	–		9		Reported to underlying adjustment (note 2)
Foreign exchange on contract accounting	(77)		9		Reported to underlying adjustment (note 2)
Revaluation of trading assets and liabilities	(67)		13		Reported to underlying adjustment (note 2)
Effect of acquisition accounting	115		124		Reported to underlying adjustment (note 2)
UK pension restructuring	306		–		Reported to underlying adjustment (note 2)
Impairment of goodwill	219		75		Reported to underlying adjustment (note 2)
Exceptional restructuring	129		49		Reported to underlying adjustment (note 2)
Deferred prosecution agreement costs	671		–		Reported to underlying adjustment (note 2)
Other	1		1		Reported to underlying adjustment (note 2)
Adjustments to reported operating profit	871		(7)		
Underlying profit before financing	915		1,492		
Underlying financing	(102)		(60)		Underlying income statement (note 2)
<b>Underlying profit before tax</b>	<b>813</b>		<b>1,432</b>		

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

	2016		2015	
	£m	£m	£m	£m
<b>Change in cash and cash equivalents</b>		(691)		320
Shareholder payments	301		421	
Share buy back	–		433	
Less amount retained for share incentive schemes	–		(19)	
<b>Returns to shareholders</b>		301		835
<b>Net cash flow from changes in borrowings and finance leases</b>		345		(1,095)
<b>Increase/decrease in short-term investments</b>		1		(5)
Increase in share in joint ventures	154		–	
Debt of joint ventures reclassified as joint operations	(9)		–	
Disposal of discontinued operations	–		121	
Acquisition of businesses	6		5	
Disposal of other businesses	(7)		(2)	
<b>Changes in group structure</b>		144		124
<b>Free cash flow</b>		100		179

## Company balance sheet

At 31 December 2016

	Notes	2016 £m	2015 £m
<b>Assets</b>			
<b>Non-current assets</b>			
Investments – subsidiary undertakings	2	12,046	12,016
<b>Current assets</b>			
Trade and other receivables		–	–
<b>TOTAL ASSETS</b>		12,046	12,016
<b>Liabilities</b>			
<b>Current liabilities</b>			
Other financial liabilities	3	(28)	(29)
Trade and other payables		(1,204)	(842)
<b>TOTAL LIABILITIES</b>		(1,232)	(871)
<b>NET ASSETS</b>		10,814	11,145
<b>Equity</b>			
Called-up share capital	4	367	367
Share premium account		181	180
Merger reserve		7,058	7,359
Capital redemption reserve		2,001	1,699
Other reserve		156	126
Retained earnings		1,051	1,414
<b>TOTAL EQUITY</b>		10,814	11,145

The financial statements on pages 167 to 169 were approved by the Board on 13 February 2017 and signed on its behalf by:

**WARREN EAST**  
Chief Executive

**DAVID SMITH**  
Chief Financial Officer

Company's registered number: 7524813

## Company statement of changes in equity

For the year ended 31 December 2016

	Attributable to ordinary shareholders						
	Share capital £m	Share premium £m	Merger reserve £m	Capital redemption reserve £m	Other reserve <sup>1</sup> £m	Retained earnings £m	Total equity £m
<b>At 1 January 2016</b>	367	180	7,359	1,699	126	1,414	11,145
Profit for the year	–	–	–	–	–	–	–
Shares issued to share trust	–	1	–	–	–	–	1
Issue of C Shares	–	–	(301)	–	–	–	(301)
Redemption of C Shares	–	–	–	302	–	(302)	–
Acquisition of own shares <sup>2</sup>	–	–	–	–	–	(45)	(45)
Share-based payments – direct to equity	–	–	–	–	30	(16)	14
<b>At 31 December 2016</b>	367	181	7,058	2,001	156	1,051	10,814

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

<sup>2</sup> On 2 December 2016, the Company acquired 6,854,216 of its ordinary shares (including the group's share-based payment trust) from its subsidiary, Rolls-Royce Group plc (RRG plc) for £45m which represented fair value of those shares at that date. RRG plc had previously held these shares in a share trust for the purpose of the group's share-based payment plans.

# Notes to the Company financial statements

## 1 Accounting policies

### BASIS OF ACCOUNTING

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.

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 83 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
<b>Cost:</b>	
<b>At 1 January 2016</b>	<b>12,016</b>
Additions	—
Cost of share-based payments in respect of employees of subsidiary undertakings less receipts from subsidiaries in respect of those payments	30
<b>At 31 December 2016</b>	<b>12,046</b>

## 3 Financial liabilities

### C SHARES

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

	C Shares of 0.1p millions	Nominal value £m
<b>At 1 January 2016</b>	<b>28,960</b>	<b>29</b>
Shares issued	300,993	301
Shares redeemed	(301,828)	(302)
<b>At 31 December 2016</b>	<b>28,125</b>	<b>28</b>

The rights attaching to C Shares are set out on page 186.

## 4 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
<b>Issued and fully paid</b>					
<b>At 1 January and 31 December 2016</b>	<b>1</b>	<b>–</b>	<b>–</b>	<b>1,838</b>	<b>367</b>

The rights attaching to each class of share are set out on page 186.

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 3.

## 5 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 2016, these guarantees amounted to **£2,235m** (2015: £1,937m).

## 6 Other information

### EMOLUMENTS OF DIRECTORS

The remuneration of the Directors of the Company is shown in the Directors' remuneration report on pages 83 to 95.

### EMPLOYEES

The Company had no employees in 2016.

### 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.

## Subsidiaries

Company name	Address	Class of shares	% of class held
A. F. C. Wultex Limited*	Derby <sup>1</sup>	Ordinary	90
A.P.E. – Allen Gears Limited*	Derby <sup>1</sup>	Ordinary	100
Allen Power Engineering Limited*	Derby <sup>1</sup>	Ordinary	100
Amalgamated Power Engineering Limited*	Derby <sup>1</sup>	Deferred	100
Bergen Engines AS	Hordvikneset 125, N-5108, Hordvik, Bergen 1201, Norway	Ordinary	100
Bergen Engines Bangladesh Private Limited	Green Granduer, 6th Floor, Plot n.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	Værftsvej 23, 9000 Ålborg, Denmark	Ordinary	100
Bergen Engines India Private Limited	52-b, 2nd Floor, Okhla Industrial Estate, Phase III, New Delhi 110020, India	Ordinary	100
Bergen Engines Limited	Derby <sup>1</sup>	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.	13 Via Castel Morrone, 16161, Genoa, Italy	Social capital	100
Bristol Siddeley Engines Limited*	Derby <sup>1</sup>	Ordinary	100
Brooks Inspection Solutions Limited*	Derby <sup>1</sup>	Ordinary	100
Brown Brothers & Company Limited*	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, Scotland, KY11 9JT	Ordinary	100
C.A. Parsons & Company Limited*	Derby <sup>1</sup>	Ordinary	100
Composite Technology and Applications Limited	Derby <sup>1</sup>	Ordinary	100
Croydon Energy Limited*	Derby <sup>1</sup>	Ordinary	100
Data Systems & Solutions, LLC	Wilmington <sup>2</sup>	Partnership	100
Deeside Titanium Limited*	Derby <sup>1</sup>	Ordinary	82.5
Derby Cogeneration Limited*	Derby <sup>1</sup>	Ordinary	100
Derby Specialist Fabrications Limited*	Derby <sup>1</sup>	Ordinary	100
Europea Microfusioni Aerospaziali S.p.A.	Zona Industriale AS1, 83040 Morra de Sanctis, Avellino, Italy	Ordinary	100
Exeter Power Limited*	Derby <sup>1</sup>	Ordinary	100
Fluid Mechanics LLC	Wilmington <sup>2</sup>	Partnership	100
Heartlands Power Limited*	Derby <sup>1</sup>	Ordinary	100
Heaton Power Limited*	Derby <sup>1</sup>	Ordinary	100
John Thompson Cochran Limited*	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, Scotland, KY11 9JT	6% Cumulative preference	100
John Thompson Limited*	Derby <sup>1</sup>	Ordinary	100
Kalvet Engineering (Proprietary) Limited*	Corner Marconi Road and 3rd Street Montague Gardens, Western Cape, 7441, South Africa	Ordinary	100
Kamewa AB*	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Kamewa do Brazil Equipamentos Marítimos Limitada*	401 Rua Visconde de Pitaja 433, Rio de Janeiro, Brazil	Quotas	100
Kamewa Holding AB*	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Kamewa UK Limited*	Derby <sup>1</sup>	Deferred Preference	100
Karl Maybach-Hilfe GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Ordinary	100
L'Orange Fuel Injection (Ningbo) Co, Limited	#3 Hall, No.55 South Qihang Road, Yinzhou Economic Development Zone, Ningbo City, 315145, China	Capital Stock	100
L'Orange Fuel Injection Trading (Suzhou) Co. Limited	No. 88 Suhong Middle Road, Suzhou Industrial Park, Suzhou 215000, China	Capital Stock	100
L'Orange GmbH	Porschestraße 30, 70435 Stuttgart, Germany	Capital Stock	100
L'Orange Unterstützungskasse GmbH	Rudolph-L'Orange-Strasse 1, 72293 Glatten, Germany	Capital Stock	100
Mansfield Holdings Limited*	Derby <sup>1</sup>	Ordinary	100
MTU America Inc.	Wilmington <sup>2</sup>	Ordinary	100
MTU Asia PTE Limited	112 Robinson Road, #05-01, The Corporate Office, 068902, Singapore	Ordinary	100
MTU Benelux B.V.	Merwedestraat 86, 3313 CS, Dordrecht, Netherlands	Ordinary	100
MTU China Company Limited	Room 1801 - 1803 18/F Ascendas Plaza, No.333 Tian Yao Qiao Road, Xuhai District, Shanghai, 200030, China	Ordinary	100
MTU do Brasil Limitada	Via Anhanguera, KM 29203, 05276-000 São 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.	281 Chausée Jules César, 95250 Beauchamp, France	Ordinary	100
MTU Friedrichshafen GmbH	Maybachplatz 1, 88045, Friedrichshafen, Germany	Capital Stock	100
MTU Hong Kong Limited	36/F Tower Two, Time Square, 1 Matheson Street, Causeway Bay, Hong Kong	Ordinary	100
MTU Ibérica Propulsión y Energía S.L.	Calle Copérnico 26-28, 28823 Coslada, Madrid, Spain	Ordinary	100

\* Dormant entity.

<sup>1</sup> Moor Lane, Derby, DE24 8BJ, England.<sup>2</sup> Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE19808, United States.<sup>3</sup> 62 Buckingham Gate, London, SW1E 6AT, England.

Company name	Address	Class of shares	% of class held
MTU India Private Limited	HM Geneva House, Unit No. 303, 3rd Floor, No. 14 Cunningham Road, Bangalore, KA 560052, 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	Takanawa-Meiko Building, 2-Chome 15-19, Takanawa, Minato-ku, 108-0074 Tokyo, 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, P.O. Box 61141, Dubai, United Arab Emirates	Ordinary	100
MTU Motor Türbin Sanayi ve Ticaret A.S.	Hatira Sokak, No. 5, Ömerli Mahallesi, 34555 Arnavutköy, Istanbul, Turkey	Ordinary	100
MTU Onsite Energy Corporation	100 Power Drive, Mankato, Minnesota 56001, United States	Common Stock	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: Starograd Szczeciński, Plz: 73-110, Poland	Ordinary	100
MTU Reman Technologies GmbH	Friedrich-List-Strasse 8, 39122 Magdeburg, Germany	Capital Stock	100
MTU Rus Limited Liability Company	Vashutinskoye Sh. 24 B, Khimki, 141402, Moscow, Russian Federation	Ordinary	100
MTU South Africa (Proprietary) Limited	Corner Marconi Road and 3rd Street Montague Gardens, Western Cape, 7441, South Africa	Ordinary	100
MTU UK Limited	Derby <sup>1</sup>	Ordinary	100
Navis Consult d.o.o.	Ul. Bartola Kašića 5/4, HR-51000, Rijeka, Croatia	Ordinary	75
NEI Combustion Engineering Limited*	Derby <sup>1</sup>	A Ordinary B Ordinary Deferred	100 100 100
NEI International Combustion Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Mining Equipment Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Nuclear Systems Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Overseas Holdings Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Parsons Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Peebles Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Power Projects Limited*	Derby <sup>1</sup>	Ordinary	100
NEI Services Limited*	Derby <sup>1</sup>	Ordinary	100
Nightingale Insurance Limited	Maison Trinity, Trinity Square, St. Peter Port, Guernsey, GY1 4AT	Ordinary	100
Optimized Systems and Solutions (US) LLC	Wilmington <sup>2</sup>	Partnership Redeemable non-cumulative preference	100 100 100
PKMJ Technical Services, Inc.	Wilmington <sup>2</sup>	Ordinary	100
Powerfield Limited*	Derby <sup>1</sup>	Ordinary	100
Powerfield Specialist Engines Limited*	Derby <sup>1</sup>	Ordinary	100
Prokura Diesel Services (Proprietary) Limited	Corner Marconi Road and 3rd Street Montague Gardens, Western Cape, 7441, South Africa	Ordinary	100
PT MTU Indonesia	Secure Building Blok B, Jl. Raya Protokol Halim, Perdanakusuma, Jakarta, 13610, Indonesia	Ordinary	100
PT Rolls-Royce	Mid Plaza 2, Lantai 16 Jl. Jenderal Sudirman 10-11, Jakarta, Pusat, 10220, Indonesia	Ordinary	100
R.O.V. Technologies, Inc.	Corporation Service Company, 100 North Main Street, Suite 2, Barre, VT 05641, United States	Ordinary	100
Rallyswift Limited*	Derby <sup>1</sup>	Ordinary	100
Reyrolle Belmos Limited*	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, Scotland, KY11 9JT	Ordinary	100
Rolls-Royce (Ireland) Unlimited Company*	Ulster International Finance, 1st Floor, IFSC House, IFSC, Dublin 1, Ireland	Ordinary	100
Rolls-Royce (Thailand) Limited	900, 11th Floor Tonson Tower, Ploenchit Road, Lumpini, Pathumwan, Bangkok, Thailand	Ordinary	100
Rolls-Royce AB	Box 1010, S-68129, Kristinehamn, Sweden	Ordinary	100
Rolls-Royce Aero Engine Services Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Australia 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 dr Cincinato Braga 47, Planalto, 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 Capital Limited*	London <sup>3</sup>	Ordinary	100
Rolls-Royce Civil Nuclear Canada Limited	597 The Queensway, Peterborough ON K9J 7J6, Canada	Class A Preferred Common Shares	100 100
Rolls-Royce Civil Nuclear S.A.S.	23 Chemin du Vieux Chêne, 38240, Meylan, France	Ordinary	100

<sup>\*</sup> Dormant entity.<sup>1</sup> Moor Lane, Derby, DE24 8BJ, England.<sup>2</sup> Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE19808, United States.<sup>3</sup> 62 Buckingham Gate, London, SW1E 6AT, England.

## Subsidiaries continued

Company name	Address	Class of shares	% of class held
Rolls-Royce Commercial (Beijing) Co, Limited	305-306 Indigo Building 1, 20 Jiuxianqiao Road, Beijing, 100016, China	Registered capital	100
Rolls-Royce Commercial Aero Engines Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Control Systems Holdings Co	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Controls and Data Services (NZ) Limited	Level 7 Bayleys Building, 36 Brandon Street, Wellington, 6011, New Zealand	Ordinary	100
Rolls-Royce Controls and Data Services Controls and Data Services (UK) Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Controls and Data Services Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Controls and Data Services Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Corporation	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Côte d'Ivoire Sarl	7 Boulevard Latrille, Abidjan-Cocody, 25 BP 945, Abidjan 25, Côte d'Ivoire	Ordinary	100
Rolls-Royce Crosspointe LLC	Wilmington <sup>2</sup>	Partnership	100
Rolls-Royce de Venezuela SA*	Avenida 3E, entre Calles 78 y 79, Torre Empresarial Claret, Piso 10, Oficina 10-3, Sector Valle Frio, Maracaibo, Estado Zulia, Venezuela	Registered shares	100
Rolls-Royce Defense Products and Solutions Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Defense Services Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Deutschland Ltd & Co KG	Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany	Ordinary	100
Rolls-Royce Energy Angola, Limitada*	Rua Rei Katayala, Edifício Rei Katayala, Entrada B, Piso 8, Luanda, Angola	Quota	100
Rolls-Royce Energy Systems Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Engine Controls Holdings Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Engine Services – Oakland Inc.	Corporation Service Company, 2710 Gateway Oaks Dr, Suite 150N, Sacramento, CA 95833, United States	Common Stock	100
Rolls-Royce Engine Services Holdings Co	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Engine Services Limitada Inc.*	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 <sup>1</sup>	Deferred	100
Rolls-Royce Finance Holdings Co	Wilmington <sup>2</sup>	Ordinary	100
Rolls-Royce Fuel Cell Systems Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce General Partner Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Group plc	London <sup>3</sup>	Ordinary	100
Rolls-Royce High Temperature Composites Inc.	Corporation Service Company, 2710 Gateway Oaks Dr, Suite 150N, Sacramento, CA 95833, United States	Ordinary	100
Rolls-Royce Holdings Canada Inc.	9500 Côte de Liesse, Lachine, Québec H8T 1A2, Canada	Common C shares	100
Rolls-Royce India Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce India Private Limited	Birla Tower West, 2nd Floor 25, Barakhamba Road, New Delhi, 110001, India	Equity	100
Rolls-Royce Industrial & Marine Power Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Industrial Power (India) Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Industrial Power (Overseas Projects) Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Industrial Power Engineering (Overseas Projects) Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Industrial Power Investments Limited*	Derby <sup>1</sup>	2.8% cumulative redeemable preference stock 4.9% cumulative preference stock Ordinary	100 100 100
Rolls-Royce Industries Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce International Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce International LLC	Office 41N, Lit. A, 32-34 Nevsky Prospect, St. Petersburg, 19186, Russia	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.	13 Via Castel Morrone, 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 JSF Holdings Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Leasing Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Malaysia Sdn. Bhd.	Suite 13.03, 13th Floor, Menara Tan & Tan, 207 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia	Ordinary	100
Rolls-Royce Marine A/S	Værftsvej 23, 9000 Ålborg, Denmark	Ordinary	100
Rolls-Royce Marine AS	Borgundvegen 340, Ålesund, 6009, Norway	Ordinary	100
Rolls-Royce Marine Asia Limited	G/F, No 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong	Ordinary	100

\* Dormant entity.

<sup>1</sup> Moor Lane, Derby, DE24 8BJ, England.

<sup>2</sup> Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE19808, United States.

<sup>3</sup> 62 Buckingham Gate, London, England, SW1E 6AT.

Company name	Address	Class of shares	% of class held
Rolls-Royce Marine Australia PTY Limited	Unit 2/8 Wallace Way, Fremantle WA 6160, Australia	Ordinary	100
Rolls-Royce Marine Benelux BV	Werfdijk 2, 3195 HV Pernis, Rotterdam, Netherlands	Ordinary	100
Rolls-Royce Marine Chile S.A.	Alcantara 200, 6th floor, office 601, Las Condes, Santiago, Chile	Ordinary	100
Rolls-Royce Marine Deutschland GmbH	Fährstieg 9, 21107, Hamburg, Germany	Ordinary	100
Rolls-Royce Marine Electrical Systems Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Marine Espana S.A.	Calle Dinamarca s/n (esquina Calle Alemania), Polígono 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, Chung Shun Knitting Centre, No.'s 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong	Ordinary	100
Rolls-Royce Marine India Private Limited	Plot D-505, TTC Industrial Area, MIDC, Turbhe, Navi Mumbai, 400703 Maharashtra, India	Ordinary	100
Rolls-Royce Marine Korea Limited	197 Noksan SanEop Buk-Ro, (Songjeong-dong) Gangseo-gu, Busan 46753, Republic of Korea	Ordinary	100
Rolls-Royce Marine Manufacturing (Shanghai) Limited	No.1 Xuanzhong Road, Xuanqiao Town, Pudong New Area, Shanghai, 201399, China	Ordinary	100
Rolls-Royce Marine North America Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce Marine Power Operations Limited	Derby <sup>1</sup>	A Ordinary	100
		B Ordinary	100
Rolls-Royce Mechanical Test Operations Centre GmbH	Kiefernstrasse 1, 15827 Blankenfelde-Mahlow OT, Dahlewitz, Germany	Ordinary	100
Rolls-Royce Mexico Administration S de RL de CV	Boulevard Adolfo Ruiz Cortínez 3642-403, Fracc Costa de Oro, Verzcrus CP 94299 6, Mexico	Ordinary	100
Rolls-Royce Mexico S de RL de CV	Boulevard Adolfo Ruiz Cortínez 3642-403, Fracc Costa de Oro, Verzcrus CP 94299 6, Mexico	Ordinary	100
Rolls-Royce Military Aero Engines Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Namibia (Proprietary) Limited	2nd Floor, Unit 4, LA Chambers, Ausspann Plaza, Dr Agostinho Neto Road, Ausspannplatz, Windhoek, Namibia	Ordinary	100
Rolls-Royce New Zealand Limited	Level 7 Bayleys Building, 36 Brandon Street, Wellington, 6011, New Zealand	Ordinary	100
Rolls-Royce Nigeria Limited*	7th Floor Marble House, 1 Kingsway Road, Falomo, Ikoyi, Lagos, Nigeria	Ordinary	100
Rolls-Royce North America (USA) Holdings Co.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce North America Holdings Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce North America Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce North America Ventures Inc.	Wilmington <sup>2</sup>	Common Stock	100
Rolls-Royce North American Technologies Inc.	Wilmington <sup>2</sup>	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, NY 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, Sultanate of Oman, PO Box 20, Postal Code 103	Ordinary	100
Rolls-Royce Operations (India) Private Limited	RMZ-NXT, Campus 2A, Unit 001 Ground Floor, Near to SAP, Whitefield Road, EPIP Zone, Mahadevapura, Bangalore 560066, Karnataka, India	Ordinary	100
Rolls-Royce Overseas Holdings Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Overseas Investments Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Oy Ab	PO Box 220, Suojantie 5, 26101, Rauma, Finland	A Shares	100
Rolls-Royce Placements Limited	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce plc	London <sup>3</sup>	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 <sup>1</sup>	Ordinary	100
Rolls-Royce Power Engineering plc	Derby <sup>1</sup>	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 Singapore Pte. Limited	1 Marina Boulevard, #28-00 One Marina Boulevard, Singapore, 018989	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 <sup>1</sup>	Ordinary	100
Rolls-Royce Turkey Power Solutions Industry and Trade Limited	Meclis-i Mebusan Cad No 1, Ekemen Han, 34427 Kabataş İstanbul, Turkey	Cash shares	100
Rolls-Royce UK Pension Fund Trustees Limited*	Derby <sup>1</sup>	Ordinary	100
Rolls-Royce Vietnam Limited	Dông Xuyên Industrial Zone, Rach Dùa 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 <sup>1</sup>	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	Rua Sao Jose 90, salas 1406 e 1407, Centro, Rio De Janeiro, Brazil	Quotas	66

\* Dormant entity.

<sup>1</sup> Moor Lane, Derby, DE24 8BJ, England.<sup>2</sup> Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE19808, United States.<sup>3</sup> 62 Buckingham Gate, London, England, SW1E 6AT.

## Subsidiaries continued

Company name	Address	Class of shares	% of class held
Sharing in Growth UK Limited <sup>**</sup>	Derby <sup>1</sup>	Limited by Guarantee	100
Spare IPG (AGL) Limited*	Derby <sup>1</sup>	Ordinary	100
Spare IPG 4 Limited*	Derby <sup>1</sup>	Ordinary	100
Spare IPG 15 Limited*	Derby <sup>1</sup>	Ordinary	100
Spare IPG 18 Limited*	Derby <sup>1</sup>	Ordinary	90
Spare IPG 20 Limited*	Derby <sup>1</sup>	Ordinary	100
Spare IPG 24 Limited*	Derby <sup>1</sup>	Ordinary	100
Spare IPG 27 Limited*	Taxiway, Hillend Industrial Estate, Dalgety Bay, Dunfermline, Fife, Scotland, KY11 9JT	Ordinary	100
Spare IPG 32 Limited*	Derby <sup>1</sup>	7.25% cumulative preference	100
Stone Vickers Limited*	Derby <sup>1</sup>	Ordinary	100
The Bushing Company Limited*	Derby <sup>1</sup>	Ordinary	100
Timec 1487 Limited*	Derby <sup>1</sup>	Ordinary	100
Trigno Energy S.R.L.	Zona Industriale, 66050 San Salvo, Italy	Ordinary	100
Ulstein Holdings AS	Sjøgata 80, 6065 Ulsteinvik, Norway	Ordinary	100
Ulstein Maritime Limited	96 North Bend Street, Coquitlam, British Columbia V3K 6H1 Canada	Common	100
Vessel Lifter Inc.*	Corporation Service Company, 1201 Hays Street, Tallahassee, FL32301, United States	Common Stock	100
Vickers Pension Trustees Limited*	Derby <sup>1</sup>	Ordinary	100
Vickers Pressings Limited*	Derby <sup>1</sup>	Ordinary	100
Viking Power Limited*	Derby <sup>1</sup>	Ordinary	100
Vinters Defence Systems Limited*	Derby <sup>1</sup>	Ordinary	100
Vinters Engineering Limited	Derby <sup>1</sup>	Ordinary	100
Vinters International Limited	Derby <sup>1</sup>	Ordinary	100
Vinters Limited	Derby <sup>1</sup>	Ordinary	100
Vinters-Armstrongs (Engineers) Limited*	Derby <sup>1</sup>	Ordinary	100
Vinters-Armstrongs Limited*	Derby <sup>1</sup>	Ordinary B	100
Wultex Machine Company Limited*	Derby <sup>1</sup>	Ordinary	100

The following companies were dissolved on 3 January 2017 - NEI Allen Limited, NEI Limited, Oxygenaire Limited, R-R Industrial Controls Limited, Rolls-Royce Industrial & Marine Gas Turbines Limited, Rolls-Royce Industrial Power Systems Limited, Rolls-Royce Transmission & Distribution Limited, Spare IPG (CEL) Limited, Spare IPG 3 Limited, Spare IPG 11 Limited, Spare IPG 22 Limited, Spare IPG28 Limited and Spare IPG 30 Limited. Crossley-Premier Engine (Sales) Limited was dissolved on 10 January 2017. John Hastie of Greenock (Holdings) Limited and Spare RRPD (BEL) Limited were dissolved on 17 January 2017.

## Joint ventures and associates

Company name	Address	Class of shares	% of class held	Group interest held %
Aero Gearbox International SAS <sup>**</sup>	18 boulevard Louis Seguin, 92700 Colombes, France	Ordinary	50	50
Aerospace Transmission Technologies GmbH <sup>**</sup>	Adelheidstrasse 40, D-88046, Friedrichshafen, Germany	Capital Stock	50	50
Airtanker Holdings Limited	One London Wall, London, England EC2Y 5EB	Ordinary	20	20
Airtanker Services Limited	Airtanker Hub, RAF Brize Norton, Carterton, Oxfordshire, England OX18 3LX	Ordinary	22	22
Alpha Leasing (US) LLC, Alpha Leasing (US) (No.2) LLC, Alpha Leasing (US) (No.4) LLC, Alpha Leasing (US) (No.5) LLC, Alpha Leasing (US) (No.6) LLC, Alpha Leasing (US) (No.7) LLC, Alpha Leasing (US) (No.8) LLC	Wilmington <sup>2</sup>	Partnerships (no equity held)	–	50
Alpha Partners Leasing Limited	London <sup>3</sup>	A Ordinary	100	50
Anecom Aerotest GmbH	122 Freiheitstrasse, Wildau, D-15745, Germany	Capital Stock	24.9	24.9
CFMS Limited	Victoria House, 51 Victoria Street, Bristol, England, BS1 6AD	Limited by guarantee	n/a	50
Clarke Chapman Portia Port Services Limited	Maritime Centre, Port of Liverpool, Liverpool, England, L21 1LA	A Ordinary	100	50
Egypt Aero Management Services	EgyptAir Engine Workshop, Cairo International Airport, Cairo, Egypt	Ordinary	50	50

\* 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.

\*\* As at 31 December 2016, these entities are accounted for as joint operations (see note 1 accounting policies).

<sup>1</sup> Moor Lane, Derby, DE24 8BJ, England.

<sup>2</sup> Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE19808, United States.

<sup>3</sup> 62 Buckingham Gate, London, England, SW1E 6AT.

Company name	Address	Class of shares	% of class held	Group interest held %
EPI Europrop International GmbH	Dachauer Strasse 655, 80995 Munich, Germany	Capital Stock	28	Effective 35.5
Eurojet Turbo GmbH	Lilienthalstrasse 2b, 85399 Hallbergmoos, Germany	Capital Stock	33	Effective 39
GE Rolls-Royce Fighter Engine Team LLC	The Corporation Trust Company, 1209, Orange Street, Wilmington, DE19801, United States	Partnership (no equity held)	—	40
Genistics Holdings Limited	Derby <sup>1</sup>	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	69	69
Industria De Turbo Propulsores SA	Parque Technológico Edificio 300, 48170 Zamudio, Vizcaya, Spain	Ordinary	46.9	46.9
International Aerospace Manufacturing Private Ltd**	Survey No.3 Kempapura Village, Varthur Hobli, Bangalore, KA 560037, India	Ordinary	50	50
LG Fuel Cell Systems Inc.	Wilmington <sup>2</sup>	Common Stock	25	25
Light Helicopter Turbine Engine Company (unincorporated partnership)	Suite 119, 9238 Madison Boulevard, Madison, AL35758, USA	Partnership (no equity held)	—	50
Metlase Limited	Unipart House, Garsington Road, Cowley, Oxford, England, OX4 2PG	Ordinary B	100	20
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	25	Effective 37
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
Rolls Laval Heat Exchangers Limited*	Derby <sup>1</sup>	Ordinary A	100	50
Rolls-Royce & Partners Finance (US) LLC, Rolls-Royce & Partners Finance (US) (No.2) LLC	Wilmington <sup>2</sup>	Partnerships (no equity held)	—	50
Rolls-Royce Snecma Limited	Derby <sup>1</sup>	Ordinary B	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
Techjet Aerofoils Limited**	Tefen Industrial Zone, PO Box 16, 24959, Israel	Ordinary A	50	50
Texas Aero Engine Services LLC	The Corporation Trust Company, 1209, Orange Street, Wilmington, DE19801, United States	Partnership (no equity held)	—	50
TRT Limited	Derby <sup>1</sup>	Ordinary B	100	49.5
Turbine Surface Technologies Limited**	Derby <sup>1</sup>	Ordinary B	100	50
Turbo-Union Limited	Derby <sup>1</sup>	Shares A Ordinary	37.5 40	40
UK Nuclear Restoration Limited*	Booths Park, Chelford Road, Knutsford, Cheshire, England, WA16 8QZ	Ordinary	20	20
Viking Reisebyra AS	Stålhaugen 10, 6065 Ulsteinvik, Norway	Ordinary	50	50
Xian XR Aero Components Co., Limited**	Xujiawan, Beijiao, PO Box 13, Xian 710021, Shaanxi China	Ordinary	49	49

\* Dormant entity.

\*\* As at 31 December 2016, these entities are accounted for as joint operations (see note 1 accounting policies).

<sup>1</sup> Moor Lane, Derby, DE24 8BJ, England.<sup>2</sup> Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE19808, United States.

# Independent auditor's report

to the members of Rolls-Royce Holdings plc only

## OPINIONS AND CONCLUSIONS ARISING FROM OUR AUDIT

### 1 OUR OPINION ON THE FINANCIAL STATEMENTS IS UNMODIFIED

We have audited the financial statements of Rolls-Royce Holdings plc for the year ended 31 December 2016 set out on pages 115 to 175.

In our opinion:

- the financial statements give a true and fair view of the state of the Group's and of the parent company's affairs as at 31 December 2016 and of the Group's loss for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union (Adopted IFRS);
- the parent company financial statements have been properly prepared in accordance with UK Accounting Standards, including FRS 101 *Reduced Disclosure Framework*; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

### 2 OUR ASSESSMENT OF RISKS OF MATERIAL MISSTATEMENT

When planning our audit, we made an assessment of the relative significance of the key risks of material misstatement to the Group financial statements, initially without taking account of the effectiveness of controls implemented by the Group. (This year our testing generally showed these controls to have increased in effectiveness.)

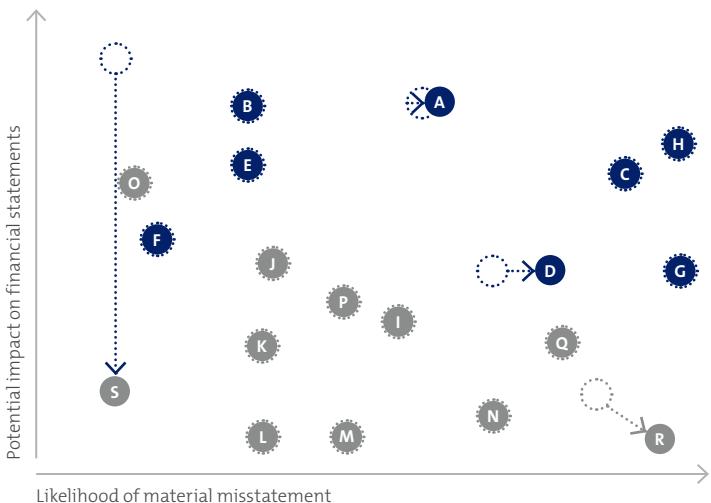
This initial assessment is shown below in the output from our Dynamic Audit planning tool. As there has been no significant change in the Group's operations and as the reduction in our assessment of materiality did not change the ranking of risks, the key risks are the same as in the prior year, though there have been some changes in the relative significance to our audit of some of the risks. (For last year's audit, the risk relating to *Bribery and corruption* covered both (i) the risk that the Group had entered into corrupt transactions that could materially affect the financial statements and (ii) the risk that the consequences of the then ongoing investigations into bribery and corruption in overseas markets were not properly reflected in the financial statements. These are now shown as separate risks as, following the conclusion of the investigations by the UK, US and Brazilian investigating authorities, the significance of the second element of the risk has reduced substantially.)

Of the 19 key risks identified, we describe below (i) the eight risks of material misstatement that had the greatest effect on our audit (those in dark blue on the risk map – the descriptions of risks include an explanation for the changes in significance of these risks from last year), (ii) our key audit procedures to address those risks and (iii) our findings from those procedures in order that the Company's members as a body may better understand the process by which we arrived at our audit opinion. Our findings are the result of procedures undertaken in the context of and solely for the purpose of our statutory audit opinion on the financial statements as a whole and consequently are incidental to that opinion, and we do not express discrete opinions on separate elements of the financial statements.

Our 2015 audit was reviewed by the Financial Reporting Council's Audit Quality Review (AQR) team. The review findings noted limited areas for improvement. These have been incorporated into our continuous improvement process for our approach to the 2016 audit and are reflected in the descriptions of the audit procedures set out below.

#### Dynamic Audit planning tool

(Relative significance of audit risks before taking account of controls)



- |          |  |          |  |
|----------|--|----------|--|
| <b>A</b> | The pressure on and incentives for management to meet revenue and profit targets                 | <b>I</b> | Measurement of revenue and profit on long-term contracts outside the Civil Aerospace business (see page 123) |
| <b>B</b> | The basis of accounting for revenue and profit in the Civil Aerospace business                   | <b>J</b> | Determination of development costs to be capitalised (see page 123)  |
| <b>C</b> | The measurement of revenue and profit in the Civil Aerospace business                            | <b>K</b> | The basis of accounting for contractual aftermarket rights (see page 121)                                    |
| <b>D</b> | Recoverability of intangible assets in the Civil Aerospace business                              | <b>L</b> | Determination of the amortisation period of development costs and CARs (see page 128)                        |
| <b>E</b> | Liabilities arising from customer financing arrangements   | <b>M</b> | The basis of accounting for Risk and Revenue Sharing Arrangements (see pages 122 and 123)                    |
| <b>F</b> | Bribery and corruption   | <b>N</b> | Estimating provisions for warranties and guarantees (see page 124)   |
| <b>G</b> | The presentation of 'underlying profit'  | <b>O</b> | Valuation of derivatives and hedge accounting (see pages 126 and 127)  |
| <b>H</b> | Disclosure of the effect on the trend in profit of items which are uneven in frequency or amount | <b>P</b> | Measurement of post-retirement benefits (see page 124)   |
| <b>J</b> |  | <b>Q</b> | Accounting for uncertain tax positions and deferred tax assets (see page 124)                                |
| <b>K</b> |  | <b>R</b> | Valuation of goodwill (see page 123)   |
| <b>L</b> |  | <b>S</b> | Consequences of investigations into bribery and corruption in overseas markets (see page 163)                |
| <b>M</b> |  |          |  |
| <b>N</b> |  |          |  |
| <b>O</b> |  |          |  |
| <b>P</b> |  |          |  |
| <b>Q</b> |  |          |  |
| <b>R</b> |  |          |  |
| <b>S</b> |  |          |  |

**A The pressure on and incentives for management to meet revenue and profit targets**

Refer to pages 18 to 35 (Business review) and pages 98 and 99 (Audit Committee report – Financial reporting)

**The risk** – In recent years the Group has published a number of revisions to its revenue and profit guidance with a generally decreasing trend in profit and revenue and there have been significant associated decreases in the Group's share price. The Group's employee incentive schemes include profit targets. Clear instructions were given to the Executive Leadership Team and the senior finance executives on more than one occasion not to take any account of the pressure to meet forecasts in preparing the financial results and to manage and be alert to how this pressure might affect personnel across the wider Group. Nevertheless, the continuing pressure on and incentives for management to meet targets increases the inherent risk of manipulation of the Group financial statements. The financial results are sensitive to significant estimates and judgements, particularly in respect of revenues and costs associated with long-term contracts, and there is a broad range of acceptable outcomes of these that could lead to different levels of profit and revenue being reported in the financial statements. Relatively small changes in the basis of those judgements and estimates could result in the Group meeting, exceeding or falling short of forecasts, guidance or targets.

The significance of this risk increased marginally following changes to the Group's employee incentive schemes that involved the introduction of individual business profit targets as well as a Group profit target.

**Our response** – We have: (i) extended our enquiries designed to assess whether judgements and estimates exhibited unconscious bias or whether management had taken systematic actions to manipulate the reported results; (ii) compared the results to forecasts, guidance and targets, and challenged variances at a much lower level than we would otherwise have done based on our understanding of factors affecting business performance with corroboration using external data where possible; and (iii) applied an increased level of scepticism throughout the audit by increasing the involvement of the senior audit team personnel, with particular focus on audit procedures designed to assess whether revenues and costs have been recognised in the correct accounting period, whether central adjustments were appropriate and whether the segmental analysis has been properly prepared.

In particular:

- when considering the risk relating to *The measurement of revenue and profit in the Civil Aerospace business* (C refer to page 178), we challenged the basis for changes in the estimated revenues and costs in long-term contracts, with a heightened awareness of the possibility of unconscious or systematic bias;
- when considering the risk relating to *Recoverability of intangible assets in the Civil Aerospace business* (D refer to pages 178 and 179), we challenged with a heightened awareness of the possibility of unconscious or systematic bias the basis for an increase in the estimated market size and share of the Trent 900 engine which offset the significant reduction in the recoverable amount of Trent 900 programme assets arising from new

technical issues on these engines, the response to which is forecast to be costly; and

- when considering the risk relating to *The presentation of underlying profit* (G refer to pages 179 and 180) and the risk relating to *Disclosure of the effect on the trend in profit of items which are uneven in frequency or amount* (H refer to pages 180 and 181), we sought to identify items that affected profit (and/or the trend in profit) unevenly in frequency or amount (especially those where management had a greater degree of discretion over the timing or scale of transactions entered into) at a much lower level than we would otherwise have done and we assessed the balance and transparency of disclosure of these items.

**Our findings** – Our testing did not identify any indication of manipulation of results (2015 audit finding: none). We found the degree of caution/optimism adopted in estimates to be balanced overall (2015 audit finding: balanced). We found that there was ample unbiased disclosure of items affecting the trend in profit.

**B The basis of accounting for revenue and profit in the Civil Aerospace business**

Refer to pages 121 and 122 (Key areas of judgement – Introduction, Contractual aftermarket rights, Linkage of original and long-term aftermarket contracts), page 125 (Significant accounting policies – Revenue recognition) and pages 98 and 99 (Audit Committee report – Financial reporting)

**The risk** – The amount of revenue and profit recognised in a year on the sale of engines and aftermarket services is dependent, inter alia, on the appropriate assessment of whether or not each long-term aftermarket contract for services is linked to or separate from the contract for sale of the related engines as this drives the accounting basis to be applied. As the commercial arrangements can be complex, significant judgement is applied in selecting the accounting basis in each case. The most significant risk is that the Group might inappropriately account for sales of engines and long-term service agreements as a single arrangement as this would usually lead to revenue and profit being recognised too early because the margin in the long-term service agreement is usually higher than the margin in the engine sale agreement.

The significance of the risk has not changed during the year.

**Our response** – We re-evaluated the appropriateness of the accounting bases the Group applies in the Civil Aerospace business by reference to accounting standards and re-examining historical long-term aftermarket contracts. We considered whether the disclosure included in the financial statements enables shareholders to understand how the accounting policies represent the commercial substance of the Group's contracts with its customers. We made our own independent assessment, with reference to the relevant accounting standards, of the accounting basis that should be applied to each long-term aftermarket contract entered into during the year and compared this to the accounting basis applied by the Group.

**Our findings** – We found that the Group has developed a framework for selecting the accounting bases which is consistent with a balanced interpretation of accounting standards and has applied this consistently. We found that the disclosure was ample.

## Independent auditor's report continued

For the agreements entered into during this year, it was clear which accounting basis should apply.

### **c The measurement of revenue and profit in the Civil Aerospace business**

*Refer to pages 122 (Key areas of judgement – Measurement of performance on long-term aftermarket contracts), page 125 (Significant accounting policies – Revenue recognition and TotalCare arrangements) and pages 98 and 99 (Audit Committee report – Financial reporting)*

**The risk** – The amount of revenue and profit recognised in a year on the sale of engines and aftermarket services is dependent, inter alia, on the assessment of the percentage of completion of long-term aftermarket contracts and the forecast cost profile of each arrangement. As long-term aftermarket contracts can extend over significant periods and the profitability of these arrangements typically assumes significant lifecycle cost improvement over the term of the contracts, the estimated outturn requires significant judgement to be applied in estimating future engine flying hours, time on wing and other operating parameters, the pattern of future maintenance activity and the costs to be incurred. The nature of these estimates means that their continual refinement can have an impact on the profits of the Civil Aerospace business that can be significant in an individual financial year. The assessment of the estimated outturn for each arrangement involves detailed calculations using large and complex databases with a significant level of manual intervention.

The significance of the risk has not changed during the year.

**Our response** – We tested the controls designed and applied by the Group to provide assurance that the estimates used in assessing revenue and cost profiles are appropriate and that the resulting estimated cumulative profit on these contracts is accurately reflected in the financial statements; these controls operated over both the inputs and the outputs of the calculations. We challenged the appropriateness of these estimates for each programme and assessed whether or not the estimates showed any evidence of systematic or unconscious management bias in the context of the heightened pressure on and incentives for management to meet forecasts, guidance and targets discussed above. Our challenge was based on our assessment of the historical accuracy of the Group's estimates in previous periods, identification and analysis of changes in assumptions from prior periods and an assessment of the consistency of assumptions within programmes.

In terms of future cost estimates, we undertook detailed assessments of the achievability of the Group's plans to reduce lifecycle costs and an analysis of the impact of these plans on forecast cost profiles taking account of contingencies and analysis of the impact of known technical issues on cost forecasts. We focused on the estimates of costs expected to be incurred to respond to new technical issues emerging during the year, notably in relation to the Trent 700 and 900 programmes.

Our analysis of forecast revenues considered each significant airframe that is powered by the Group's engines and was based on discussions with commercial and operational management and our own experience, supplemented by discussions with an aircraft valuation specialist engaged by the Group. We assessed whether the valuation specialist was objective and suitably qualified.

We also checked the mathematical accuracy of the revenue and profit for each arrangement and considered the implications of identified errors and changes in estimates.

**Our findings** – We focused our controls testing on controls that we assessed as likely to provide effective audit evidence, largely those relating to revenue estimates. We also considered the operation of other controls in order to provide relevant comment to management and the audit committee. We found that the remediation of control weaknesses identified in earlier periods had continued. The scope and depth of our detailed testing and analysis was expanded to take account of the remaining control weaknesses. Overall, our assessment is that the assumptions and resulting estimates (including appropriate contingencies) resulted in balanced (*2015 audit finding: balanced*) profit recognition.

### **D Recoverability of intangible assets (certification costs and participation fees, development expenditure and contractual aftermarket rights) in the Civil Aerospace business**

*Refer to page 123 (Key sources of estimation uncertainty – Forecasts and discount rates), pages 127 and 128 (Significant accounting policies – Certification costs and participation fees, Research and development, Contractual aftermarket rights and Impairment of non-current assets), pages 140 to 142 (Note 9 to the financial statements – Intangible assets) and pages 98 and 99 (Audit Committee report – Financial reporting)*

**The risk** – The recovery of these assets depends on a combination of achieving sufficiently profitable business in the future as well as the ability of customers to pay amounts due under contracts often over a long period of time. Assets relating to a particular engine programme are more prone to the risk of impairment in the early years of a programme as the engine's market position is established. In addition, the pricing of business with launch customers makes assets relating to these engines more prone to the risk of impairment.

The significance of the risk has increased somewhat during the year due to the emergence of new technical issues on the Trent 900 engines, the response to which is forecast to be costly.

**Our response** – We tested the controls designed and applied by the Group to provide assurance that the assumptions used in preparing the impairment calculations are regularly updated, that changes are monitored, scrutinised and approved by appropriate personnel and that the final assumptions used in impairment testing have been appropriately approved. We challenged the appropriateness of the key assumptions in the impairment tests (including market size, market share, pricing, engine and aftermarket unit costs, individual programme assumptions, price and cost escalation, discount rate and exchange rates). Our challenge was based on our assessment of the historical accuracy of the Group's estimates in previous periods, our understanding of the commercial prospects of key engine programmes, identification and analysis of changes in assumptions from prior periods and an assessment of the consistency of assumptions across programmes and customers and comparison of assumptions with public data where this was available. We focused on the Trent 900 programme assets where the impact of the estimated cost of responding to new technical issues would have led to a significant impairment had the effect not been offset by an increase in estimated market size and share. We tested the mathematical accuracy of the impairment calculations. We considered whether the disclosures in Note 9 to the financial

statements describe the inherent degree of subjectivity in the estimates and the potential impact on future periods of revisions to these estimates.

**Our findings** – Our testing did not identify weaknesses in the design and operation of controls that would have required us to expand the nature or scope of our planned detailed test work. We found that the assumptions and resulting estimates were balanced (*2015 audit finding: balanced*) and that the disclosures were proportionate (*2015 audit finding: proportionate*). We found no errors in calculations (*2015 audit finding: none*).

With regard to the Trent 900 programme assets, we found no evidence that the increase in estimated market size and share that resulted in no impairment being recognised was motivated by the impact on profit and we found that this estimate was based on a balanced assessment of the data available.

#### **E Liabilities arising from customer financing arrangements**

*Refer to page 123 (Key areas of judgement – Customer financing contingent liabilities), page 129 (Significant accounting policies – Customer financing support), page 156 (Note 18 to the financial statements – Provisions for liabilities and charges) and pages 98 and 99 (Audit Committee report – Financial reporting)*

**The risk** – The Group has contingent liabilities in respect of financing and asset value support provided to customers. This support typically takes the form of a guarantee with respect to the value of an aircraft at a future date, a commitment to buy used aircraft or a guarantee of a customer's future payments under an aircraft financing arrangement. The Group also provides standby credit lines to certain customers that can be accessed if they fail to arrange alternative financing at the time they take delivery of engines. Judgement is required to assess the likelihood of these liabilities crystallising, in order to assess whether a provision should be recognised and, if so, the amount of that provision. The total potential liability is significant and can be affected by the assessment of the residual value of the aircraft and the creditworthiness of the customers.

The significance of the risk has not changed during the year.

**Our response** – We analysed the terms of guarantees on aircraft delivered during the year in detail and obtained aircraft values from and held discussions with aircraft valuation specialists engaged by the Group. We assessed whether the valuer was objective and suitably qualified, had been appropriately instructed and had been provided with complete, accurate data on which to base its evaluation. For all contracts on delivered aircraft, we assessed the commercial factors relevant to the likelihood of the guarantees being called, including the credit ratings and recent financial performance of the relevant customers and their fleet plans, and critically assessed the Group's estimate of the required provisions for those liabilities. We considered movements in aircraft values and potential changes in the assessed probability of a liability crystallising since the previous year end and considered whether the evidence supported the Group's assessment as to whether or not a liability needs to be recognised and the amount of the liability recognised or contingent liability disclosed. We considered whether the related disclosure in Note 18 to the financial statements appropriately explains the potential liability in excess of the amount provided for in the financial statements for delivered aircraft and highlights the significant but unquantifiable contingent liability in respect of aircraft which will be delivered in the future.

**Our findings** – We found that the assumptions and estimates were balanced (*2015 audit finding: balanced*) and that the disclosures were proportionate (*2015 audit finding: proportionate*).

#### **F Bribery and corruption**

*Refer to pages 105 and 106 (Safety & Ethics Committee report – Ethics and compliance)*

**The risk** – A large part of the Group's business is characterised by competition for individually significant contracts with customers, which are often directly or indirectly associated with governments, and the award of individually significant contracts to suppliers. The procurement processes associated with these activities are highly susceptible to the risk of corruption. In addition, the Group operates in a number of territories where the use of commercial intermediaries is either required by the government or is common practice.

The significance of the risk has not changed during the year.

**Our response** – We designed an approach to provide reasonable assurance that we would identify bribery and corruption that would have a material impact on the financial statements. We evaluated and tested the Group's policies, procedures and controls over the selection and renewal of intermediaries, contracting arrangements, ongoing management and payments and over responses to suspected breaches of policy. We sought to identify payments made to intermediaries during the year using data analysis techniques, including focusing on intermediaries that have been rejected through the Group's selection process or were identified during investigations. We tested whether these had been subject to the Group's controls, made enquiries of appropriate personnel and evaluated the tone set by the Board and the Executive Leadership Team and the Group's approach to managing this risk. Having enquired of management, the Audit Committee and the Board as to whether the Group is in compliance with laws and regulations relating to bribery and corruption, we made written enquiries of and/or met with the Group's legal advisers to cross check the results of those enquiries with third parties and maintained a high level of vigilance to possible indications of significant non-compliance with laws and regulations relating to bribery and corruption whilst carrying out our other audit procedures.

**Our findings** – We did not find any evidence of payments of bribes or other corrupt behaviour during the year that would have had a material impact on the financial statements (*2015 audit finding: none*).

#### **Presentation and explanation of results**

*Refer to pages 18 to 35 (Business review), pages 36 to 39 (Financial review), pages 131 to 135 (Note 2 to the financial statements – Segmental analysis) and pages 98 and 99 (Audit Committee report – Financial reporting)*

#### **G The presentation of 'underlying profit'**

**The risk** – In addition to its Adopted IFRS financial statements, the Group presents an alternative income statement on an 'underlying' basis. The Directors believe the 'underlying' income statement reflects better the Group's trading performance during the year. The basis of adjusting between the Adopted IFRS and 'underlying' income statements and a full reconciliation between them is set out in Note 2 to the financial statements on pages 133 and 134.

A significant recurring adjustment between the Adopted IFRS income statement and the 'underlying' income statement relates

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to the foreign exchange rates used to translate foreign currency transactions. The Group uses forward foreign exchange contracts to manage the cash flow exposures of forecast transactions denominated in foreign currencies but does not generally apply hedge accounting in its Adopted IFRS income statement. The 'underlying' income statement translates these amounts at the achieved foreign exchange rate on forward foreign exchange contracts settled in the period, retranslates assets and liabilities at exchange rates forecast to be achieved from future settlement of such contracts and excludes unrealised gains and losses on such contracts which are included in the Adopted IFRS income statement. The Group has discretion over which forward foreign exchange contracts are settled in each financial year, which could impact the achieved rate both for the period and in the future.

In addition, adjustments are made to exclude one-off past-service costs on post-retirement schemes, the cost of restructuring programmes that involve the substantial closure or exit from a site, facility or line of business or other major transformation activities, the effect of acquisition accounting (including any subsequent impairments of goodwill or other intangible assets) and a number of other items, including this year the £671m financial penalties from agreements with investigating authorities in connection with historic bribery and corruption involving intermediaries in a number of overseas markets.

Alternative performance measures can provide shareholders with appropriate additional information if properly used and presented. In such cases, measures such as these can assist shareholders in gaining a more detailed and hence better understanding of a company's financial performance and strategy. However, when improperly used and presented, these kinds of measures might prevent the Annual Report being fair, balanced and understandable by hiding the real financial position and results or by making the profitability of the reporting entity seem more attractive.

The significance of the risk has not changed during the year.

**Our response** – We assessed the appropriateness of the basis for the adjustments between the Adopted IFRS income statement and the 'underlying' income statement and the consistency of application of this basis and we recalculated the adjustments with a particular focus on the impact of the foreign exchange rates used to translate foreign currency amounts in the 'underlying' income statement. We assessed whether or not the selection of forward foreign exchange contracts settled in the year showed any evidence of management bias. We also assessed: (i) the extent to which the prominence given to the 'underlying' financial information and related commentary in the Annual Report compared to the Adopted IFRS financial information and related commentary could be misleading; (ii) whether the Adopted IFRS and 'underlying' financial information are reconciled with sufficient prominence given to that reconciliation; (iii) whether the basis of the 'underlying' financial information is clearly and accurately described and consistently applied; and (iv) whether the 'underlying' financial information is not otherwise misleading in the form and context in which it appears in the Annual Report.

**Our findings** – We found no concerns regarding the basis of the 'underlying' financial information or its calculation and no

indication of management bias in the settlement of forward foreign exchange contracts. We consider that there is proportionate (and somewhat improved) disclosure of the nature and amounts of the adjustments to allow shareholders to understand the implications of the two bases on the financial measures being presented (*2015 audit finding: proportionate*). We found the overall presentation of the 'underlying' financial information to be balanced (*2015 audit finding: balanced*).

### **• Disclosure of the effect on the trend in profit of items which are uneven in frequency or amount**

**The risk** – The Group's profits are significantly impacted by items such as cumulative adjustments to profit recognised on long-term contracts, impairments (and reversals of impairments) of goodwill, CARs and other intangible assets, sale and leasebacks of spare engines to joint ventures, research and development charges, reorganisation costs and foreign exchange translation which can be uneven in frequency and/or amount. If significant either to the profit for the year or to the trend in profit, appropriate disclosure of the effect of these items is necessary in the Annual Report and financial statements to provide the information necessary to enable shareholders to assess the Group's performance.

The significance of the risk has not changed during the year.

**Our response** – We undertook detailed analysis of business performance at Group and segment level that sought to identify items that affect profit (and the trend in profit) which are uneven in frequency or amount at a much lower level than we would otherwise have done and to assess the transparency of disclosure of these items.

**Our findings** – We identified a number of significant items that had affected profit for the year or the prior year that required appropriate disclosure in the Annual Report to enable shareholders to assess the Group's performance. The key items are:

- (1) the £4,420m unrealised fair value losses (*2015: £1,315m losses*) on derivative contracts;
- (2) the £217m profit (*2015: £140m profit*) arising from the impact of improvements in lifecycle costs on long-term contracts;
- (3) the £35m profit (*2015: nil*) arising from the impact of revising the forecast long-term US dollar to sterling exchange rate on long-term contracts;
- (4) the £98m loss (*2015: £24m loss*) on long-term contracts arising from new technical issues on Civil Aerospace large engines;
- (5) the £64m loss (*2015: £83m loss*) arising from other estimate changes on long-term contracts;
- (6) the £30m loss (*2015: nil*) arising on Civil Aerospace new engine programmes;
- (7) the £918m (*2015: £818m*) of research and development charges;
- (8) the £127m, net of a release of prior year provisions of £19m, (*2015: £88m, net of a £30m release*) of restructuring charges;
- (9) the £119m (*2015: £71m*) profit arising from sales of spare engines to joint ventures;
- (10) the £219m (*2015: £75m*) impairments of goodwill;

- (11) the £671m (2015: nil) financial penalties from agreements with investigating authorities in connection with historic bribery and corruption involving intermediaries in a number of overseas markets;
- (12) the £53m (2015: nil) release of accruals relating to termination in prior years of intermediary services;
- (13) the £306m loss (2015: nil) from the restructuring of the UK pension schemes, including the buyout of the Vickers Group Pension Scheme;
- (14) the £189m profit arising from refinement in the basis of measurement of the risk contingency for forecasts of future revenue to be earned under long-term contracts in 2015; and
- (15) the £65m profit arising from the release of provisions against previously impaired intangible assets for contractual aftermarket rights in 2015.

We found that ample disclosure of these items had been provided in the Annual Report and financial statements taken as a whole (*2015 audit finding: ample*).

In reaching our audit opinion on the financial statements we took into account the findings that we describe above and those for other, lower risk areas included in the output from our Dynamic Audit planning tool set out above. Overall the findings from across the whole audit are that the financial statements have been prepared on the basis of appropriate accounting policies, reflect balanced estimates, and provide proportionate disclosure. Having assessed these findings and evaluated uncorrected misstatements in the context of materiality and considered the qualitative aspects of the financial statements as a whole, we have not modified our opinion on the financial statements.

### 3 OUR APPLICATION OF MATERIALITY AND AN OVERVIEW OF THE SCOPE OF OUR AUDIT

Our measure of materiality for the Group financial statements as a whole has reduced in line with the reduction in the Group's profit. This was set at £30m (2015: £66m) and was determined with reference to a benchmark of Group profit before taxation, averaged over the last three years in order to take into account the volatility in profits over this period, and normalised to exclude the impact of gains and losses on revaluation of foreign currency and other derivative financial instruments which could otherwise result in an inappropriate materiality level being determined. This materiality measure represents 2.9% (2015: 4.5%) of this benchmark and 0.6% (2015: 41.3%) of total reported profit/loss before tax. We carry out audit procedures to assess the accuracy of the gains and losses on these derivative financial instruments (which this year amounted to a £4.4bn loss (2015: £1.3bn loss)) as part of our audit of the Group's treasury operations.

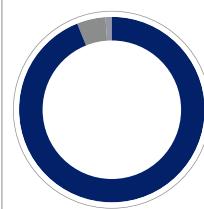
We report to the Audit Committee: (i) all material corrected identified misstatements; (ii) uncorrected identified misstatements exceeding £1.5m (2015: £3m) for income statement items; and (iii) other identified misstatements that warrant reporting on qualitative grounds.

We subjected 34 (2015: 31) of the Group's reporting components to audits for group reporting purposes and 13 (2015: 11) to specified risk-focused audit procedures. The latter were not individually sufficiently financially significant to require an audit for group reporting purposes, but did present specific individual risks that needed to be addressed. This work also provided further audit coverage. For the remaining components, the Group audit team performed analysis at an aggregated group level to re-examine our assessment that there were no significant risks of material misstatement within these components.

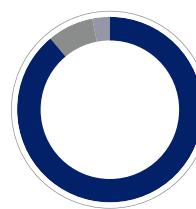
The Group operates shared service centres for the bulk processing of financial transactions in Derby (UK), Indianapolis (US) and Singapore, the outputs of which are included in the financial information of the reporting components they service and therefore they are not separate reporting components. Each of the service centres is subject to specified risk-focused audit procedures, predominantly the testing of transaction processing and review controls. Additional audit procedures are performed at certain reporting components to address the audit risks not covered by the work performed over the shared service centres.

#### SUMMARY AUDIT SCOPE

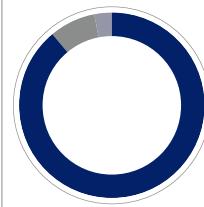
##### REVENUE



##### UNDERLYING PROFIT BEFORE TAX



##### TOTAL ASSETS



##### Audit for group reporting purposes

##### Specified risk-focused audit procedures

##### Group-level procedures only

The Group audit team instructed component auditors, and the auditors of the shared service centres, as to the significant areas to be covered, including the relevant risks detailed above, and the information to be reported back. The Group audit team approved the component materiality assessments, which ranged from £0.3m to £24m (2015: £0.2m to £52m), having regard to the mix of size and risk profile of the Group across the components. The work on 19 of

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the 47 (2015: 21 of 42) components was performed by component auditors and the rest by the Group audit team. The Group audit team visited 33 (2015: 31) component locations in the UK, the US, Germany and Scandinavia, the purpose of which included an assessment of the audit risk and strategy. Telephone conference meetings were also held with these component auditors and with those of the higher risk components that were not physically visited. At these visits and meetings, the findings reported to the Group audit team were discussed in more detail, and any further work required by the Group audit team was then performed by the component auditor.

### 4 OUR OPINION ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006 IS UNMODIFIED

In our opinion:

- the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006; and
- the information given in the Strategic report and the Directors' report for the financial year is consistent with the financial statements.

Based solely on the work required to be undertaken in the course of the audit of the financial statements and from reading the Strategic report and the Directors' report:

- we have not identified material misstatements in those reports; and
- in our opinion, those reports have been prepared in accordance with the Companies Act 2006.

### 5 WE HAVE NOTHING TO REPORT ON THE DISCLOSURES OF PRINCIPAL RISKS

Based on the knowledge we acquired during our audit, we have nothing material to add or draw attention to in relation to:

- the Directors' viability statement on page 53, concerning the principal risks, their management, and, based on that, the Directors' assessment and expectations of the Group's continuing in operation over the five years to 31 December 2021; or
- the disclosures on page 53 and in Note 1 to the financial statements concerning the use of the going concern basis of accounting.

### 6 WE HAVE NOTHING TO REPORT IN RESPECT OF THE MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

Under ISA (UK and Ireland) we are required to report to you if, based on the knowledge we acquired during our audit, we have identified other information in the Annual Report that contains a material inconsistency with either that knowledge or the financial statements, a material misstatement of fact, or that is otherwise misleading. In particular, we are required to report to you if:

- we have identified material inconsistencies between the knowledge we acquired during our audit and the Directors' statement that they consider that the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's performance, business model and strategy; or
- the Audit Committee report does not appropriately address matters communicated by us to the Audit Committee.

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements and the part of the Directors' remuneration report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Under the Listing Rules we are required to review:

- the Directors' statements, set out on page 53, in relation to going concern and longer term viability; and
- the part of the corporate governance report on page 60 relating to the Company's compliance with the eleven provisions of the 2014 UK Corporate Governance Code specified for our review.

We have nothing to report in respect of the above responsibilities.

#### SCOPE OF REPORT AND RESPONSIBILITIES

As explained more fully in the Directors' responsibilities statement set out on page 113, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. A description of the scope of an audit of financial statements is provided on the Financial Reporting Council's website at [www.frc.org.uk/auditscopeukprivate](http://www.frc.org.uk/auditscopeukprivate). This report is made solely to the Company's members as a body and is subject to important explanations and disclaimers regarding our responsibilities, published on our website at [www.kpmg.com/uk/auditscopeukco2014b](http://www.kpmg.com/uk/auditscopeukco2014b), which are incorporated into this report as if set out in full and should be read to provide an understanding of the purpose of this report, the work we have undertaken and the basis of our opinions.

**JIMMY DABOO (SENIOR STATUTORY AUDITOR)**  
for and on behalf of KPMG LLP, Statutory Auditor

Chartered Accountants  
15 Canada Square  
London E14 5GL  
13 February 2017

# Sustainability assurance statement

To: The stakeholders of Rolls-Royce Holdings plc

## Independent limited assurance statement

### INTRODUCTION AND OBJECTIVES OF WORK

Bureau Veritas UK Limited (Bureau Veritas) has been engaged by Rolls-Royce Holdings plc (Rolls-Royce) to provide limited assurance of selected sustainability performance indicators for inclusion in its 2016 Annual Report and website. This assurance statement applies to the related information included within the scope of work described below.

### SELECTED INFORMATION

The scope of our work was limited to assurance over the following information included within Rolls-Royce's 2016 Annual Report (the Report) for the period 1 of January to 31 of December 2016 (the Selected Information):

- Energy consumption;
- Scope 1 and scope 2 greenhouse gas (GHG) emissions;
- Total reportable injury (TRI) rate; and
- The number of people reached through the science, technology, engineering and mathematics (STEM) education outreach programmes.

### REPORTING CRITERIA

The Selected Information needs to be read and understood together with the basis of reporting document, as set out at [www.rolls-royce.com/sustainability](http://www.rolls-royce.com/sustainability).

### LIMITATIONS AND EXCLUSIONS

Excluded from the scope of our work is any verification of information relating to:

- Activities outside the defined verification period; and
- Other information included in the Report.

This limited assurance engagement relies on a risk-based selected sample of sustainability data and the associated limitations that this entails. This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist.

### RESPONSIBILITIES

This preparation and presentation of the Selected Information in the Report are the sole responsibility of the management of Rolls-Royce.

Bureau Veritas was not involved in the drafting of the Report or of the Reporting Criteria. Our responsibilities were to:

- obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria;
- form an independent conclusion based on the assurance procedures performed and evidence obtained; and
- report our conclusions to the Directors of Rolls-Royce.

### ASSESSMENT STANDARD

We performed our work in accordance with International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after 15 December 2015), and in accordance with International Standard on Assurance Engagements (ISAE) 3410, Assurance Engagements on Greenhouse Gas Statements, issued by the International Auditing and Assurance Standards Board.

### SUMMARY OF WORK PERFORMED

As part of its independent verification, Bureau Veritas undertook the following activities:

1. Assessed the appropriateness of the Reporting Criteria for the Selected Information;
2. Conducted interviews with relevant personnel of Rolls-Royce;
3. Carried out nine site visits, selected employing a risk-based approach, in the UK, US, Germany, Italy and Singapore;
4. Reviewed the data collection and consolidation processes used to compile the Selected Information, including assessing assumptions made, the data scope and reporting boundaries;
5. Reviewed documentary evidence produced by Rolls-Royce;
6. Agreed a selection of the Selected Information to the corresponding source documentation; and
7. Re-performed aggregation calculations of the Selected Information.

### CONCLUSION

On the basis of our methodology and the activities described above, nothing has come to our attention to indicate that the Selected Information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria.

### STATEMENT OF INDEPENDENCE, INTEGRITY AND COMPETENCE

Bureau Veritas is an independent professional services company that specialises in quality, environmental, health, safety and social accountability with over 185 years' history. Its assurance team has extensive experience in conducting verification over environmental, social, ethical and health and safety information, systems and processes.

Bureau Veritas operates a certified<sup>1</sup> Quality Management System which complies with the requirements of ISO 9001:2008, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Bureau Veritas has implemented and applies a Code of Ethics, which meets the requirements of the International Federation of Inspections Agencies (IFIA)<sup>2</sup> across the business to ensure that its employees maintain integrity, objectivity, professional competence and due care, confidentiality, professional behaviour and high ethical standards in their day-to-day business activities.

The assurance team for this work does not have any involvement in any other Bureau Veritas projects with Rolls-Royce.

Bureau Veritas UK Limited  
London

2 February 2017



**BUREAU  
VERITAS**

<sup>1</sup> Certificate of Registration FS 34143 issued by BSI Assurance UK Limited.

<sup>2</sup> International Federation of Inspection Agencies – Compliance Code – Third Edition.

## Additional financial information

### Foreign exchange

Foreign exchange rate movements influence the reported income statement, the cash flow and closing net debt balance. The average and spot rates for the principal trading currencies of the Group are shown in the table below:

	2016	2015	Change
USD per GBP	Year end spot rate	1.23	1.48
	Average spot rate	1.36	-11%
EUR per GBP	Year end spot rate	1.17	-14%
	Average spot rate	1.22	-12%

### The Group's approach to managing its tax affairs

#### Introduction

Rolls-Royce is committed to (i) complying with laws in a responsible manner and (ii) building and maintaining professional and constructive working relationships with tax authorities based on principles of mutual transparency and trust.

These commitments, which are explained in more detail below, apply to all countries and all employees.

#### 1. Tax planning

The Group manages tax costs through maximising the tax efficiency of business transactions which includes taking advantage of available tax incentives and exemptions. This must be done in a way which is aligned with the Group's commercial objectives and meets its legal obligations and ethical standards. It must also be done in a way that gives a tax result the Group reasonably believes is not contrary to the clear intentions of the legislation concerned.

#### 2. Relationships with tax authorities

The Group is committed to building constructive working relationships with tax authorities based on a policy of full disclosure in order to remove uncertainty in its business transactions and allow the authorities to review possible risks.

Where appropriate and possible, the Group enters into consultation with tax authorities to help shape proposed legislation and future tax policy.

#### 3. Transfer pricing

The Group seeks to price transactions between Rolls-Royce group companies as if they were between unrelated parties, in compliance with the OECD Transfer Pricing Guidelines and the laws of the relevant jurisdictions.

#### 4. Governance

The Board has approved this approach.

The Group Audit Committee oversees the Group's tax affairs and risks through periodic reviews.

The Group's governance framework is used to manage tax risks, establish controls and monitor their effectiveness.

The Group Tax Director is responsible for ensuring that appropriate policies, processes and systems are in place and that the global tax team has the required skills and support to implement this approach.

### The Group's global corporate income tax contribution

Around 85% of the Group's underlying profit before tax (excluding joint ventures and associates) is generated in the UK, the US, Germany, Norway, Finland and Singapore. This is lower than 2015 (95%) due to losses in the Marine businesses. The remaining profits are generated across more than 40 other countries. This reflects the fact that the majority of the Group's business is undertaken, and employees are based, in the above countries.

In common with most multinational groups the total of all profits in respect of which corporate income tax is paid is not the same as the consolidated profit before tax reported on page 115. The main reasons for this are:

- i) the consolidated income statement is prepared under adopted IFRS whereas tax is paid on the profits of each Group company, which are determined by local accounting rules;
- ii) accounting rules require certain income and costs relating to our commercial activities to be eliminated from, or added to, the aggregate of all the profits of the Group companies when preparing the consolidated income statement ('consolidation adjustments'); and
- iii) specific tax rules including exemptions or incentives as determined by the tax laws in each country.

The Group's total corporation tax payments in 2016 were £157m. The level of tax paid in each country is impacted by the above. In most cases, (i) and (ii) are only a matter of timing and therefore tax will be paid in an earlier or later year. As a result they only have a negligible impact on the Group's underlying tax rate, which, excluding joint ventures and associates, would be 37.5% (2015: 26.6%). The underlying tax rate including joint ventures and associates can be found on pages 16 and 36. This is due to deferred tax accounting, details of which can be found in note 5 to the Consolidated Financial Statements. The impact of (iii) will often be permanent depending on the relevant tax law.

Further information on the tax position of the Group can be found as follows:

- Audit Committee report (page 98) – The Group Tax Director gave a presentation to the Audit Committee during the year which covered various matters including tax risks and how they are managed;
- Note 1 to the Consolidated financial statements (pages 124 and 126) – Details of key areas of uncertainty and accounting policies for tax;
- Note 5 to the Consolidated financial statements (pages 137 to 139) – Details of the tax balances in the Consolidated financial statements together with a tax reconciliation. This explains the main drivers of the tax rate.

At this stage we expect these items to continue to influence the underlying tax rate. The reported tax rate is more difficult to forecast due to the volatility of significant items in reported profits, in particular the net unrealised fair value changes to derivative contracts.

## Investments and capital expenditure

The Group subjects all major investments and capital expenditure to a rigorous examination of risks and future cash flows to ensure that they create shareholder value. All major investments, including the launch of major programmes, require Board approval.

The Group has a portfolio of projects at different stages of their life cycles. Discounted cash flow analysis of the remaining life of projects is performed on a regular basis.

Sales of engines in production are assessed against criteria in the original development programme to ensure that overall value is enhanced.

## Financial risk management

The Board has established a structured approach to financial risk management. The Financial risk committee (Frc) is accountable for managing, reporting and mitigating the Group's financial risks and exposures. These risks include the Group's principal counterparty, currency, interest rate, commodity price, liquidity and credit rating risks outlined in more depth in note 17. The Frc is chaired by the Chief Financial Officer. The Group has a comprehensive financial risk policy that advocates the use of financial instruments to manage and hedge business operations risks that arise from movements in financial, commodities, credit or money markets. The Group's policy is not to engage in speculative financial transactions. The Frc sits quarterly to review and assess the key risks and agree any mitigating actions required.

## Capital structure

£m	2016	2015
Total equity	1,864	5,016
Cash flow hedges	107	100
Group capital	1,971	5,116
Net debt	(225)	(111)

Operations are funded through various shareholders' funds, bank borrowings, bonds and notes. The capital structure of the Group reflects the judgement of the Board as to the appropriate balance of funding required. Funding is secured by the Group's continued access to the global debt markets. Borrowings are funded in various currencies using derivatives where appropriate to achieve a required currency and interest rate profile. The Board's objective is to retain sufficient financial investments and undrawn facilities to ensure that the Group can both meet its medium-term operational commitments and cope with unforeseen obligations and opportunities.

The Group holds cash and short-term investments which, together with the undrawn committed facilities, enable it to manage its liquidity risk.

During the year the Group extended the maturity of the £1,500m committed bank borrowing facility from 2020 to 2021. The Group also added a further £500m committed bank borrowing facility with a maturity of 2019. Both of these facilities were undrawn at the period end. At the year end, the Group retained aggregate liquidity of £5.1bn, including cash and cash equivalents of £2.8bn

and undrawn borrowing facilities of £2.3bn. Circa £170m of the facilities mature in 2017.

The maturity profile of the borrowing facilities is regularly reviewed to ensure that refinancing levels are manageable in the context of the business and market conditions. There are no rating triggers in any borrowing facility that would require the facility to be accelerated or repaid due to an adverse movement in the Group's credit rating. The Group conducts some of its business through a number of joint ventures. A major proportion of the debt of these joint ventures is secured on the assets of the respective companies and is non-recourse to the Group. This debt is further outlined in note 11.

## Credit rating

	Rating	Outlook	Grade
Moody's Investors Service	A3	Stable	Investment
Standard & Poor's	BBB+	Stable	Investment

The Group subscribes to both Moody's Investors Service and Standard & Poor's for independent long-term credit ratings. At the date of this report, the Group maintained investment grade ratings from both agencies.

As a capital-intensive business making long-term commitments to our customers, the Group attaches significant importance to maintaining or improving the current investment grade credit ratings.

## Accounting

The Consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU.

No new accounting standards had a material impact in 2016. The impact of changes to IFRS, in particular IFRS 15 *Revenue from Contracts with Customers* which have not been adopted in 2016 is included within the accounting policies in note 1.

## Share price

During the year, the share price increased by 16% from 575p to 668p, compared to a 12% increase in the FTSE aerospace and defence sector and a 14% increase in the FTSE 100. The Company's share price ranged from 504p in February 2016 to 826p in July 2016.

## Other statutory information

### Share capital

On 31 December 2016 1,838,796,763 ordinary shares of 20p each, 28,124,943,825 C Shares of 0.1p each and one Special Share of £1 were in issue. The ordinary shares are listed on the London Stock Exchange.

### Payment to shareholders

The Company issues non-cumulative redeemable preference shares (C Shares) as an alternative to paying a cash dividend.

Shareholders can choose to:

- Redeem all C Shares for cash.
- Redeem all C Shares for cash and reinvest the proceeds in the C Share Reinvestment Plan (CRIP).
- Keep the C Shares.

The CRIP is operated by Computershare Investor Services PLC (the Registrar). The Registrar will purchase ordinary shares in the market for shareholders electing to reinvest their C Share proceeds. Shareholders wishing to participate in the CRIP or redeem their C Shares in July 2017 must ensure that their instructions are lodged with the Registrar no later than 5.00pm (BST) on 1 June 2017 (CREST holders must submit their election in CREST before 3.00pm (BST) on 1 June 2017). Redemption will take place on 5 July 2017.

At the 2017 AGM, the Directors will recommend an issue of 71 C Shares with a total nominal value of 7.1p for each ordinary share. The C Shares will be issued on 3 July 2017 to shareholders on the register on 28 April 2017 and the final day of trading with entitlement to C Shares is 26 April 2017. Together with the interim issue on 4 January 2017 of 46 C Shares for each ordinary share with a total nominal value of 4.6p, this is the equivalent of a total annual payment to ordinary shareholders of 11.7p for each ordinary share.

Further information for shareholders is on pages 190 and 191.

### Share class rights

The full share class rights are set out in the Company's Articles of Association (Articles), which are available on the Group's website at [www.rolls-royce.com](http://www.rolls-royce.com), and are summarised below.

#### ORDINARY SHARES

Each member has one vote for each ordinary share held. Holders of ordinary shares are entitled to: receive the Company's Annual Report; attend and speak at general meetings of the Company; appoint one or more proxies or, if they are corporations, corporate representatives; and exercise voting rights. Holders of ordinary shares may receive a bonus issue of C Shares or a dividend and on liquidation may share in the assets of the Company.

#### C SHARES

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

On a return of capital on a winding-up, the holders of C Shares shall be entitled, in priority to any payment to the holders of ordinary shares, to the repayment of the nominal capital paid-up or credited as paid-up on the C Shares held by them, together with a sum equal to the outstanding preferential dividend which will have been accrued but not been paid until the date of return of capital.

The holders of C Shares are only entitled to attend, speak and vote at a general meeting if a resolution to wind up the Company is to be considered, in which case they may vote only on that resolution.

#### SPECIAL SHARE

Certain rights attach to the special rights non-voting share (Special Share) issued to HM Government (Special Shareholder). These rights are set out in the Articles. Subject to the provisions of the Companies Act 2006, the Treasury Solicitor may redeem the Special Share at par at any time. The Special Share confers no rights to dividends but in the event of a winding-up it shall be repaid at its nominal value in priority to any other shares.

Certain Articles (in particular those relating to the foreign shareholding limit, disposals and the nationality of the Company's Directors) that relate to the rights attached to the Special Share may only be altered with the consent of the Special Shareholder. The Special Shareholder is not entitled to vote at any general meeting or any other meeting of any class of shareholders.

#### RESTRICTIONS ON TRANSFER OF SHARES AND LIMITATIONS ON HOLDINGS

There are no restrictions on transfer or limitations on the holding of the ordinary shares or C Shares other than under the Articles (as described here), under restrictions imposed by law or regulation (for example, insider trading laws) or pursuant to the Company's share dealing code. The Articles provide that the Company should be and remain under UK control. As such, an individual foreign shareholding limit is set at 15% of the aggregate votes attaching to the share capital of all classes (taken as a whole) and capable of being cast on a poll and to all other shares that the Directors determine are to be included in the calculation of that holding. The Special Share may only be issued to, held by and transferred to the Special Shareholder or his successor or nominee.

#### SHAREHOLDER AGREEMENTS AND CONSENT REQUIREMENTS

There are no known arrangements under which financial rights carried by any of the shares in the Company are held by a person other than the holder of the shares and no known agreements between the holders of shares with restrictions on the transfer of shares or exercise of voting rights. No disposal may be made to a non-Group member which, alone or when aggregated with the same or a connected transaction, constitutes a disposal of the whole or a material part of either the Nuclear propulsion business or the assets of the Group as a whole, without the consent of the Special Shareholder.

## Authority to issue shares

At the AGM in 2016, authority was given to the Directors to allot new C Shares up to a nominal value of £500m as an alternative to a cash dividend.

In addition, a special resolution was passed authorising the Directors to allot new ordinary shares up to a nominal value of £122,579,775 equivalent to one-third of the issued share capital of the Company. This resolution also authorised the Directors to allot up to two thirds of the total issued share capital of the Company, but only in the case of a rights issue.

A further special resolution was passed to effect a disapplication of pre-emption rights for a maximum of 5% of the issued share capital of the Company.

These authorities are valid until the AGM in 2017, and the Directors propose to renew each of them at that AGM. The Board believes that these authorities will allow the Company to retain flexibility to respond to circumstances and opportunities as they arise.

## Authority to purchase own shares

At the AGM in 2016, the Company was authorised by shareholders to purchase up to 183,869,662 of its own ordinary shares representing 10% of its issued ordinary share capital.

The authority for the Company to purchase its own shares expires at the conclusion of the AGM in 2017 or 18 months from 5 May 2016 whichever is the earlier. A resolution to renew it will be proposed at the 2017 meeting.

## Deadlines for exercising voting rights

Electronic and paper proxy appointments, and voting instructions, must be received by the Company's Registrar not less than 48 hours before a general meeting.

## Voting rights for employee share plan shares

Shares are held in various employee benefit trusts for the purpose of satisfying awards made under the various employee share plans. For shares held in a nominee capacity or if plan/trust rules provide the participant with the right to vote in respect of specifically allocated shares, the trustee votes in line with the participants' instructions. For shares that are not held absolutely on behalf of specific individuals, the general policy of the trustees, in accordance with investor protection guidelines, is to abstain from voting in respect of those shares.

## Change of control

### CONTRACTS AND JOINT VENTURE AGREEMENTS

There are a number of contracts and joint venture agreements which would allow the counterparties to terminate or alter those arrangements in the event of a change of control of the Company. These arrangements are commercially confidential and their disclosure could be seriously prejudicial to the Company.

### BORROWINGS AND OTHER FINANCIAL INSTRUMENTS

The Group has a number of borrowing facilities provided by various banks. These facilities generally include provisions which may require any outstanding borrowings to be repaid or the alteration or termination of the facility upon the occurrence of a change of control of the Company. At 31 December 2016, these facilities were less than 15% drawn (2015: 22%).

The Group has entered into a series of financial instruments to hedge its currency, interest rate and commodity exposures. These contracts provide for termination or alteration in the event that a change of control of the Company materially weakens the creditworthiness of the Group.

### EMPLOYEE SHARE PLANS

In the event of a change of control of the Company, the effect on the employee share plans would be as follows:

- PSP – awards would vest pro rata to service in the performance period, subject to Remuneration Committee judgement of Group performance.
- APRA deferred shares – the shares would be released from trust immediately.
- ShareSave – options would become exercisable immediately. The new company might offer an equivalent option in exchange for cancellation of the existing option.
- Share Incentive Plan (SIP) – consideration received as shares would be held within the SIP, if possible, otherwise the consideration would be treated as a disposal from the SIP.
- New LTIP (subject to shareholder approval) – awards would vest on the change of control, subject to the Remuneration Committee's judgement of performance and may be reduced pro rata to service in the vesting period. Any applicable holding period will cease in the event of a change in control.

## Other statutory information continued

### Major shareholdings

At 13 February 2017 the following shareholders had notified an interest in the issued ordinary share capital of the Company in accordance with the Financial Conduct Authority's (FCA's) Disclosure Guidance and Transparency Rules.

Shareholder	Date notified	% of issued ordinary share capital
BlackRock, Inc.	23 November 2016	5.00
The Capital Group Companies, Inc.	6 January 2017	4.69
ValueAct Capital Master Fund, L.P.	27 January 2017	11.01
Harbor International Fund	2 February 2017	3.98

### Directors

The names of the Directors who held office during the year are set out on page 61.

### Disclosures in the Strategic report

The Board has taken advantage of Section 414C(11) of the Companies Act 2006 to include disclosures in the Strategic report including:

- Employee involvement.
- The future development, performance and position of the Group.
- The financial position of the Group.
- R&D activities.
- The principal risks and uncertainties.

### Political donations

The Group's policy is not to make political donations and therefore did not donate any money to any political party during the year.

However, it is possible that certain activities undertaken by the Group may unintentionally fall within the broad scope of the provisions contained in the Companies Act 2006 (the Act). The resolution to be proposed at the AGM is to ensure that the Group does not commit any technical breach of the Act.

During the year, expenses incurred by Rolls-Royce North America Inc. in providing administrative support for the Rolls-Royce North America political action committee (PAC) was US\$42,742 (2015: US\$45,021). PACs are a common feature of the US political system and are governed by the Federal Election Campaign Act.

The PAC is independent of the Group and independent of any political party. The PAC funds are contributed voluntarily by employees and the Group cannot affect how they are applied, although under US Law, the business expenses are paid by the employee's company. Such contributions do not require authorisation by shareholders under the Act and therefore do not count towards the limits for political donations and expenditure for which shareholder approval will be sought at this year's AGM to renew the authority given at the 2016 AGM.

### Greenhouse gas emissions

In 2016, our total greenhouse gas (GHG) emissions from our facilities and processes, including product test and development, was 587 kilotonnes carbon dioxide equivalent (ktCO<sub>2</sub>e). This represents a decrease of 3% compared with 602 ktCO<sub>2</sub>e in 2015.

We have introduced reporting of fugitive emissions of hydrofluorocarbons (HFCs), associated with air conditioning equipment, into our GHG emissions figures for 2016. These include emissions from our facilities in the UK, US, Canada and France only. We do not anticipate that emissions from other facilities will have a material impact. Figures from prior years (2012 to 2015) exclude emissions associated with HFCs.

Total GHG emissions (ktCO <sub>2</sub> e)	2012	2013	2014*	2015☒	2016☒
Direct emissions – facilities, processes, product test and development (Scope 1)	219	241	301	242	240
Indirect emissions – facilities, processes, product test and development (Scope 2)	313	313	382	360	347
<b>Total for facilities, processes, product test and development</b>	<b>532</b>	<b>554</b>	<b>683</b>	<b>602</b>	<b>587</b>
Direct emissions – power generation to grid (Scope 1)		153	155	132	132
Indirect emissions – power generation to grid (Scope 2)		12	14	15	11
<b>Total for facilities, processes, product test and development, and power generation to grid</b>	<b>719</b>	<b>852</b>	<b>749</b>	<b>730</b>	
<b>Intensity ratio (total emissions normalised by revenue) for facilities, processes, product test and development, and power generation to grid (ktCO<sub>2</sub>e/£m)</b>	<b>0.048</b>	<b>0.062</b>	<b>0.055</b>	<b>0.052</b>	

\* 2014 data has been restated to reflect the inclusion of greenhouse gas emissions data from Power Systems. Figures for prior years (2012 to 2013) do not include data from Power Systems and therefore are not directly comparable.

☒ We engaged Bureau Veritas to undertake a limited assurance engagement, reporting to Rolls-Royce Holdings plc, using the assurance standards ISAE 3000 and ISAE 3410 over the energy, GHG, TRI rate and STEM data that has been highlighted with ☒ and as set out on pages 41 to 44 and in the table above. The sustainability assurance statement is included on page 183.

With the exceptions noted above, we have reported on all of the emission sources required under the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013. These sources fall within our consolidated financial statements. We do not have responsibility for any emission sources that are not included in our consolidated financial statements.

We have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) as of 31 December 2014, data gathered to fulfil our requirements under the Carbon Reduction Commitment (CRC) Energy Efficiency scheme, and emission factors from the UK government's GHG Conversion Factors for Company Reporting 2016.

Further details on our methodology for reporting and the criteria used can be found within our basis of reporting, available to download from our website at [www.rolls-royce.com/sustainability](http://www.rolls-royce.com/sustainability).

## Branches

Rolls-Royce is a global company and our activities and interests are operated through subsidiaries, branches of subsidiaries, joint ventures and associates which are subject to the laws and regulations of many different jurisdictions. Our subsidiaries, joint ventures and associates are listed on pages 170 to 175.

## Post balance sheet events

In January 2017, the Group entered into Deferred Prosecution Agreements with the UK Serious Fraud Office and the US Department of Justice, and a leniency agreement with the Brazilian authority, MPF. These agreements require that the Group pays financial penalties, the details of which are set out on page 8.

There have been no other events affecting the Group since 31 December 2016 which need to be reflected in the 2016 Consolidated financial statements.

## Financial instruments

Details of the Group's financial instruments are set out in note 17 to the consolidated financial statements.

## Related party transactions

Related party transactions are set out in note 24 to the Consolidated financial statements.

## Information required by UK Listing Rule (LR) 9.8.4

There are no disclosures to be made under LR 9.8.4.

## Management report

The Strategic report and the Directors' report together are the management report for the purposes of Rule 4.1.8R of the FCA's Disclosure Guidance and Transparency Rules.

## Disclosure of information to auditors

Each of the persons who is a Director at the date of approval of this report confirms that:

- So far as the Director is aware, there is no relevant audit information of which the Company's auditor is unaware.
- The Director has taken all steps that he or she ought to have taken as a director in order to make himself or herself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

This confirmation is given, and should be interpreted, in accordance with the provisions of Section 418 of the Companies Act 2006.

# Shareholder information

## Financial calendar 2017-2018

<b>4 MAY 11.00 AM</b> AGM Pride Park Stadium Pride Park Derby DE24 8XL	<b>3 JULY</b> Payment of cash dividend on C Shares	<b>17 NOVEMBER</b> Record date for cash dividend on C Shares	<b>3 JANUARY</b> Payment of cash dividend on C Shares
<b>3 JULY</b> Allotment of C Shares	<b>5 JULY</b> Payment of C Share redemption monies		<b>3 JANUARY</b> Allotment of C Shares
<b>5 JULY</b> Purchase of ordinary shares for CRIP participants (at the latest)	<b>12 JULY</b> Announcement of half-year results		<b>5 JANUARY</b> Payment of C Share redemption monies
<b>1 AUGUST</b> Announcement of half-year results			<b>12 JANUARY</b> Purchase of ordinary shares for CRIP participants (at the latest)
<b>APR 2017</b>	<b>MAY 2017</b>	<b>JUN 2017</b>	<b>JUL 2017</b>
<b>AUG 2017</b>	<b>SEP 2017</b>	<b>OCT 2017</b>	<b>NOV 2017</b>
<b>DEC 2017</b>	<b>JAN 2018</b>	<b>FEB 2018</b>	<b>MAR 2018</b>
<b>27 APRIL</b> Ex-entitlement to C Shares	<b>1 JUNE 5.00PM</b> Deadline for receipt by Registrar of C Share instructions (3:00pm for CREST holders)	<b>26 OCTOBER</b> Ex-entitlement to C Shares	<b>1 DECEMBER 5.00PM</b> Deadline for receipt by Registrar of C Share instructions (3:00pm for CREST holders)
<b>28 APRIL</b> Record date for entitlement to C Shares	<b>2 JUNE</b> Record date for cash dividend on C Shares	<b>27 OCTOBER</b> Record date for entitlement to C Shares	<b>31 DECEMBER</b> Financial year end
			<b>FEBRUARY/MARCH</b> Announcement of full-year results and Annual Report published

## Managing your shareholding

Your shareholding is managed by Computershare Investor Services PLC (the Registrar). When making contact with the Registrar please quote your Shareholder Reference Number (SRN), a 10-digit number prefixed with the letter 'C' that can be found on the right-hand side of your share certificate or in any other shareholder correspondence. It is very important that you keep your shareholding account details up to date by notifying the Registrar of any changes in your circumstances.

You can manage your shareholding at [www.investorcentre.co.uk](http://www.investorcentre.co.uk), speak to the Registrar on +44 (0)370 703 0162 (8.30am to 5.30pm Monday to Friday) or you can write to the Registrar at Computershare Investor Services PLC, The Pavilions, Bridgwater Road, Bristol BS13 8AE.

## Payments to shareholders

The Company makes payments to shareholders by issuing redeemable C Shares of 0.1p each. You can redeem C Shares for cash and either take the cash or reinvest the cash to purchase additional ordinary shares providing you complete a payment instruction form, which is available from the Registrar. Once you have submitted your payment instruction form, you will receive cash or additional ordinary shares each time the Company issues C Shares. If you choose to receive cash we strongly recommend that you include your bank details on the payment instruction form and have payments credited directly to your bank account. This removes the risk of a cheque going astray and means that cleared payments will be credited to your bank account on the payment date.

## Share dealing

The Registrar offers existing shareholders an internet dealing service available from its website [www.computershare.co.uk](http://www.computershare.co.uk) and a telephone dealing service (+44 (0)370 703 0084). The service is available during market hours, 8.00am to 4.30pm, Monday to Friday excluding bank holidays. The fee for internet dealing is 1% of the transaction value subject to a minimum fee of £30. The fee for telephone dealing is 1% of the transaction plus £35. Stamp duty of 0.5% is payable on all purchases. Other share dealing facilities are available but you should always use a firm regulated by the FCA (see [www.fca.org.uk/register](http://www.fca.org.uk/register)).

## Your share certificate

Your share certificate is an important document. If you sell or transfer your shares you must make sure that you have a valid share certificate in the name of Rolls-Royce Holdings plc. If you place an instruction to sell your shares and cannot provide a valid share certificate, the transaction cannot be completed and you may be liable for any costs incurred by the broker. Share certificates issued in the name of Rolls-Royce plc or Rolls-Royce Group plc are invalid and should be destroyed. If you are unable to find your share certificate please inform the Registrar immediately.

## American Depository Receipts (ADR)

ADR holders should contact the depositary, JP Morgan, by calling +1 (800) 990 1135 (toll free within the US) or emailing [adr@jpmorgan.com](mailto:adr@jpmorgan.com).

## Warning to shareholders – investment scams

We are aware that some of our shareholders have received unsolicited telephone calls or correspondence, offering to buy or sell their shares at very favourable terms. The callers can be very persuasive and extremely persistent and often have professional websites and telephone numbers to support their activities. These callers will sometimes imply a connection to Rolls-Royce and provide incorrect or misleading information. This type of call should be treated as an investment scam – the safest thing to do is hang up.

You should always check that any firm contacting you about potential investment opportunities is properly authorised by the FCA. If you deal with an unauthorised firm you will not be eligible for compensation under the Financial Services Compensation Scheme. You can find out more about protecting yourself from investment scams by visiting the FCA's website [www.fca.org.uk/consumers](http://www.fca.org.uk/consumers), or by calling the FCA's consumer helpline on 0800 111 6768 (overseas callers dial +44 20 7066 1000). If you have already paid money to share fraudsters contact Action Fraud immediately on 0300 123 2040, whose website is at [www.actionfraud.police.uk](http://www.actionfraud.police.uk).

**Remember: if it sounds too good to be true it probably is.**

## Visit Rolls-Royce online

Visit [www.rolls-royce.com](http://www.rolls-royce.com) to find out more about the latest financial results, the share price, payments to shareholders, the financial calendar and shareholder services.



## Keeping up to date

You can sign up to receive the latest news updates to your phone or email address by visiting [www.rolls-royce.com](http://www.rolls-royce.com) and registering for our alert service.

## DIVIDENDS PAID ON C SHARES HELD

C Share calculation period	C Share dividend rate (%)	Record date for C Share dividend	Payment date
1 July 2016 – 31 December 2016	0.254	11 November 2016	4 January 2017
1 January 2016 – 30 June 2016	0.282	3 June 2016	1 July 2016

## PREVIOUS C SHARE ISSUES

Issue date	No. of C Shares issued per ordinary share	Record date for entitlement to C Shares	Latest date for receipt of payment instruction forms by Registrar	Apportionment values		CGT apportionment				
				Price of ordinary shares on first day of trading (p)	Value of C Share issues per ordinary shares (p)	Ordinary shares (%)	C Shares (%)	Date of redemption of C Shares	CRIP purchase date	CRIP purchase price (p)
4 January 2017	46	21 October 2016	1 December 2016	670.00	4.60	99.32	0.68	6 January 2017	12 January 2017	665.4883
1 July 2016	71	29 April 2016	1 June 2016	711.25	7.10	99.01	0.99	4 July 2016	5 July 2016	709.4997

For information on earlier C Share issues, please refer to the Group's website [www.rolls-royce.com](http://www.rolls-royce.com).

## ANALYSIS OF ORDINARY SHAREHOLDERS AT 31 DECEMBER 2016

Type of holder	Number of shareholders	% of total shareholders	Number of shares	% of total shares
Individuals	186,217	97.46	95,144,774	5.17
Institutional and other investors	4,850	2.54	1,743,651,989	94.83
Total	191,067	100.00	1,838,796,763	100.00
Size of holding				
1 – 150	62,115	32.51	5,793,739	0.32
151 – 500	94,927	49.68	26,096,749	1.42
501 – 10,000	32,319	16.91	52,267,639	2.84
10,001 – 100,000	1,163	0.61	32,145,373	1.75
100,001 – 1,000,000	378	0.20	125,958,367	6.85
1,000,001 and over	165	0.09	1,596,534,896	86.82
Total	191,067	100.00	1,838,796,763	100.00

# Glossary

<b>ABC</b>	anti-bribery and corruption	<b>IASB</b>	International Accounting Standards Board
<b>AGM</b>	Annual General Meeting	<b>IFRS</b>	International financial reporting standards
<b>AMC</b>	Approved Maintenance Centre	<b>KPIs</b>	key performance indicators
<b>AMRCs</b>	Advanced Manufacturing Research Centres	<b>ktCO<sub>2</sub>e</b>	kilotonnes carbon dioxide equivalent
<b>APRA</b>	annual performance related award plan	<b>LIBOR</b>	London inter-bank offered rate
<b>Articles</b>	Articles of Association of Rolls-Royce Holdings plc	<b>LTIP</b>	long-term incentive plan
<b>ASC</b>	Authorised Service Centres	<b>LTPR</b>	long-term planning exchange rate
<b>Brexit</b>	UK exit from the European Union	<b>LTSA</b>	long-term service agreement
<b>C Shares</b>	non-cumulative redeemable preference shares	<b>MPF</b>	Ministério Pùblico Federal, Brazil
<b>C&amp;A</b>	commercial and administrative	<b>MRO</b>	maintenance repair and overhaul
<b>CARs</b>	contractual aftermarket rights	<b>MTC</b>	Manufacturing Technology Centre
<b>CEO</b>	chief executive officer	<b>NCI</b>	non-controlling interest
<b>CFO</b>	chief financial officer	<b>OCI</b>	other comprehensive income
<b>Company</b>	Rolls-Royce Holdings plc	<b>OE</b>	original equipment
<b>CPS</b>	cash flow per share	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>CRIP</b>	C Share reinvestment plan	<b>P&amp;L</b>	profit and loss
<b>DARPA</b>	Defense Advanced Research Projects Agency	<b>PBT</b>	profit before tax
<b>DoJ</b>	US Department of Justice	<b>PPE</b>	property, plant and equipment
<b>DPA</b>	Deferred Prosecution Agreements	<b>PSP</b>	performance share plan
<b>EASA</b>	European Aviation Safety Agency	<b>R&amp;D</b>	research and development
<b>ELT</b>	Executive Leadership Team	<b>R&amp;T</b>	research and technology
<b>EPS</b>	earnings per share	<b>Registrar</b>	Computershare Investor Services PLC
<b>EU</b>	European Union	<b>RMS</b>	risk management system
<b>EUR</b>	euro	<b>RRSAs</b>	risk and revenue sharing arrangements
<b>FCA</b>	Financial Conduct Authority	<b>SFO</b>	UK Serious Fraud Office
<b>FCAS</b>	UK-France Unmanned Combat Air System	<b>SMR</b>	small modular reactors
<b>FRC</b>	Financial Reporting Council	<b>SMS</b>	safety management system
<b>FX</b>	foreign exchange	<b>SSA</b>	Special Security Agreement
<b>GBP</b>	Great British pound or pound sterling	<b>STEM</b>	science, technology, engineering and mathematics
<b>GHG</b>	greenhouse gas	<b>the Code</b>	UK Corporate Governance Code
<b>Global Code</b>	Global Code of Conduct	<b>Trent 1000</b>	Thrust, Efficiency and New Technology
<b>Group</b>	Rolls-Royce Holdings plc and its subsidiaries	<b>TEN</b>	
<b>HPC</b>	high performance culture	<b>TRI</b>	total reportable injuries
<b>HS&amp;E</b>	health, safety and environment	<b>TSR</b>	total shareholder return
<b>IAB</b>	International Advisory Board	<b>USD/US\$</b>	United States dollar
<b>IAS</b>	International accounting standards	<b>UTCs</b>	University Technology Centres



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