# **INTRODUCTION**

Rolls-Royce is a global company, providing integrated power solutions for customers in civil and defence aerospace, marine, energy and power markets.

Our vision is to deliver 'better power for a changing world'.

		Restated*	
	2013	2012	Change
Order book £m	71,612	60,146	+19%
Underlying revenue £m	15,505	12,209	+27%
Underlying profit before tax £m	1,759	1,434	+23%
Underlying earnings per share	65.59p	59.59p	+10%
Full year payment to shareholders	22.0p	19.5p	+13%
Reported revenue £m	15,513	12,161	+28%
Reported profit before tax £m	1,759	2,766	-36%
Reported earnings per share	73.26p	125.38p	-42%
Net cash £m	1,939	1,317	
•			

 <sup>2012</sup> figures have been restated to reflect the adoption of amendments to IAS 19 Employee Benefits
and the change in accounting policy for RRSAs.

Strategic report	
Introduction	
Group at a glance	
Chairman's review	4
Chief Executive's review	(
Our vision, business model,	
strategy and values	8
Chief Financial Officer's review	10
Civil aerospace	14
Defence aerospace	16
Marine	18
Energy	20
Power Systems	22
Engineering and technology	24
Operations	2!
Sustainability	26
Key performance indicators	30
Principal risks and uncertainties	32
Directors' report	
Chairman's introduction	3!
Board of directors	36
International Advisory Board	38
Executive Leadership Team	38
Corporate governance report	39
Audit committee report	44
Nomination committee report	4
Ethics committee report	49
Risk committee report	53
Safety committee report	52
Remuneration committee report	53
Directors' remuneration policy	5!
Directors' remuneration report	62
Shareholders and share capital	70
Other statutory information	72
Financial statements	
Contents	74
Other information	
Subsidiaries, jointly controlled	10
entities and associates Independent Auditor's report	127
	130
Group five-year review	136
Additional financial information	137
Shareholder information	139
Glossary	143

#### 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 will not be updated. By their nature, these statements involve risk and uncertainty, and a number of factors could cause material differences to the actual results or developments. This report is intended to provide information to shareholders, is not designed to be relied upon by any other party, or for any other purpose and the Company and its directors accept no liability to any other person other than that required under English law.

# **GROUP AT A GLANCE**

As in previous years, our business priorities remain the 4 Cs: Customer, Concentration, Cost and Cash.

# **GROUP OVERVIEW 2013**

2013 revenue by business segment



- Civil aerospace
- Defence aerospace
- Energy 16% Marine
- Power Systems

- The order book increased 19 per cent to £71.6 billion. This included a £1.6 billion contribution from Power Systems.
- · Order intake was £26.9 billion in the year.
- · Underlying revenue increased to £15.5 billion, with 53 per cent from original equipment (OE) and 47 per cent from services revenue.
- · Underlying profit before tax increased 23 per cent to £1.8 billion, including £257 million from Tognum.

# **CIVIL AEROSPACE**

#### Revenue mix

- 46% OE revenue
- 54% Services revenue

£6,655m

Underlying revenue 2013

Underlying profit 2013

- First flight of the Airbus A350 XWB powered by Trent XWB engines
- First flight of the Boeing 787-9 powered by Trent 1000 engines
- · Major new orders from JAL, IAG, Lufthansa, United, Singapore and Etihad
- Delivered 3,000th BR700 series engine

The Civil aerospace segment is a major manufacturer of aero engines for the airline and corporate jet markets. Rolls-Royce powers more than 30 types of commercial aircraft and has almost 13,000 engines in service around the world.

# **DEFENCE AEROSPACE**



Revenue mix

- OE revenue
- Services revenue 46%
- Development

# £2,591m

Underlying revenue 2013

£438m Underlying profit 2013

- TP400-powered A400M entered service
- MissionCare<sup>™</sup> contract for Saudi Arabian EJ200 engines secured
- 1,500th AE 2100 engine delivered
- Upgraded AE 1107 engines for V-22 Osprey
- T56 engine enhancement kits gained first sales
- · Delivered 40th Rolls-Royce LiftFan® for F-35B Lightning II fighter programme
- · RTM322 helicopter engine programme sold to Turbomeca

Rolls-Royce is the second largest provider of defence aero-engine products and services globally, with around 16,000 engines in service with over 160 military customers in more than 100 countries.

# **MARINE**



#### Revenue mix



- 57% OF revenue
- Services revenue

£2,527m

Underlying revenue 2013

Underlying profit 2013

- Range of world 'firsts' of LNG-powered vessel types delivered
- MT30 selected for new UK MoD Type 26 Frigate
- £800 million contract agreed with UK MoD for provision of future nuclear submarine propulsion systems
- New UT 830 seismic survey vessel launched
- · COSCO ordered new wave-piercing design of offshore vessels
- · Third service centre in China opened

The Marine segment has 4,000 customers and equipment installed on over 25,000 vessels worldwide, including those of 70 navies.

# **ENERGY**



Revenue mix



- 40% OE revenue
- 60% Services revenue

£1,048m

Underlying revenue 2013

£26m

Underlying profit 2013

- 33 RB211s ordered for oil and gas applications
- Major service contract secured with Petrobras
- · New Santa Cruz, Brazil, assembly plant operational
- · Signed tripartite agreement with Rosatom and Fortum to assess nuclear reactor design for UK new build
- · Renewed agreement with Westinghouse to provide nuclear inspection services in US

To date, Energy has sold 4,600 gas turbines with 180 million operating hours recorded. Rolls-Royce has over 50 years of experience in the nuclear industry.

# **POWER SYSTEMS**



Revenue mix



- 71% OE revenue
- Services revenue

£2,831m

Underlying revenue 2013

£294m

Underlying profit 2013

- MTU Powerpacks ordered for UK Intercity Express Programme
- Fjord Line ordered Bergen engines for cruise ferries
- · UK MoD selects MTU gensets alongside MT30 gas turbine
- · Polish partnership created to supply and maintain cogeneration plants
- · Mining trucks powered by MTU delivered to Rio Tinto in Australia

Rolls-Royce Power Systems is headquartered in Germany and specialises in reciprocating engines, propulsion systems and distributed energy systems.

# **CHAIRMAN'S REVIEW**

In 2013, Rolls-Royce delivered another year of growth in underlying revenues, underlying profits and orders.

The Board is proposing an increase in the final payment to shareholders of 13.4p bringing the full year payment to 22.0p. This is my first Chairman's review. Before I joined Rolls-Royce I sensed that it would be an extraordinary privilege to serve such a great company with such a rich history. So it has proved to be. In the past nine months I have travelled widely and met a broad cross-section of colleagues, customers, suppliers and investors. All have been free with their time and open with their perspectives.

I have two dominant initial impressions. The first is of the pride that people across the world have in the activities and achievements of the Group. We have a team that really does aspire to be 'trusted to deliver excellence' in everything it does, yet is under no illusions about what this will take. There is pride but no sense of complacency.

The second impression is of opportunity. Some of our business segments face strong headwinds and there will be some inevitable volatility. But, overall, Rolls-Royce competes in markets characterised by long-term demand growth and the opportunity to add value. This is as true of the services we provide as it is of our products. These opportunities are increasingly global in nature. Rolls-Royce has a great British history but its future has to be as a great global company.

In 2013, Rolls-Royce delivered another year of growth in revenues, profits and order book. This performance was achieved against a background of significant global economic and political uncertainty. The 13 per cent of increase in the payment to shareholders to 22.0 pence reflects the confidence that the Board has in the fundamentals of the business as well as in its future prospects.

The increase in the payment to shareholders also recognises the importance that many of our investors place on annual cash returns. Nevertheless a key characteristic of Rolls-Royce is that it is a long-term business

with technologies that take years to develop. This creates the necessity of a long-term view and for long-term investment, together with a commensurate attitude and mindset for risk.

Our strategy must be directed towards creating a sustainable business. For Rolls-Royce that means driving profitable growth whilst achieving a positive economic, social and environmental impact. We will deliver better power to our customers, use innovation to secure a better future, and build on today's achievements to develop a better business, ready to meet the challenges ahead.

Research and development, and innovation more broadly, are crucial. They will become more so as we strive to improve the quality and performance of our power systems and services. The Trent XWB, for example, has proved to be the most efficient large civil aero engine in the world. Design and development of that engine started in 2006. In our Marine business, innovation and the development of liquefied natural gas (LNG) power systems has led to the possibility of a 40 per cent reduction in a ship's CO<sub>2</sub> emissions and the virtual elimination of sulphur and oxides of nitrogen emissions compared with conventional, diesel-powered craft. This presents a clear environmental and commercial opportunity. These innovations have also taken years to develop.

We are committed to both the short-term performance and to the long-term health of the Group. It is a matter of 'both-and', not 'either-or'. In my experience the most successful, most enduring organisations invest equivalent resource and imagination in the long-term health of their business as they do in their short to medium-term performance.



Dwelling on performance, I am totally supportive of John Rishton and the management team's operational focus on the 4 Cs – customer, concentration, cost and cash. John describes the progress, and the continuing opportunities, of these 4 Cs in this report. I am particularly pleased at the progress in improving customer service and delivery reliability. Engineering and technology companies can have an inbuilt tendency to focus on product rather than on customer. Yet it is our customers who pay our bills and finance our investments. It is of the highest strategic and commercial importance that we deliver on our product and service commitments to our customers.

Over and above the continuing need for investment, I would like to comment on a couple of themes relating to long-term health: diversity and good governance.

I have remarked already on the need for Rolls-Royce to establish itself as an even more global Group. This will require us to become more diverse in our workforce and in our people development. To achieve our aspirations we have to attract, retain and develop the best talent everywhere we operate – commercial as much as engineering, female as much as male.

We are making real progress. Our global apprenticeship programme enjoys world-wide renown. Our record graduate intake in 2013 includes 32 nationalities from 97 universities around the world. Additionally we continue to broaden internationally our network of University Technology Centres which are so important to our future. But more needs to be done.

We can and need to do more to attract and, particularly, retain exceptional women. The engineering sector has not always been a favoured destination for well-qualified

women and there may be cultural and historical reasons for this. For a Group like Rolls-Royce, this should be as much an opportunity as a problem. Purposeful diversity is an important part of our long-term planning.

Fundamental to a healthy company are strong ethical standards and behaviours, supported by good governance. As John Rishton has repeatedly made clear, the Group will not tolerate improper conduct. We are striving to ensure that every single Rolls-Royce employee knows what is expected of them and understands the standards to be met. The Board and management are united in this endeavour. In particular, I will focus on ensuring that we have the appropriate governance arrangements and structures in place to reinforce the required conduct and behaviours, wherever we operate.

Over recent years, the Board and management have been greatly assisted by the wise counsel of our International Advisory Board (IAB) whose membership is described on page 38. The IAB's primary role is to provide context on political and economic developments around the world and to alert the Group to possible long-term opportunities, threats and risks. They are also available to provide counsel and support in specific areas of expertise. I am grateful to the IAB members for their contributions.

I am also indebted to my fellow Board directors for their hard work and remarkable commitment to our Group as well as for their patience and good humour in dealing with the new Chairman. The Board has been augmented in January 2014 by Lee Hsien Yang and Warren East, both of whom bring a wealth of experience in global technology oriented industries. Further details of their careers are included on pages 36 and 37. I am delighted that they have joined the Group.

In the Queen's Birthday Honours, Michel Dubarry, Rolls-Royce International President – France, Head of Europe and Northern Africa, was awarded an OBE. In the New Year's Honours, Hamid Mughal, Director of Manufacturing, received an OBE and my fellow Board member, Warren East, a CBE. Their recognition is well deserved and I congratulate each of them.

I would also like, in closing, to acknowledge Sir Simon Robertson for his inspirational chairmanship and leadership of the Board. I am sure that, over time, I will forgive him for being such a hard act to follow.

I feel honoured to have the opportunity to serve as Chairman of Rolls-Royce. We have, and will have, challenges. However, I would be disappointed if this review does not convey my deep sense of opportunity to improve both short-term performance and to build the long-term health of the Group. 2013 was a good year for Rolls-Royce and I would like to thank my colleagues for their hard work and efforts in making this happen.

#### **Ian Davis** Chairman

12 February 2014

Rolls-Royce Holdings plc annual report 2013

# **CHIEF EXECUTIVE'S REVIEW**

In 2013, Rolls-Royce continued to grow its order book and expand its portfolio. The Group increased its underlying profits, and underlying revenues. The order book increased to £71.6 billion.

This performance demonstrates both the long-term demand for our products and services, and the confidence our customers place in us.

We strive continually to improve quality, performance and cost. To that end we invest in innovation, infrastructure and in the global workforce upon whose ability and ambition our current and future success entirely depends. I am impressed every day by the commitment and professionalism of my colleagues around the world and I thank them for their hard work.

The leaders of the Group have devoted considerable time and energy into articulating the vision, values, strategy and business priorities that we share, as well as setting out the standards of behaviours expected from everybody at Rolls-Royce. Providing clarity on these core beliefs, and making sure they are understood by everyone in the Group will enable us to better serve our customers and secure a profitable future for our employees and shareholders.

Vision: better power for a changing world

Values: trusted to deliver excellence

# **Strategy:** customer, innovation, profitable growth

These are described in greater length on pages 8 and 9.

Our business priorities in 2013 remained the same as in previous years, and have been characterised as 'The 4 Cs':

# Customer – deliver on the promises we have made

Concentration – decide where to grow and where not to

# **Cost and Cash** – improve financial performance

In 2013, we have made progress in all of these, although there remains much more to do.

#### Customer

It is essential that we deliver on the promises made to our customers. Across the business we have significantly improved on-time delivery. This foundational step will strengthen our customer relationships and drive more efficient use of resources, such as inventory. In Civil aerospace, on-time delivery to our wide-body customers was 100 per cent in 2013 for the first time.

In 2013, major milestones were achieved in a number of important programmes. The Airbus A350 XWB flew for the first time powered by our Trent XWB engines. We have now received orders for more than 1,600 Trent XWBs, making this our best-selling Trent engine. The Trent 1000 engine, which powers the Boeing 787 Dreamliner, has achieved the best performance of any new wide-body engine entering service, with a 99.9 per cent despatch reliability. In June, it was selected by Singapore Airlines to power 50 Boeing 787 aircraft. In Marine, the first of our innovative Environships went to sea. This vessel combines a wave-piercing bow,

gas-powered engines and advanced propulsion systems that together reduce CO<sub>2</sub> emissions by 40 per cent, compared with equivalent diesel-powered vessels. Lastly, BAE Systems announced that the UK's Type 26 Destroyer programme will feature four MTU diesel gensets from Power Systems, together with our Trent-derived MT30 gas turbines.

#### Concentration

Concentration means deciding where to invest for future growth and where not. We have two technology platforms: gas turbines and reciprocating engines. Within gas turbines, we have a strong Civil aerospace business, with over £60 billion in orders. We will continue to invest here, including in the next generation of narrow-body aircraft engines. We will also look for opportunities to expand in reciprocating engines.

In 2013, we acquired Hyper-Therm HTC, a specialist ceramics company, to increase our capabilities in ceramic matrix materials that will, in the future, play a critical part in improving the performance of gas turbine engines. We also acquired a Norwegian company, SmartMotor AS, a leader in the permanent magnet technology employed in our Marine business. We integrated PKMJ Technical Services, a US-based nuclear engineering services business with expertise in extending the life of nuclear plants.

Areas where we have decided not to grow include the sale of our 50 per cent holding in the RTM322 helicopter engine programme to Turbomeca, a Safran company.



#### Cost

The highly regulated nature of the aerospace industry means that it will take both time and tenacity to drive cost out of the business, and we are still not where we need to be. However there are a number of areas where progress is being made. We reduced indirect headcount by 11 per cent, with further savings identified for 2014. Unit cost fell in Marine, Energy and Power Systems, although this was more than offset by an increase in Civil, where capacity growth has preceded volume growth and the cost per unit has predictably risen. We are building newer, more efficient facilities and capacity that will support a doubling of production of Trent engines. We are moving production away from high cost countries, and we are consolidating our supply chain. These actions will deliver benefits over time.

We have prioritised investment that improves operational performance, adds to our technical capability and reduces cost. This includes a shop floor IT modernisation programme that will increase operational efficiency and an Integrated Production Systems programme that will improve delivery to customers while reducing cost.

#### Cash

The Group delivered a cash inflow of £359 million (£312 million excluding Tognum), after payments to shareholders, prior to acquisitions, disposals and foreign exchange. Inventory has been an area of significant focus. While substantially improving our on-time delivery to customers and preparing for the ramp-up in volumes, we have improved inventory turns from 3 times to 3.4 times, excluding Tognum. This is one of the largest one-year improvements in our stock turns.

We continue to invest significantly to deliver our order book. In 2013, capital expenditure was £687 million (£590 million excluding Tognum and £491 million in 2012). This included two new aero-engine test facilities: one at the NASA Stennis Space Center in Mississippi, US, and the other at Dahlewitz, Germany. We have extended our global Marine services network with a new facility in Guangzhou, China. An advanced aerofoil machining facility at Crosspointe in Virginia, US, will begin production in 2014. In the UK, production has started at our new state-ofthe-art fan disc factory in Washington, Tyne and Wear and we are also close to completing a new turbine blade factory in Rotherham.

In January 2013, we appointed Lord Gold to lead a review of our process and procedures regarding compliance and business ethics. This followed our report to the Serious Fraud Office (SFO) of concerns about bribery and corruption involving intermediaries in overseas markets. In December, the SFO confirmed that it had begun a formal investigation into these matters. We have co-operated fully with the regulatory authorities and will continue to do so.

During the year, we published a new Global Code of Conduct. Under a programme implemented in 2013, all employees are asked to certify they have: received a copy of the Global Code; read and understood it; will comply with it; and have received a management briefing. I have made it explicit that we will not tolerate improper business conduct of any sort. We have updated and re-launched our confidential reporting line for employees, now known as the Ethics Line, available 24 hours a day, to make sure that we can hear about and address any matters of concern.

It is important that everyone at Rolls-Royce recognises that they are an ambassador for the Group. We have set out three common behaviours that will make sure we maintain high ethical standards, build trust with our customers and each other and help secure the long-term success of our business:

win right – securing business fair and square;

**focus with firm resolve** – decide what needs to be done, then focus relentlessly on delivery – refusing to be distracted; and

**communicate** – simply, consistently and often.

Every aspect of the Group's performance results from the endeavours of the 55,000 men and women who share a vision of delivering 'better power for a changing world'. It is their ingenuity and commitment alongside our continued investment in technology, that allows us to seize the opportunities that our changing world presents and to face the future with confidence.

# **John Rishton**Chief Executive

12 February 2014

# **OUR VISION, BUSINESS MODEL, STRATEGY AND VALUES**

Rolls-Royce is a global Group, providing integrated power solutions for customers in civil and defence aerospace, marine, energy and power markets. Our products work in mission-critical environments where safety is paramount.

Read more on pages 14 to 23.

# **OUR VISION**

Better power for a changing world

Since its earliest days, Rolls-Royce has been striving to achieve ever higher standards. Our vision is delivering 'better power for a changing world'.

**Better:** we will succeed only by continually raising standards. We constantly improve quality, performance and cost. We are inquisitive, energetic and 'better' every day. Even when we may be the best, we must continue to get better.

**Power:** we are a power systems company that develops, sells and services mission-critical products. Our customers demand innovation that improves performance and reduces the environmental impact of our power systems.

**Changing world:** the world around is changing rapidly and the pace of change is accelerating. New markets are emerging, shifting the balance of economic power. Regulation is, rightly, driving the requirement for cleaner power and setting new standards for business conduct. Our continuous investment in technology, our ingenuity and our commitment to excellence allow us to seize the opportunities that change presents and to face the future with confidence.

# **OUR BUSINESS MODEL**

Our business model places emphasis on reducing costs so that we can generate the funds we need to deliver our vision of 'better power for a changing world'.

The business model is built around our core strategic themes of **customer**, **innovation** and **profitable growth**. We are a power systems company based on two technology platforms, gas turbines and reciprocating engines. Continuous investment in **innovation** delivers better products and services on behalf of **customers**. This allows us to meet their needs and **grow profitably** to the benefit of our shareholders.

Around the core strategic themes of the model we:

Grow sales for original equipment and the associated aftermarket through developing strong routes to market based on customer relationships, understanding and knowledge. Allocate capital in a disciplined way, choosing where to grow, and where not to. Reduce costs and generate cash, to enable profitable growth from our order book and the maintenance of a strong balance sheet. Fund research, development, infrastructure and future programmes. Our financial resilience and resources provide a firm foundation from which to invest. Risk and Revenue Sharing Arrangements are a particular feature of the civil aerospace sector as a means of sharing risk due to the scale of investment required for large gas turbines.

# **OUR STRATEGY**

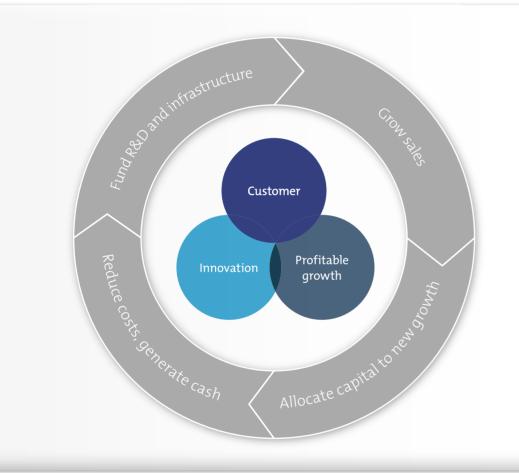
We operate in competitive markets. Our competitors are well-funded, ambitious and full of smart people.

Our strategy will enable us to win by focusing on three powerful themes: customer; innovation and profitable growth.

#### **CUSTOMER**



**Customer:** placing the customer at the heart of our organisation is key. We need to listen to our customers, share ideas, really understand their needs and then relentlessly focus on delivering our promises.



# **OUR VALUES**

We say we are 'trusted to deliver excellence', but simply being Rolls-Royce does not give us the right to make that claim. Trust takes a long time to earn and can be lost in an instant.

**Trust:** is earned by doing what we say we will. It demands care, consistency, courage and competence. Trust commits us to high ethical standards – it is central to who and what we are.

**Deliver:** part of being trusted. We must deliver on our promises, meeting our customers' requirements for quality, delivery, responsiveness and reliability, always recognising that the safety of our products and our people is paramount.

**Excellence:** if we are trusted, and we deliver, then we will be regarded as excellent

# **INNOVATION**



Innovation: is our lifeblood. We must continually innovate to remain competitive. To drive innovation, we create the right environment – curious, challenging, unafraid of failure, disciplined, open-minded and able to change with pace. But most importantly, we ensure our innovation is relevant to our customers' needs.

# **PROFITABLE GROWTH**



Profitable growth: by focusing on our customers, and offering them a competitive portfolio of products and services, we will create the opportunity to grow our market share. Of course we have got to make sure that we are not just growing, but growing profitably. That means ensuring our costs are competitive. We look after our cash and we win right.

10 Strategic report
Rolls-Royce Holdings plc annual report 2013

# **CHIEF FINANCIAL OFFICER'S REVIEW**

#### Summary

Summary		D+-1-3*	
		Restated*	_
. <u></u>	2013	2012	Change
Order book £m	71,612	60,146	+19%
Underlying revenue £m	15,505	12,209	+27%
Underlying profit before tax £m	1,759	1,434	+23%
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Full year payment to shareholders	22.0p	19.5p	+13%
Reported revenue £m	15,513	12,161	+28%
Reported profit before tax £m	1,759	2,766	-36%
Reported earnings per share	73.26p	125.38p	-42%
Net cash £m	1,939	1,317	
Average net cash/(debt) £m	350	(145)	
			-

<sup>\* 2012</sup> figures have been restated to reflect the adoption of amendments to IAS 19 Employee Benefits and the change in accounting policy for RRSAs.

2013 was another good year for the Group, with significant growth in our order book, good growth in underlying revenues and profits, coupled with a cash inflow, but as ever, there are some areas where progress has been slower than I would have liked. Our confidence in the future remains high, reflected in our increased final payment to shareholders but, as you would expect me to say, we have more to do on cost and cash across the Group to deliver the future performance implicit in this confidence.

The results reflect the full consolidation of Rolls-Royce Power Systems AG (formerly Tognum AG) from 1 January 2013. Previously, Tognum was accounted for as a joint venture.

Order intake in the year of £26.9 billion saw the order book grow yet again to reach record levels. This reflects £2.5 billion from Power Systems and £18.9 billion from our Civil business reflecting a very successful year for the Trent XWB. This vote of confidence from our customers gives good visibility and underpins our confidence to invest for the future.

Underlying revenues and profit before tax increased by 27 per cent and 23 per cent respectively. Prior to the impact of consolidating Power Systems, underlying revenue growth was six per cent and profit advanced by 11 per cent. The 11 per cent growth in profits reflected strong margins in Defence, the benefit of the IAE International Aero Engines AG (IAE) restructuring which was executed in the middle of 2012 and a lower research and development charge against profits. Profits were adversely impacted by price pressure in our Marine business and the pace of cost reduction in our Civil business.

Our largest business, Civil aerospace, was the backbone of the Group's order increase and saw revenue grow steadily. The installed base saw more engines flying more hours. Profit benefited from the higher volumes, the new IAE trading arrangements and higher entry fees from our partners. However, our Civil profits were held back by higher unit costs where progress has lagged our expectations, but the actions we have taken in 2013 will yield savings in 2014.

Defence aerospace performed very well in 2013, largely due to higher export sales and lower research and development (R&D) spend. Services held up well, albeit with some softness on flying hours of military transport aircraft. We expect a 15-20 per cent decline in both Defence revenue and profit in 2014 as we complete some major export delivery schedules. We expect original equipment revenue to decrease by 30-40 per cent due to fewer deliveries of engines to power the C130Js, V-22 Ospreys and Typhoons, as well as fewer Adour engine kits.

As always, it is important to put this into perspective. Our Defence business has had two very good years of revenue and profit growth. Which means the numbers we are guiding for in 2014, bring us back only to 2011 revenue levels, and we expect growth again in 2015.

Marine's offshore and merchant markets continue to see intense competition driven by overcapacity and price pressure. This affected the order intake during the year that sees order cover for 2014 at a lower level than we started 2013. In this challenging environment, we made some good progress on cost, but have more to do if we are to compete more effectively. Our Naval business remains stable.

Energy saw some improvement in 2013 and we continue to work hard to improve further its financial performance.

Power Systems delivered a very strong second half performance, contributing £2.6 billion to revenue in 2013 (nil in 2012) and an underlying profit before tax of £257 million (2012 £77 million). We are very pleased with Power Systems and it remains a key part of our desire to go to market via two strong technology platforms: gas turbines and reciprocating engines.

Our cost base can be broadly split between 85 per cent relating directly to our delivered product, ten per cent indirect (commercial and administration) and five per cent on R&D. We continue to push hard on product cost as we work with the internal and external supply chains and although Civil unit costs increased in 2013, we did realise improvements in Marine and Energy. We expect to see progress across all our segments in 2014. In terms of indirect cost, we achieved our objectives to reduce headcount by 11 per cent, primarily through voluntary severance arrangements. After taking into account the related restructuring costs during the year, the benefits to this reduction will be seen in future years.

We were pleased with the cash inflow of £359 million at Group level, prior to acquisitions, disposals and foreign exchange, which included an inflow of £47 million from Power Systems. Net working capital improved slightly, reflecting a good second half performance on inventory and higher deposits, mainly in Civil, flowing from the order intake. We made good progress on inventory, improving turns from 3 to 3.4 times (excluding Power Systems), helped by a consistent focus in the second half of the year.

Cost and cash remain areas of intense focus going forward.

In terms of financial reporting, please note the following:

1. To better align our reporting structure with our organisation, going forward we will report as: Aerospace and Marine & Industrial Power Systems (MIPS). Aerospace comprises Civil aerospace and Defence aerospace. MIPS comprises our Marine, Power Systems, Energy and Nuclear businesses. Our Nuclear Submarines business will be reported within Energy and Nuclear. We will continue to report the same level of financial detail for our business segments as we normally do.



- 2. Consistent with past practice and IFRS accounting standards, the Group provides both reported and underlying figures. We believe underlying figures are more representative of the trading performance, by excluding the impact of year end mark-to-market adjustments, principally the GBP/USD hedge book. In addition, post-retirement financing and the effects of acquisition accounting are excluded. The adjustments between the underlying income statement and the reported income statement are set out in more detail in note 2 to the financial statements. This basis of presentation has been applied consistently since the transition to IFRS in 2005.
- 3. The Group has changed its accounting policy in respect of entry fees arising from Risk and Revenue Sharing Arrangements (RRSAs) following discussions with the Conduct Committee of the Financial Reporting Council (FRC). This is covered further in note 1 to the financial statements

RRSAs with key suppliers are a feature of our Civil aerospace business. Under these arrangements the workshare partner shares in the risks and costs of developing an engine and during the production phase, supplies components and receives a share of the programme revenues over the life of the engine programme. The share of development costs borne by the workshare partner and of the revenues it receives reflect the proportionate forecast cost of providing their parts compared to the overall forecast manufacturing cost of the engine.

The contribution to the development costs is achieved by the workshare partner performing their own development work, providing parts in the development phase and paying a non-refundable cash entry fee, such that both parties bear their proportionate share of the forecast non-recurring development costs.

Historically, we recognised the entry fee as income when received, which we believed matched it to the recognition of nonrecurring development costs incurred on behalf of the workshare partner. However, this did not take account of the fact that we capitalise some of our non-recurring development costs. Therefore, where we capitalise those costs, we will now defer the equivalent portion of the entry fee received and recognise it as the related costs are amortised in the production phase. As required by Adopted IFRS, we have made this change retrospectively; the impact of the change in policy in 2012 has been to increase profit before tax by £25 million and to reduce net assets at 31 December 2011 and 2012 by £184 million and £170 million respectively. Had the policy not been amended, profit before tax in 2013 would have been £39 million higher and at 31 December 2013 net assets £208 million higher.

Adopted IFRS does not explicitly deal with payments of this nature from suppliers and so, in developing an accounting treatment for entry fees that best reflects the commercial objectives of the contractual arrangement, we have analysed key features of RRSAs in the context of relevant accounting pronouncements and have had to weigh the importance of each feature in faithfully representing the overall commercial effect. Consequently this is a judgemental area. The judgements we have taken in respect of this matter are set out in detail in note 1 to the financial statements. In summary, our view is that the

development and production phases of the contract should be considered separately in accounting for the RRSA, which results in the entry fee being matched against the non-recurring development costs as described above.

The FRC Conduct Committee's 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 FRC Conduct Committee has confirmed that, in view of the change to the policy and the additional disclosure we have made, it does not intend to pursue its consideration of this accounting policy further. We will keep the size of the difference under review, and do not currently expect the difference between the two approaches to become material in the foreseeable future.

We consider that the policy we have adopted best reflects the commercial effect of the agreements and is in accordance with Adopted IFRS. So far as we can tell, it is also aligned with the approach taken by others in our industry under both IFRS and US accounting standards (which we believe does not conflict with IFRS in this regard).

The impact of the different approaches on profit before tax and net assets is as follows:

		2013			2012	
	Reported profit	Underlying profit		Reported profit	Underlying profit	
	before tax £m	before tax £m	Net assets £m	before tax £m	before tax £m	Net assets £m
Previous policy	1,798	1,798	6,511	2,741	1,409	6,166
Difference	(39)	(39)	(208)	25	25	(170)
Adopted policy	1,759	1,759	6,303	2,766	1,434	5,996
Difference	(37)	(37)	(365)	(10)	(10)	(323)
Alternative policy <sup>1</sup>	1,722	1,722	5,938	2,756	1,424	5,673

<sup>&</sup>lt;sup>1</sup> Consistent with FRC Conduct Committee's view

Rolls-Royce Holdings plc annual report 2013

#### **CHIEF FINANCIAL OFFICER'S REVIEW**

Underlying revenue increased £3.3 billion to £15.5 billion, of which £2.6 billion was due to the inclusion of Rolls-Royce Power Systems AG (RRPS) from 1 January 2013. The remaining increase (six per cent) reflects a seven per cent growth in OE revenue and a four per cent increase in services revenue. Original equipment performance included growth of 21 per cent in Energy, 13 per cent in Defence aerospace and 12 per cent in Marine. Underlying services revenue continues to represent around half (47 per cent) of the Group's underlying revenue. In 2013, services revenue grew in all businesses, as the installed base of products continued to grow and the services network expanded.

Underlying profit before financing and taxation increased 22 per cent to £1.8 billion, including £190 million from the consolidation of RRPS from 1 January 2013. Excluding RRPS, the increase was due to a number of factors: increased revenue: continued strong margins in Defence aerospace and the restructured relationship with IAE.

Further discussion of trading is included in the business segment reports on pages 14 to 23

Underlying financing costs increased 18 per cent to £72 million, including £10 million from RRPS.

Underlying taxation was £434 million, an underlying tax rate of 24.7 per cent compared with 22.1 per cent in 2012. The Group's tax payments are described on page 137.

Underlying EPS increased 10 per cent to 65.59 pence, lower than the increase in the underlying profit after tax due to the NCI share of RRPS.

Payments to shareholders: at the AGM on 1 May 2014, the directors will recommend an issue of 134 C Shares with a total nominal value of 13.4 pence for each ordinary share. Together with the interim issue on 2 January 2014 of 86 C Shares for each ordinary share with a total nominal value of 8.6 pence, this is the equivalent of a total annual payment to ordinary shareholders of 22.0 pence for each ordinary share. Further details are on page 43.

Net underlying R&D charged to the income statement increased by 18 per cent to £624 million including £174 million from RRPS, reflecting a combination of increased spend of £33 million offset by higher net capitalisation of £61 million (due to the phasing of major new programmes, in particular the certification of the

Trent XWB 84k), R&D tax credits of £28 million and net deferral of RRSA entry fees of £26 million. The Group continues to expect net R&D investment to remain within four to five per cent of Group underlying revenue.

Reported profit before tax has reduced from £2,766 million to £1,759 million. In addition to the changes in underlying profit before tax described above, reported profit before tax has been affected by (i) the impact of mark-to-market adjustments on derivative contracts (£497 million reduction); (ii) the impact of consolidating RRPS (£322 million reduction, comprising the unrealised profit on reclassification to a subsidiary, the additional amortisation on recognised intangible assets and the revaluation of the put option on NCI); (iii) the net impact of disposals (£483 million reduction, disposal of RTM322 in 2013 more than offset by the restructuring of IAE in 2012); and (iv) the cost of providing discretionary pension increases (£64 million). The reported tax charge is affected by the related tax impact of these items and the reduction of tax rates in the UK. This is set out in more detail in note 2 to the financial statements.

Intangible assets (note 9) represent longterm assets of the Group. These assets increased by £121 million with additional development, certification and software costs being largely offset by annual amortisation charges.

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. There have been no significant impairments in 2013.

Property, plant and equipment increased by £283 million due to the ongoing development and refreshment of facilities and tooling as the Group prepares for increased production volumes.

Net post-retirement scheme deficits (note 19) reduced by £100 million as a result of adopting the amendments to IAS 19. During the year, the net deficit fell by £49 million, principally due to the movements in the assumptions used to

Poctatod'

#### Underlying income statement

		Restated*	
£ million	2013	2012	Change
Revenue	15,505	12,209	+27%
Civil aerospace	6,655	6,437	+3%
Defence aerospace	2,591	2,417	+7%
Marine	2,527	2,249	+12%
Energy	1,048	962	+9%
Power Systems	2,831	287	+886%
Intra-segment	(147)	(143)	
Profit before financing and taxation	1,831	1,495	+22%
Civil aerospace	844	743	+14%
Defence aerospace	438	395	+11%
Marine	281	294	-4%
Energy	26	19	+37%
Power Systems	294	109	+170%
Intra-segment	2	(11)	
Central costs	(54)	(54)	
Net financing	(72)	(61)	-18%
Profit before taxation	1,759	1,434	+23%
Taxation	(434)	(317)	-37%
Profit for the year	1,325	1,117	+19%
EPS	65.59p	59.59p	+10%
Payments to shareholders	22.0p	19.5p	+13%
Other items			
Gross R&D investment	1,118	919	+22%
Net R&D charged to the income statement	624	531	+18%
* 2012 figures have been restated to reflect the adoption of amendme	ents to IAS 19 Employee Benef	its and the change	in accounting

<sup>2012</sup> figures have been restated to reflect the adoption of amendments to IAS 19 Employee Benefits and the change in accounting policy for RRSAs

value the underlying assets and liabilities in accordance with IAS 19. This reduction in the deficit was after agreeing to fund additional pension increases in the Rolls-Royce Pension Fund, where there is no indexation for pre-1997 service, at a cost of £64 million.

Overall funding across the schemes has improved in recent years as the Group has adopted a lower risk investment strategy that reduces volatility going forward and enables the funding position to remain stable: interest rate and inflation risks are largely hedged, and the exposure to equities is around 11 per cent of scheme assets.

The Group's funding of its defined benefit schemes is expected to increase modestly in 2014, largely as a result of funding the discretionary benefits.

**Net funds** increased by £0.6 billion to £1.9 billion due in part to the £250 million proceeds received on the sale of the Group's interest in the RTM322 engine. Average net funds were £350 million.

Investments in joint ventures and associates increased by 15 per cent, largely as a result of retained profits in existing joint ventures.

**Provisions** largely relate to warranties and guarantees provided to secure the sale of OE and services.

Net financial assets and liabilities relate to the fair value of foreign exchange, commodity and interest rate contracts, financial RRSAs and the put option on the NCI of Rolls-Royce Power Systems Holding GmbH, set out in detail in note 17. The change largely reflects the inclusion of the put option. There is also an impact of the change in the GBP/USD exchange rate on the valuation of foreign exchange contracts and the movement in put options on NCI of £259 million.

The USD hedge book increased ten per cent to US\$24.7 billion. This represents around four years of net exposure and has an average book rate of £1 to US\$1.59.

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.

#### Balance sheet

		1 January 2013	Restated*
		including	31 December
£ million	2013	Power Systems	2012
Intangible assets	4,987	4,866	2,901
Property, plant and equipment	3,392	3,109	2,564
Net post-retirement scheme deficits	(793)	(842)	(445)
Net working capital	(970)	(819)	(1,321)
Net funds	1,939	1,354	1,317
Provisions	(733)	(741)	(461)
Net financial assets and liabilities	(1,587)	(154)	(127)
Joint ventures and associates	601	523	1,800
Other net assets and liabilities	(533)	(515)	(232)
Net assets	6,303	6,781	5,996
Other items			
USD hedge book (US\$ billion)	24.7		22.5
TotalCare assets <sup>1</sup>	1,901		1,629
TotalCare liabilities <sup>2</sup>	(314)		(317)
Net TotalCare Assets	1,587		1,312
Gross customer finance contingent liabilities	356		569
Net customer finance contingent liabilities	59		70
*		611 111 1	

- <sup>1</sup> 2012 figures have been restated to reflect the adoption of amendments to IAS 19 Employee Benefits and the change in accounting policy for RRSAs.
- Included in amounts recoverable on contracts (note 13).
- Included in accruals and deferred income (note 16).

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 18. 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.

During 2013, the Group's gross exposure reduced by £213 million to £356 million, due largely to the expiry of guarantees. On a net basis, exposures reduced by £11 million.

#### Segmental reporting

During 2013, we have revised the internal structure of the business to focus on (i) aerospace; and (ii) marine and industrial markets. The internal reporting structure has been developed to reflect this. Consequently, in accordance with IFRS 8 *Operating Segments*, from 1 January 2014, we will report the Group's segments as follows:

**Aerospace**, comprising Civil aerospace and Defence aerospace; and

Marine and Industrial Power Systems, comprising Marine, Power Systems, Energy and Nuclear.

The 2013 figures on the revised basis are included in note 26 to the financial statements

#### Group 2014 quidance

For the full year 2014, we expect underlying Group revenue and profit to be flat. This reflects a significant decline in Defence revenue, as we complete the delivery phase of a number of major export programmes. Additionally, the largest part of our Marine business, Offshore, will generate lower revenue in 2013. We expect growth to resume in 2015 as Civil and Defence deliveries increase.

We expect profitability to be much stronger in the second half of 2014, reflecting the timing and mix of trading and cost reduction. To be more consistent with market practice, our cash guidance in the future will be based on free cash flow. We expect our 2014 free cash flow to be similar to 2013 (£781 million).

Additional financial information can be found on pages 137 and 138.

# **CIVIL AEROSPACE**





We remain focused on delivering on all of our major programme commitments.

**Tony Wood** President – Aerospace

# **OVERVIEW**

Underlying revenue (£m)



£6,655m

Underlying revenue 2013





● 46% OE revenue **54%** Services revenue

# Revenue by sector 2013



● 57% Wide-body

**32%** Corporate and regional

• 11% Narrow-body

2013

#### Highlights

- First flight of the Airbus A350 XWB powered by Trent XWB engines
- First flight of the Boeing 787-9 powered by Trent 1000 engines
- Major new Trent orders from JAL, IAG, Lufthansa, United, Singapore and Etihad
- Delivered the 3,000th BR700 series engine

key financiai data	200
Order book £m*	47,10

Order book £m*	47,102	48,490	51,942	49,608	60,296
	+8%	+3%	+7%	-4%	+22%
Engine deliveries*	844	846	962	668	753
Underlying revenue £m	4,481	4,919	5,572	6,437	6,655
	0%	+10%	+13%	+16%	+3%
Underlying OE revenue £m	1,855	1,892	2,232	2,934	3,035
Underlying service revenue £m	2,626	3,027	3,340	3,503	3,620
Underlying profit before financing £m	493	392	499	743	844
	-13%	-20%	+27%	+49%	+14%

<sup>\*</sup> all years before 2012 include IAE order book and engine deliveries include IAE V2500.

# Rolls-Royce powers more than 30 types of commercial aircraft and has almost 13,000 engines in service around the world.

#### What we do

The Civil aerospace segment is a major manufacturer of aero engines for the airliner and corporate jet markets. We have particular strengths in the wide-body market where Rolls-Royce has a 54 per cent share of aircraft on order. Demand for our products and services remains robust.

#### 2013 financial review

The order book increased 22 per cent, including new orders of £18.9 billion (£10.3 billion in 2012). Trent engines and aftermarket services now constitute 73 per cent of the Civil aerospace order book.

Revenue increased three per cent, including three per cent growth in OE revenue. There was a 20 per cent increase in business jet engine deliveries and a small increase in Trent engines. Profit increased 14 per cent, reflecting higher volumes, the £112 million higher benefit from the restructured trading relationship with IAE and £26 million higher RRSA entry fees.

In 2014, we expect modest growth in revenue and good growth in profit.

#### How we are performing

The airline industry saw global passenger traffic up around five per cent in 2013. Airlines in developed markets benefited from a modest economic recovery. In many developing markets there were significant increases in traffic supported by economic growth and market liberalisation.

**Civil Large Engines:** Nearly 1,400 Trent 700 engines for the Airbus A330 have been delivered to date and during 2013 Airbus

delivered the 1,000th aircraft. The milestone aircraft and its Trent 700 engines were accepted by Cathay Pacific, the first airline to put the Trent 700 into service in 1995.

Important milestones were achieved in two major Civil Large Engine programmes. In June, the first flight of the new Airbus A350 XWB was powered by our Trent XWB engines. Then in September, the Boeing 787-9 version of the Dreamliner took to the skies for the first time, powered by our Trent 1000 engines.

Singapore Airlines Group placed a major order with us to power 50 Boeing 787 aircraft with Trent 1000 engines.

In July, we celebrated the first delivery of two new Rolls-Royce powered aircraft to the British Airways fleet – the Airbus A380 and the Boeing 787 Dreamliner.

In September, we announced that, due to the current regulatory environment, we would not proceed with a planned joint venture with United Technologies Corporation to develop an engine to power future mid-size aircraft. Rolls-Royce remains fully committed to this important market segment and we continue to invest in technologies that will enable us to take advantage of opportunities as they arise.

The Trent XWB will enter service in 2014 with Qatar Airways. This is the best-selling Trent engine yet, with more than 1,600 engines already on order.

Significant orders for the Trent XWB came from airlines in Europe, North America, the Middle East and Asia and these included a landmark first ever engine order for Rolls-Royce from Japanese airline JAL.

Corporate and regional: In our corporate and regional engine business, we delivered the 3,000th BR700 series engine. This engine series powers the Gulfstream G500 and G550, the Bombardier Global 5000 and Global 6000 (BR710), the Boeing 717 (BR715) and the Gulfstream G650 (BR725).

The first production version of the Cessna Citation X business jet flew in August, powered by our AE 3007C engines. Deliveries of the new aircraft are due to begin in early 2014.

2010

2011

2012

**Services:** Revenue from services for civil airliners increased by three per cent in 2013, reflecting continued growth in the fleet of widebodied engines. More than 1,100 aircraft in service are covered by TotalCare.

Some 1,500 business aircraft are covered by CorporateCare® and in 2013 more than 70 per cent of customers for new Rolls-Royce powered business jets enrolled in CorporateCare.

#### Future priorities and opportunities

In 2014, particular priority will be given to supporting the smooth entry into service of the Airbus A350 XWB. Rolls-Royce is the sole engine supplier for this new aircraft, and orders for the Trent XWB represent 53 per cent of the Civil aerospace order book.

Significant management attention will continue to be paid to financial performance, in particular reducing costs and improving inventory turn.

Developing new technology for future engine programmes and enhancing existing products remains a major priority.

Market outlook: We estimate that the global civil engine market will be worth approximately US\$1,750 billion over the next 20 years, with US\$1,050 billion being for original equipment and US\$700 billion of aftermarket services. Over half of this value comprises engines for twin aisle airliners and large business jets, where Rolls-Royce is currently the number one engine supplier in terms of market share. Our forecasts are based on our own internal forecasting tools, data from Ascend Online Fleets and airline schedules from Official Airline Guide (OAG).

# **DEFENCE AEROSPACE**



We are focused on managing costs to ensure we can effectively compete and win in today's challenging market.

**Tom Bell**President – Defence aerospace

# **OVERVIEW**

Underlying revenue (£m)



£2,591m

Underlying revenue 2013

Revenue mix 2013



50% OE revenue46% Services rev

46% Services revenue4% Development

Revenue by sector 2013



38% Combat48% Transport

**14%** UAV/trainer



#### Highlights

- TP400-powered A400M entered service
- MissionCare contract for Saudi Arabian EJ200 engines secured
- 1,500th AE 2100 engine delivered
- Upgraded AE 1107 engines for V-22 Osprey
- T56 enhancement kits gained first sales
- Delivered 40th Rolls-Royce LiftFan for F-35B Lightning II fighter programme
- RTM322 helicopter engine programme sold to Turbomeca

Key financial data	2009	2010	2011	2012	2013
Order book £m	6,451	6,506	6,035	5,157	4,071
	+17%	+1%	-7%	-15%	-21%
Engine deliveries	662	710	814	864	893
Underlying revenue £m	2,010	2,123	2,235	2,417	2,591
	+19%	+6%	+5%	+8%	+7%
Underlying OE revenue £m	964	1,020	1,102	1,231	1,385
Underlying service revenue £m	1,046	1,103	1,133	1,186	1,206
Underlying profit before financing £m	253	309	376	395	438
	+13%	+22%	+22%	+5%	+11%

We are the second largest provider of defence aero-engine products and services globally, with around 16,000 engines in service with over 160 military customers in more than 100 countries.

#### What we do

Our engines power aircraft in every major market sector including transport, combat, patrol, trainers, helicopters, and unmanned aerial vehicles.

#### 2013 financial review

The Defence order book declined 21 per cent (15 per cent decrease in 2012) reflecting continued budgetary pressures on our major customers. The net order intake of £1.6 billion was five per cent higher than the previous year. Revenue increased seven per cent, reflecting a 13 per cent increase in OE and a two per cent increase in services. Strong OE growth was driven by higher export sales, particularly of our EJ200 and Adour engine programmes. Profit increased 11 per cent due to higher volumes and lower R&D spending.

In 2014, we expect a decline in revenue and profit of between 15-20 per cent before growth resumes in 2015. This one year decline is the consequence of well publicised cuts in defence spending among major customers, and the completion of the delivery phase of a number of major export programmes. After two record years, this re-basing, supported by cost reduction programmes, will position the business well for future growth.

#### How we are performing

Var. financial data

2013 was a challenging year as traditional markets continued to experience unprecedented budgetary pressures. While this environment creates risks for existing business, it also presents opportunities for us to develop innovative solutions to meet the evolving needs of our customers. Nowhere is this more evident than in the area of services where we have the opportunity to help customers manage their budgets and costs more efficiently.

We also continue to pursue new equipment sales opportunities in global markets such as Asia and the Middle East where budgets are less constrained.

MissionCare contracts worth £492 million were secured in 2013. These included the first MissionCare contract for the support of EJ200 engines in Saudi Arabia.

In order to get closer to our customers, we are expanding our presence at operational bases. During 2013, we opened a new support facility at RAF Marham in the UK and announced another at Tinker Air Force Base in the US

In-service fleets continue to benefit from technology enhancements, with the upgraded AE 1107 now providing 17 per cent more power for the V-22 Osprey aircraft. The latest T56 enhancement kits achieved Federal Aviation Authority (FAA) certification and recorded their first sales in the US, where fuel savings in the US Air Force C-130 fleet could amount to billions of dollars.

Our leading position in transport was underpinned by the entry into service of the A400M powered by TP400 engines, broadening our portfolio in a market where the Rolls-Royce powered C-130 is the leading player. This year we delivered our 1,500th AE 2100 engine for the C-130J.

The Rolls-Royce LiftSystem® continued to perform well as the F-35B Lightning II aircraft expanded its flight test programme and deliveries to the US Marine Corps accelerated. We delivered the 40th Rolls-Royce LiftFan and the 50th 3 Bearing Swivel Module (3BSM).

In order to concentrate our resources on markets where we can add greatest value, we sold our share in the RTM322 helicopter engine programme to Turbomeca, a Safran company, in September 2013. To further improve efficiency, we have reconfigured our organisation to bring us closer to our major customers.

We expect our services business to continue to grow as we continue to provide customers with greater capability.

#### Future priorities and opportunities

We are focused on managing costs to ensure we maximise our ability to compete and win in an increasingly uncertain market.

Our inclusion in the Hawk Advanced Jet Training System team to pursue the US Air Force T-X training contract provides just one of several paths to growth. Customers also continue to invest in their transport aircraft fleets, where we have a strong position. Defence applications for the Trent 700 should increase as the Airbus A330 tanker aircraft is selected by more military customers. The UK's fleet of tankers continues to expand with Rolls-Royce benefiting both as the engine supplier and as an AirTanker shareholder.

**Market outlook:** We estimate a business opportunity over the next 20 years of US\$155 billion in original equipment and US\$260 billion in services. *Source: Forecast International 2014.* 

# **MARINE**

Innovation remains an important differentiator in the sector, as technology will address the future challenges related to the environment and the cost of owning and running vessels.

**Lawrie Haynes**President – Marine and Nuclear



# **OVERVIEW**

Underlying revenue (£m)



£2,527m

Underlying revenue 2013





57% OE revenue43% Services revenue

#### Revenue by sector 2013



37% Naval15% Merchant48% Offshore



281

-4%

#### Highlights

- A range of world 'firsts' of LNG-powered vessel types delivered
- MT30 selected for the new UK MoD Type 26 Frigate
- £800 million contract agreed with UK MoD for provision of future nuclear submarine propulsion systems
- New UT 830 seismic survey vessel launched
- COSCO ordered new wave-piercing design of offshore vessels
- Third service centre in China opened

	2009	2010	2011*	2012	2013
Order book £m	3,526	2,977	2,737	3,954	3,996
	-32%	-16%	-8%	+44%	+1%
Underlying revenue £m	2,589	2,591	2,271	2,249	2,527
	+17%	+0%	-12%	-1%	+12%
Underlying OE revenue £m	1,804	1,719	1,322	1,288	1,438
Underlying service revenue fm	785	872	949	961	1 089

263

+44%

# The Marine segment has 4,000 customers and equipment installed on over 25,000 vessels worldwide, including those of 70 navies.

#### What we do

We are leaders in the provision and integration of complex, mission-critical systems for offshore oil and gas, merchant and naval vessels. We are located in 35 countries, and have a global service network supporting our customers' operations around the clock.

Our advanced ship designs combine the latest technologies to offer highly-efficient solutions for ship owners and operators including a range of engines using liquefied natural gas (LNG).

#### 2013 financial review

The order book increased one per cent including new orders of £2.7 billion (£3.3 billion in 2012). In 2013, we saw stable order inflow in our Merchant and Naval businesses. This was offset by weaker order flow in Offshore, where the phasing of projects has slowed growth in some of our key products. Revenue increased 12 per cent, reflecting higher sales in both new equipment and in services. Growth was particularly strong in Offshore and in Naval, offset by further weakening in our Merchant business, which declined 11 per cent. Profit decreased four per cent as volume growth was more than offset by pricing pressure and a less favourable mix. In 2013, profitability was also offset by investments in Marine to better position the business for future growth, including higher spending on R&D and restructuring costs.

In 2014, we expect a modest decline in revenue, with a modest increase in profit. The nuclear submarine business will be reported in the Energy and Nuclear segment going forward.

#### How we are performing

Underlying profit before financing £m

Key financial data

The global shipbuilding industry has had a challenging year. Important factors driving the market continue to be ship efficiency, environmental performance and value for money.

Merchant: The adoption of LNG as a marine fuel is gaining momentum: the first LNG-powered cargo vessel of our Environship design took to the seas in May; the world's first LNG-powered cruise ferry entered service during the summer; and the world's first LNG-powered tug boat was delivered. We also won our first contract to convert a diesel-powered cargo ship to LNG. Bergen engines using LNG fuel are all provided via the Power Systems business segment.

Naval: Our MT30 gas turbine was successfully installed in the Royal Navy's new aircraft carrier, HMS Queen Elizabeth. The MT30 was also selected by BAE Systems for the UK's new Type 26 Frigate programme and has now been selected by navies in the UK, US and South Korea, across five types of ship. We delivered a new design of water jet to the US Navy's Littoral Combat Ship programme.

This year we opened a new facility in Derby, UK, to support our Submarine business. In February, we agreed an £800 million contract with the MoD for the provision of nuclear propulsion systems for the UK's submarine flotilla. A critical design gate was successfully passed by our new nuclear plant design, PWR 3.

Offshore: We delivered one of our most advanced vessels to date, when a UT 830 seismic survey ship was launched. It features a wealth of Rolls-Royce equipment integrated into our own vessel design. It is now at work identifying oil and gas reserves around the world.

Our wave-piercing hull design was chosen for the first time in Asia, when Chinese customer COSCO announced an order for two UT vessels, with options for four more. These will feature a range of Rolls-Royce equipment, and include MTU diesel gensets from our Rolls-Royce Power Systems AG subsidiary. Several contracts were won to supply our largest azimuth thrusters for drill ships.

332

+26%

287\*

-14%

294

+2%

We enhanced our technology portfolio through the acquisition of a Norwegian company, SmartMotor AS, a leader in permanent magnet technology.

Services: We offer customers a global service capability through a network of 37 workshops in 28 countries. With more than 1,100 service engineers, we provide round-the-clock support wherever our customers need it and offer not only repair and overhaul but also a growing number of vessel upgrades to improve efficiency. We also train our customers in the operation of our equipment in our training centres in Norway, Singapore and Brazil. This year, we opened our third workshop in southern China.

#### Future priorities and opportunities

The key priorities for the Marine segment are to increase our competitiveness in a challenging market and continue to develop innovative technologies.

We will continue to develop the synergies between the Marine and Power Systems segments. We are working with a number of oil majors, in developing the availability of LNG. The aftermarket offers growth opportunities as we continue to utilise our growing global network of service engineers and workshops. In Submarines, our focus is on maintaining customer confidence by achieving our savings commitment to the MoD through increased operational efficiency.

Market outlook: We see a business opportunity over the next 20 years of US\$270 billion for original equipment and US\$125 billion for services (not including nuclear submarine business). Based on our own forecasting tools.

<sup>\* 2011</sup> figures restated due to transfer of Bergen to Power Systems segment.

# **ENERGY**

We are capitalising on oil and gas demand. We will also grow our Civil Nuclear services globally and support the UK new build programme.

**Andrew Heath**President – Energy



# **OVERVIEW**

Underlying revenue (£m)



£1,048m

Underlying revenue 2013

Revenue mix 2013



40% OE revenue60% Services revenue

Revenue by market sector 2013



• 68% Oil and gas

21% Power generation11% Civil Nuclear/other



2013

#### Highlights

- 33 RB211s ordered for oil and gas applications
- Major service contract secured with Petrobras
- New Santa Cruz, Brazil, assembly plant operational
- Signed tripartite agreement with Rosatom and Fortum to assess nuclear reactor design for UK new build
- Renewed agreement with Westinghouse to provide nuclear inspection services in the US

# Key financial data

	2003	2010	2011	2012	2015
Order book £m	1,262	1,180	1,420	1,290	1,469
	+1%	-6%	+20%	-9%	+14%
Engine deliveries	87	95	48	49	56
Underlying revenue £m	1,028	1,233	1,083	962	1,048
	+36%	+20%	-12%	-11%	+9%
Underlying OE revenue £m	558	691	527	344	415
Underlying service revenue £m	470	542	556	618	633
Underlying profit before financing £m	24	27	16	19	26
	+1300%	+13%	-41%	+19%	+37%

2009

2010

2011\*

2012

# Energy has sold 4,600 gas turbines with 180 million operating hours recorded.

# Rolls-Royce has over 50 years of experience in the nuclear industry.

#### What we do

Our Energy segment supplies customers with aero-derivative gas turbines, compressors and related services.

In Civil Nuclear, we provide products and services spanning the nuclear reactor life-cycle from concept design and installation to obsolescence management and plant life extension. We have a strong position in nuclear instrumentation and control systems.

#### 2013 financial review

The order book increased by 14 per cent with new orders of £1.1 billion (£0.8 billion in 2012). The business saw a strong recovery in order intake in oil and gas. Power generation markets remain suppressed. In Civil Nuclear, we continue to extend the suite of products and services that we offer to nuclear utilities to enable them to achieve safe, efficient and reliable lifetime reactor operations. Revenue increased nine per cent, driven by higher OE volumes in our oil and gas business. Profit increased by £7 million, reflecting higher volumes, partially offset by strong pricing pressure and continued investment in our Civil Nuclear business. We continue to work to improve the financial performance of the business. In 2014, Energy will include nuclear submarines to form our Energy and Nuclear business. We expect good growth in revenue and profit, with further improvement in the return on sales.

#### How we are performing

**Oil and gas:** In total, 33 RB211 gas turbines were ordered for oil and gas applications, 22 of which were for pipeline compression projects. This includes a US\$175 million contract from Asia Gas Pipeline for 12 units.

Our new purpose-built packaging, assembly and test facility in Santa Cruz, Brazil, became operational and the first units were delivered to Petrobras for use in its deepwater offshore production activities.

**Power generation:** Demand continued to be subdued for new power generation capacity in mature economies. Seven Trent 60 units were ordered, including five for the SARB offshore oilfield project in the UAE.

We released enhanced power ratings for the Trent 60 gas turbine, consolidating its position as the most powerful aero derivative available.

**Services:** We continue to strengthen both our aftermarket products and services capability as well as our penetration of the installed fleet, resulting in a six per cent year-on-year increase in aftermarket revenue.

Currently 24 per cent of the core engine fleet is under long-term service agreements. During the year we received several new major service contracts including a US\$138 million five-year contract from Petrobras to support 15 of its RB211 industrial gas turbine power generation units installed on four oil platforms operating in the Campos Basin.

**Civil Nuclear:** We strengthened our strategic relationships during the year with AREVA, Westinghouse, Hitachi, EDF and Rosatom.

Our acquisition of PKMJ Technical Services in the US means we now provide services to every nuclear utility in the US and Canada.

We continued to deliver the instrumentation and control (I&C) upgrade for EDF's fleet of 1,300MW nuclear reactors in France and provided I&C systems and components for seven new nuclear reactors currently under construction in China.

#### Future priorities and opportunities

Our focus is on growing our market position in oil and gas, including opportunities in pipelines and LNG. In power generation, we will benefit from any recovery in industrial demand for electricity.

In Civil Nuclear our priorities will continue to be satisfying our customers, winning new orders and high-quality delivery. Improving operational efficiency will be a key feature for the Nuclear business during 2014.

We will assess potential investments in high-value manufacturing in order to contribute positively to a successful new build programme for the UK.

In international markets, we will extend the suite of products and services that we offer to nuclear utilities to enable them to achieve safe, efficient and reliable lifetime nuclear reactor operations.

Market outlook: In the oil and gas, and power generation sectors, the Group's 20-year forecast values demand for total aero-derivative gas turbine and compressor systems at more than US\$60 billion and associated services at around US\$60 billion. Sources: McCoy Power reports, LEK Consulting, Booz & Co., IEA, Infield Systems and our own forecasting tools. We estimate a demand for nuclear mission-critical equipment, systems, engineering and support services of US\$610 billion over the next 20 years. Based on nuclear capacity forecasts from the International Energy Agency, the World Nuclear Association, the International Atomic Energy Agency and the US Department of Energy.

 $<sup>^{</sup>st}$  2011 figures restated due to transfer of Bergen to Power Systems segment.

# **POWER SYSTEMS**

2013 proved a challenging year. However, in 2014 we expect most markets to stabilise.

John Paterson President – Marine and Industrial Power Systems



# **OVERVIEW**

Underlying revenue (£m)

2,846 2013

£2,831m





■ **71**% OE revenue 29% Services revenue

#### Revenue by market sector 2013



**35%** Marine

**27**% Energy **26%** Industrial **12%** Defence and other



Change

#### Highlights

- MTU Powerpacks ordered for UK Intercity Express Programme
- Fjord Line ordered Bergen engines for cruise ferries
- Upgraded Series 1163 engines introduced
- UK MoD selects MTU gensets alongside MT30 gas turbine
- Polish partnership to be created to supply and maintain cogeneration plants
- Mining trucks powered by MTU delivered to Rio Tinto in Australia

#### Key financial data

	2012	2013	Change
Order book £m	1,823	1,927	+5.7%
Underlying revenue £m	2,846	2,831	-0.5%
Underlying OE revenue £m	1,938	2,004	+3.4%
Underlying services revenue £m	908	827	-8.9%
Underlying profit before financing £m	293	294	+0.3%

The table above shows a trading comparison as if both Tognum and Bergen Engines had been fully consolidated in 2012 as well as in 2013.

# Rolls-Royce and Daimler AG each has a 50 per cent shareholding in Rolls-Royce Power Systems Holding GmbH.

Power Systems is based in Friedrichshafen in Southern Germany and, together with its worldwide subsidiaries, employs around 11,000 people. It specialises in reciprocating engines, propulsion systems and distributed energy systems. The company previously operated under the name of Tognum AG. In 2013, Bergen Engines AS, including its subsidiaries, was contributed to the business.

#### What we do

The product portfolio includes MTU-brand high-speed engines and propulsion systems for ships, for heavy land, rail and defence vehicles, and for the oil and gas industry. Under the MTU Onsite Energy brand, the company markets diesel and gas gensets for applications such as emergency, base load, peak load or cogeneration. Bergen Engines AS manufactures medium-speed engines for marine and power generation applications. L'Orange completes the portfolio, producing fuel injection systems for large engines.

#### 2013 financial review

The order book increased 6 per cent, with new orders of £2.7 billion (£2.8 billion in 2012). The final quarter of 2013 saw strong sales, driven by the pre-purchase of engines for industrial, including agricultural, applications ahead of the introduction of tighter environmental standards in Europe. Marine revenue is well supported by demand from navies in Asia and the US. In defence, major programmes to power military tanks provide stability despite continued pressure on government spending. Revenue decreased 0.5 per cent with good growth in the Marine and Industrial divisions offset by lower revenue in oil and gas, medium-speed engines and lower aftermarket sales. Profit increased 0.3 per cent, reflecting a strong second half.

In 2014, we expect modest growth in revenue and good growth in profit driven by growth in marine and land power systems markets.

#### How we are performing

2013 proved a challenging year. Headwinds confronting the business included the Eurozone crisis, US fiscal challenges and slowing of growth in emerging countries. General nervousness about the global economic environment led to constrained order activity within the market.

Despite these adverse market conditions, a number of significant orders and contracts were achieved.

As outlined in the Marine segment review, Power Systems also benefited from contracts awarded by Chinese customer COSCO and from the UK MoD for the generator sets of the Royal Navy's future Type 26 Frigate. The Type 26 propulsion system will consist of a combination of four MTU diesel gensets and a Rolls-Royce MT30 gas turbine. These examples highlight the synergies and benefits of complementary product portfolios.

MTU introduced the upgraded Series 1163 marine engines for IMO Tier II and IMO Tier III emission standards. These are cleaner and more fuel-efficient than the previous generation and offer a better power-to-weight ratio.

For the British Intercity Express Programme, MTU received orders of rail Powerpacks with Series 1600 engines. The Powerpacks will drive Hitachi's future high-speed trains which are scheduled to go into service from 2017 on Great Western Main Line and East Coast Main Line routes. Twenty locomotives built by Chinese manufacturer, Dalian Locomotive & Rolling Stock and powered by MTU engines went into service in Argentina.

China-based Xiangtan Electric Manufacturing Corporation shipped its first ever export of mine dump trucks to the Pilbara mine site in Australia for Rio Tinto. Each of the 230 metric-ton trucks is powered by an MTU mining engine.

The Fjord Line shipping company ordered Bergen gas-powered engines. Its Stavangerfjord and Bergensfjord cruise ferries, both 170 metres long, are each to be equipped with four Bergen B-gas engines. The engines ensure that these ships already meet future IMO Tier III limits as well as satisfying mandatory EU regulations projected for 2015, for sulphur emissions from ferries.

In addition to these contract wins, we continue to build capacity through joint ventures and partnerships. L'Orange has established a consortium with Hoerbiger, for the supply of equipment for large-scale diesel and dual-fuel engines for the Asian market. Onsite Energy and regional Polish energy supplier Kogeneracja Zachód intend to form a partnership for the supply and maintenance of cogeneration plants. Over the coming years, both companies plan on working exclusively with each other to supply small- to mediumsized Polish cities with environmentally-friendly energy from CHP plants.

#### Future priorities and opportunities

Our long-term growth relies on five pillars: power; propulsion; services; regional expansion and, the product portfolio.

In 2014, we expect most markets to stabilise. although some segments are expected to remain difficult. This leads us to expect continued volatility in revenues. Overall we expect to see a positive performance primarily driven by marine applications.

We will invest in future technologies to maintain our technological leadership. We are configuring our different engine series to meet tougher emission standards. At the same time we will improve efficiency and keep a focus on costs and cash in all other areas.

Market outlook: We estimate the total market opportunity for high-speed engine original equipment over the next ten years to be €280 billion. The forecast data is taken from a range of sources including: Global Insight; Oxford Economics, Diesel and Gas Turbine Worldwide, Clarkson Research and our own internal forecasting tools.

# **ENGINEERING AND TECHNOLOGY**

# We continued our commitment to recruit and develop the very best engineers and scientists.

#### **Colin Smith CBE**

Director - Engineering and Technology

In 2013, we invested £1,118 million in gross research and development (R&D) of which £746 million was funded by the Group, prior to receipts from risk and revenue sharing arrangements.

We continually pursue innovation that will improve the performance of our power systems and benefit our customers.

We have developed and actively deployed a new innovation portal to improve the exchange of ideas around the world as we invest to improve the efficiency of our global R&D footprint.

#### People

We have an engineering resource inside the Group of around 16,600 engineers. Many work as integrated teams across borders on our major programmes and a number of our top engineers, or Rolls-Royce Fellows, are recognised as world-renowned experts in their fields.

We continued our commitment to recruit and develop the very best engineers and scientists, and the first cohort of our evolving internal Specialist Academy has graduated in October 2013. The Academy has been designed for technologists who have the potential to join the Rolls-Royce Fellowship at the very top of our specialist career ladder.

#### Research and technology

World-class technology gives us competitive product performance. We generate the largest number of patents of any UK company, 549 new patent applications were approved for filing in 2013 (including Rolls-Royce Power Systems AG). To further expand our capabilities, we acquired Hyper-Therm HTC, a US-based specialist in ceramic materials; and SmartMotor, a world leader in permanent-magnet machines and drives technology, headquartered in Norway. In addition, we acquired from GKN

the 49 per cent of Composite Technology and Applications Limited (CTAL) that we did not already own, giving us 100 per cent ownership. CTAL is engaged in the development of composite fan blades and containment cases for the next generation of advanced turbofan engines.

In 2013, we further increased our investment in early-stage research and technology to about 20 per cent of the net R&D spend. We have good visibility of stable, long-term government match-funding for research investments in aerospace technologies following the creation in the UK of the Aerospace Technology Institute, and in the EU through the Clean Sky 2 Joint Technology Initiative in Horizon 2020 and continuous German support via Luftfahrtforschungsprogramm (LuFo) V.

#### **University Technology Centres**

In addition to our significant in-house R&D capability, we pursue advanced technologies via a global network of 29 University Technology Centre (UTC) partnerships. Each centre is part-funded by the Group and works closely with our engineering teams, undertaking specialist work led by worldclass academics. In 2013, Nanyang Technological University joined this network with the launch of the Rolls-Royce@NTU Corporate Lab, a joint investment of SGD\$75 million (£38.5 million) between Rolls-Royce, Nanyang University and the National Research Foundation (NRF) of Singapore.

Our model of developing technology through collaboration with academia and other partners was recognised by the German Fraunhofer Institute for Production Technology which benchmarked 160 European companies: Rolls-Royce was one of five companies to receive the 'Successful Practices' award in technology management in 2013.



#### Research and development

Flight test results have shown the Trent XWB to be the world's most efficient large, civil, aero engine.

The Trent 1000 Package C received EASA certification in September and a few weeks later powered the newest version of the Dreamliner, the Boeing 787-9 on its first flight from Seattle, USA.

The Joint Strike Fighter F-35B, with short take -off and vertical landing (STOVL) capability provided by the Rolls-Royce LiftSystem®, successfully completed its second set of carrier trials aboard the USS Wasp in August 2013. In September, the T56 engine Series 3.5 technology enhancement program received FAA approval and has now been chosen to power the 'Hurricane Hunter' aircraft of the US National Oceanic and Atmospheric Administration.

In 2013, we received the Green Ship Technology Award for our Environship concept – a design for cargo ships that reduces CO<sub>2</sub> emissions by up to 40 per cent compared to similar diesel powered vessels.

#### Gross research and development (£m)



# **OPERATIONS**

# Record levels of investment continue to drive improvements in product and operational performance.

Alain Michaelis
Operations Director



Our operations employ 25,000 people in 17 countries at 85 Rolls-Royce facilities. In addition, 33 joint venture facilities, seven manufacturing technology partnerships and over 70 significant suppliers help us to meet customer demand.

#### Developing our capacity

This year we have extended our own capacity and capability. This included our new turbine blade factory in Rotherham, UK and our new 17,000 square metre, state-of-the-art discs manufacturing facility in Washington, UK, that has now started production. When fully operational later this year, it will have the capacity to manufacture over 2,000 fan and turbine discs annually. We are also taking steps to adjust capacity where market segments are contracting or demanding a lower price point. Although our diverse portfolio helps us balance growing and shrinking segments, we do expect an ongoing need to adjust capacity through plant renewal and closures.

#### Advanced manufacturing

We apply advanced technologies, methods and processes to deliver 'best in class' manufacturing performance through our Rolls-Royce Production System and the Advanced Manufacturing network, which has developed over the past five years.

The advanced centres in this network bring together university, government and industrial partners to provide a realistic testing ground for new industrial techniques that improve yield and reduce costs. These have proved to be successful both for Rolls-Royce and our supplier partners.

The Advanced Forming Research Centre in Glasgow, UK, the National Composites Centre in Bristol, UK and the Manufacturing Technology Centre in Coventry, UK, are expanding their facilities and the new Commonwealth Centre for Advanced Manufacturing in Richmond, USA, is now fully operational.

Our future Advanced Remanufacturing and Technology Research Centre in Singapore and High Temperature Components Centre of Excellence in the UK will ensure we lead in high-performance, low-emission turbine technology.

Our processes will increasingly include powder-based manufacturing, additive layer manufacturing technologies and ultra-high temperature materials. 'Knowledge-based manufacturing' is another developing area. Here, we will use dynamic computer models to design and verify processes. These approaches will increase design flexibility, speed of manufacture and performance.

#### Suppliers

Strong relationships with our suppliers are critical to our performance. We work closely to align our strategies as well as assessing performance through our Supplier Advanced Business Relationship (SABRE) requirements.

Rolls-Royce has taken a leading role in the establishment of the Aerospace Engine Supplier Quality Committee. Through this body, gas turbine engine makers and their suppliers — with input from regulatory agencies — aim to agree a set of common industry-wide standards. These will help remove variability and waste, enabling the aerospace supply chain to be leaner and more competitive.

To support UK suppliers in the global aerospace market, Rolls-Royce is sponsoring the UK Government-backed Sharing in Growth programme. It is a £110 million programme of intensive supplier



development training and is expected to secure at least 5,000 high-value manufacturing jobs in aerospace. We are also supporting a £76 million Sharing in Growth programme in the nuclear industry.

We continue to seek new capabilities in emerging markets across the world through our supplier development groups. These help drive competition with our existing internal plants and suppliers, and also allow us to develop new markets – Brazil (Energy) and China (Marine) being good examples. We expect the proportion of our supplier spend in emerging markets to increase.

#### Information technology

In 2013, we invested over £100 million in IT, continuing with the modernisation of our IT infrastructure and also launching our Shop Floor IT modernisation programme. We have launched an Integrated Production Systems programme to address the need for simplified, globally scalable and secure systems. The programme will improve delivery to the customer whilst improving efficiency and reducing operating costs. We are also investing in our customer systems to improve the customer experience through the use of portals and digital workflow.

# £687 million

Expenditure in 2013 on property, plant and equipment.

We are delivering customer and business benefits as we continue to invest at record levels and transform our industrial infrastructure.

# **SUSTAINABILITY**

Our strategy is to create a sustainable business, through our focus on customer, innovation and profitable growth. Our commitment is to continually improve the environmental performance of our products and services. With our customer at its heart, our strategy will deliver 'Better power, a Better future and a Better business'.

# Sustainability

#### **Better power**

Helping our customers do more using less.

#### **Better future**

We are committed to innovation: powering better, cleaner, economic growth that creates value for customers, employees, investors, suppliers and wider society.

#### **Better business**

We invest in technology, people and ideas to improve all aspects of our performance and to drive profitable growth. Building on today's achievements to meet the business challenges of the future.

# Better power

# Helping our customers do more using less.

Each of our customer-facing segments provides services and customer operation solutions to improve the effectiveness of our equipment. In each of our markets, we are focused on reducing fuel consumption and emission levels. Find out more by visiting www.rolls-royce.com.

#### Improving the environmental performance of our products

Rolls-Royce has a strong track record of reducing emissions through significant investment in technology. In 2013, we invested £1,118 million in R&D, of which around two-thirds is aimed at reducing the environmental impact of our products and services.

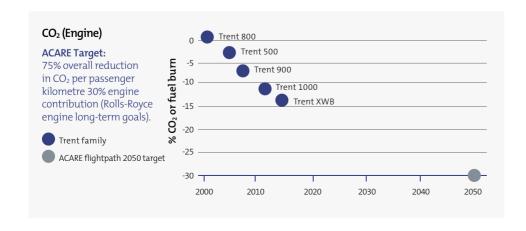
In Civil aerospace, The Advisory Council for Aviation Research and Innovation in Europe (ACARE) has set challenging goals for aviation to meet by 2050. These include reducing aircraft CO<sub>2</sub> emissions by 75 per cent (per passenger kilometre); reducing noise by 65 per cent; and reducing oxides of nitrogen (NO<sub>x</sub>) by 90 per cent, all relative to a typical new aircraft produced in 2000.

The Trent XWB is the world's most efficient turbofan aero engine flying today. The low noise technology built into the Trent 1000 makes it the quietest engine on the Boeing 787 Dreamliner, which itself has half the noise level of the corresponding previous generation aircraft.

In Defence aerospace, we have worked with the US Air Force to complete the final testing of the Series 3.5 enhancement of the T56 engine, providing fuel savings of up to ten per cent in addition to improved performance and reliability.

In Marine, our Environship design together with our advanced propulsion systems can reduce CO<sub>2</sub> emissions by up to 40 per cent compared to conventional diesel-powered vessels. The Environship concept was awarded the Green Ship Technology Award this year.

Our Civil Nuclear portfolio makes a significant contribution to future low carbon electricity generation. We are strongly positioned to support growth in this industry.





#### **Carbon Disclosure Project**

The Rolls-Royce 2013 carbon disclosure score of 85 is our highest score to date. This, along with our performance band 'B' rating, demonstrates our commitment to continually improving our environmental performance.

# Dow Jones Sustainability Indices In Collaboration with RobecoSAM

#### Dow Jones Sustainability Index

Rolls-Royce has been listed for the 12th consecutive year. We achieved an overall score of 67 in 2013, above average in all areas within the aviation and defence sector.



Left to right: Sarah Armstrong (Rolls-Royce), Ella Jakubowska and Sir Trevor McDonald at the TARGETjobs Female Undergraduate of the Year 2013 awards.

#### Better future

We are committed to innovation: powering better, cleaner economic growth that creates value for customers, employees, investors, suppliers and wider society.

#### Our people

Our culture fosters innovation, collaboration and continuous improvement. Developing strong people management and leadership skills alongside our technical expertise helps ensure that our employees are engaged and understand the wider role they play in the Group's success. We work actively to attract young people to Science, Technology, Engineering and Mathematics (STEM) subjects.

Content and figures do not include Rolls-Royce Power Systems AG, unless indicated.

In 2013, we recruited 2,530 experienced professionals to support the growth of our business. Our graduate programme is expanding, we recruited 379 graduates through our global programmes, an increase of 21 per cent from 2012. Our graduate population is becoming more representative of the diverse and global company we are working in, with this year's graduates representing 32 nationalities and coming from 97 universities. Our apprenticeship programme has been running for over 100 years. At any one time we have over 1,000 apprentices around the world.

Average number of employees	2012	2013*
By region		
United Kingdom	22,800	24,800
Rest of the world	20,000	30,400
Total	42,800	55,200
By sector	'	
Civil aerospace	21,500	23,400
Defence aerospace	7,800	7,900
Marine	8,800	9,200
Energy	3,700	4,000
Power Systems	1,000	10,700
Total	42,800	55,200

<sup>\*</sup> Includes Rolls-Royce Power Systems AG.

We retained our title as 'The most popular graduate recruiter — Engineering, Designs and Manufacture' in the UK TARGETjobs Awards for the fourth year running. Our position has also risen in the 'Times Top 100 Graduate Employers' rankings and in the 'Guardian UK 300' survey.

#### **Employee involvement**

Employee engagement is critical to our success. We use a variety of channels to communicate with our employees. We have well-established frameworks for managing employee and trade union/employee representative participation which include formal information and consultation arrangements. Our incentive schemes and all-employee share plans make sure that every employee has the opportunity to share in our success. We encourage our employees to improve their knowledge and enhance their careers by providing meaningful training and development. In 2013, we supported 49,600 employees, customers and suppliers through our learning management system. Learning investment for 2013 was £39.7 million and a total of 272,000 training course completions were delivered during the year.

#### Human rights

Our human rights policy sets out our commitment to respect the human rights of our employees through core labour standards regarding employee involvement,

diversity and equality, pay and benefits, working hours, forced labour and child labour. We set equivalent standards for our supply chain through our Supplier Code of Conduct.

#### Diversity and inclusion

A diverse workforce will help ensure our continued success as a global business and contribute towards a better future. We continue to face challenges in increasing diversity across the organisation and are working with our leadership teams to raise awareness of the need for change. Over recent years we have seen increased levels of diversity in both our early career pipeline and high potential pool, with females making up 26 per cent of our UK graduate intake in 2013 and 29 per cent of our graduate intake into countries outside the UK. Females are 24 per cent of our high potential population as compared to 15 per cent of our general population.

This year, Rolls-Royce sponsored the UK Female Undergraduate of the Year 2013 awards. The winner, Ella Jakubowska, accepted a place on our Customer Management Graduate Programme.

Headcount by gender\*

Male	46,975
Female	8,225
Total	55,200
* Includes Rolls-Royce Power Systems AG.	
Senior managers by gender*	
Male	188
Female	11
* Includes Rolls-Royce Power Systems AG.	
Board directors by gender	
Male	10
Female	2

Full-time equivalents

at 31 December 2013

We give full and fair consideration to applications for employment made by disabled people and also support employees who become disabled during employment, helping them make the best use of their skills and potential.

28 Strategic report Rolls-Royce Holdings plc annual report 2013

#### **SUSTAINABILITY**

#### Community investment

We are committed to conducting business to the highest standards and building positive relationships within the communities where we operate. In 2013, our total contribution was £8 million. We actively work with schools and universities to increase interest and encourage diversity amongst those taking STEM subjects, and to broaden the career aspirations of individuals from under-represented groups.

#### Working with governments

National governments are often our customers and we aim to build strategic relationships with governments in our key markets.

National governments and the EU also set the legislative and policy framework for doing business and they are a potential source of funding and support for research and technology (R&T), R&D, manufacturing, education and training initiatives, as well as for certain capital projects.

We engage in dialogue to align our own business needs with the political, social, economic, industrial and commercial requirements of national governments and the EU.

In 2013, we have worked with the UK Government on the development and implementation of the Aerospace Growth Partnership; in EU Affairs, we have focused on the Horizon 2020 EU funding programme; and in North America we focused on defence appropriations and policy issues.

Globally, we are members of national industry bodies and trade associations that represent our sector and Group interests. In the UK we are members of the Confederation of British Industry (CBI) and AeroSpace, Defence and Security (ADS); in North America the Aerospace Industries Association, Organisation for International Investment and the US Chamber of

Commerce; in Brussels on EU affairs we belong to The AeroSpace and Defence Industries Association of Europe (ASD) and EU Turbines, amongst others; and globally we are members of local Chambers of Commerce in our countries of operation.

Rolls-Royce does not make corporate contributions or donations to political parties or to any organisations, think-tanks, academic institutions or charities closely associated to a political party or cause, as outlined in our Global Code of Conduct.

#### **Better business**

We invest in technology, people and ideas to improve all aspects of our performance and to drive profitable growth. Building on today's achievements to meet the business challenges of the future.

#### **Ethics**

We have made a strong commitment to improving our ethical performance in line with building a better business.

You will have read in the Chief Executive's review on pages 6 and 7, about Lord Gold's review, the SFO investigation, and the publication of our new Global Code of Conduct. We have also introduced a confidential Ethics Line which is available 24 hours a day, where individuals can ask questions or raise concerns. You can read more on these topics in the ethics committee report on pages 49 and 50. We are also refreshing our Supplier Code of Conduct for deployment in 2014. Compliance with the code will continue to be monitored through our regular supplier audits.

The Group continues to be an active participant in ethical initiatives of the European and US aerospace and defence business sectors. We are a signatory to the 'Common Industry Standards' which were drawn up by ASD and aim to promote and enhance integrity practices among its members.

The Group is also a member of the International Forum on Business Ethical Conduct's (IFBEC) Steering Committee. This organisation includes leading US and European companies in the aerospace and defence sectors and aims to promote responsible and ethical business behaviours through the Global Principles of Business Ethics.

#### Improving operational performance

Improving the environmental performance of our operations contributes to profitable growth. We have set a three-year target to reduce energy consumption by ten per cent by the end of 2015, with 2012 as the baseline year excluding product test and development and normalised by revenue.

Our energy use increased slightly in 2013, reflecting our increased levels of activity, but we are on track to reduce our overall emissions of greenhouse gases. We continue to invest in improvements to our facilities. Our total spend in 2013 amounted to almost £3 million on projects, including upgrades to compressed air systems, lighting systems and controls, and additional energy monitoring capability in our plants and offices. We are seeking to make wider use of more sustainable energy sources, where cost effective and practical to do so.

Our business segments have thirdparty accredited certification to the environmental management systems standard ISO 14001. In addition, we have maintained our focus on requiring key suppliers to become certified to ISO 14001. For further information on how we work with suppliers please visit www.rolls-royce.com/sustainability.



UK Prime Minister
David Cameron meets
Colin Smith CBE,
Director – Engineering
and Technology, and
some of our apprentices
at the Apprentice
Academy, Derby, UK.

We are helping to lead the way on REACH (Registration, Evaluation and Authorisation of Chemicals) regulations and have submitted the first ever REACH Authorisation application. This is in the final stages of the approval process with the European Chemicals Agency and European Commission. Additionally, we continue to work with our suppliers to assist them in meeting their own obligations with a focus on the managed reduction and phase out of the use of targeted substances that are hazardous to health and dangerous to the environment.

Through our active participation in the International Aerospace Environment Group we are also helping to introduce new standards to facilitate efficient data sharing across the aerospace supply chain. This focuses on the uses of hazardous substances (in both manufacturing processes and included in our products) and related substitution and phase out programmes.

#### Greenhouse gas emissions

In 2013, our total greenhouse gas (GHG) emissions from our facilities, processes, product test and development was 520 kilotonnes carbon dioxide equivalent (ktCO $_2$ e). This represents a reduction of nine per cent compared with 572 ktCO $_2$ e in 2009 (see table). This reduction has been achieved, despite a growth in our global facilities footprint. We have introduced a longer term GHG target over ten years, aimed at reducing emissions by 17 per cent by the end of 2022 (baselined at 2012), excluding product test and development.

The figures in the table do not include emissions associated with Rolls-Royce Power Systems AG. We expect to integrate this subsidiary into our reporting process during 2014. Power generation relates to the operation of commercial gas-fired power stations.

Total GHG emissions (ktCO₂e)	2009	2010	2011	2012	2013
Direct emissions – facilities, processes, product					
test and development (Scope 1)	215	236	229	213	218
Indirect emissions – facilities, processes, product					
test and development (Scope 2)	357	365	346	337	302
Total for facilities, processes, product test					
and development	572	601	575	550	520
Direct emissions – power generation to grid (Scope 1)					56
Indirect emissions – power generation to grid (Scope 2)					3
Total for facilities, processes, product					
test and development, and power generation to grid					579
Normalised (by revenue) emissions ratio for facilities,	'	'	'		
processes, product test and development (ktCO₂e/£m)					0.04

We have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) data gathered to fulfil our requirements under the Carbon Reduction Commitment (CRC) Energy Efficiency scheme, and the UK Government's GHG reporting guidance as the basis of our methodology and source of emissions factors for Company reporting for 2013. Further details on our methodology can be found within our 'Basis of Reporting', available at www.rolls-royce.com/sustainability.

#### Safety

We are committed to continually improving the standards of health and safety in the workplace. We have steadily improved performance over previous years. In 2013, there were no fatalities or significant injuries and we achieved a 17 per cent reduction in the Total Reportable Injury (TRI) rate from 0.54 in 2012 to 0.45 TRIs per 100 employees. Over the longer term, we have reduced the TRI rate by 37 per cent since 2009. We have set a new target to reduce TRIs per 100 employees by 15 per cent by 2015 (baselined at 2012).

We continue to analyse high-potential incidents and each of them is investigated at business segment level, with some also included in Group level assessment. The number of high-potential incidents has declined slightly from previous years and the number of 'near misses' reported has significantly increased. The increased level of near miss reporting reflects greater risk

awareness, overall proactive reporting, risk based investigation and other improvements. These contribute to both TRI and high potential incident reductions.

Throughout the year, we continued several global safety improvement plans. The Electrical and Process Safety programmes included site reviews and training and tools for ensuring efficient implementation of control measures. Reviews have also been carried out on the use and control of exposure to a number of chemicals newly-regulated under the REACH regulations. These reviews confirmed that our controls are suitable and that they ensure occupational exposures and releases to the environment are within limits set by the new requirements.

#### Health

The current incidence of occupational illness stands at 0.86 cases per 1,000 employees. The leading causes of illness are noise-induced hearing loss, work-related upper limb disorders and stress. This reflects our global health risk profile and provides the focus for our health improvement activities.

Following a prosecution in the UK by the Health and Safety Executive for one case of Hand-Arm Vibration Syndrome (HAVS), independent advice was sought from the UK Health and Safety Laboratory and we are continuing to strengthen our management of HAVS.

# **KEY PERFORMANCE INDICATORS**

The Board uses a range of financial and non-financial indicators to monitor Group and segmental performance in line with the strategy.

Financial indicators are shown below. The key objectives of the Board and its committees are described on pages 39 to 54 and non-financial key performance indicators are shown in the sustainability section on pages 26 to 29.

Rolls-Royce Power Systems AG (RRPS), formerly Tognum AG, was fully consolidated from 1 January 2013. To aid understanding, the impact on 2013 of consolidation has been displayed separately below.

Rolls-RoyceRRPS



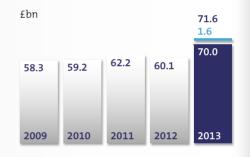
# **CUSTOMER**

**ORDER BOOK** 

+19%

+16% before RRPS

The order book provides an indicator of future business. It is measured at constant exchange rates and list prices and includes 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. Only the first seven years' revenue of long-term aftermarket contracts is included.



**ORDER INTAKE** 

+67%

+52% before RRPS

Order intake is a measure of new business secured during the year and represents new firm orders, net of 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. Order intake is measured 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. Order intake for any given year includes the seventh year of revenue.



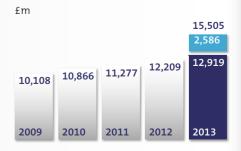
**UNDERLYING REVENUE** 

+27%

+6% before RRPS

Monitoring of revenues provides a measure of business growth. Underlying revenue is used in order to eliminate the effect of the decision not to adopt hedge accounting and to provide a clearer year-on-year measure.

The Group measures foreign currency revenue at the actual exchange rate achieved as a result of settling foreign exchange contracts from forward cover.



# **INNOVATION**

#### NET R&D EXPENDITURE AS A PROPORTION OF UNDERLYING REVENUE

+4.5% before RRPS

R&D is measured as the self-funded expenditure both before amounts capitalised in the year and amortisation of previously-capitalised balances. The Group expects to spend approximately five per cent of revenues on R&D although this proportion will fluctuate depending on the stage of development of current programmes. This measure reflects the need to generate current returns as well as to invest for the future.

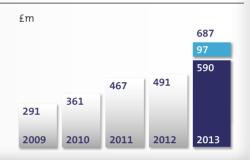


#### **CAPITAL EXPENDITURE**

+40%

+20% before RRPS

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. Annual capital expenditure is measured as the cost of property, plant and equipment acquired during the period.



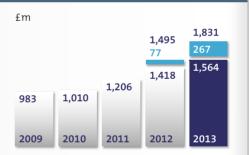
# **PROFITABLE GROWTH**

# UNDERLYING PROFIT BEFORE FINANCING

+22%

+10% before RRPS

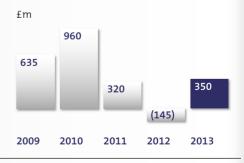
Underlying profit before financing is presented on a basis that shows the economic substance of the Group's hedging strategies in respect of the transactional exchange rate and commodity price movements. In particular: (a) revenues and costs denominated in US dollars and euros are presented on the basis 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.



#### **AVERAGE CASH/DEBT**

+£380m before RRPS

The Group reports the balance of net funds/debt on a weekly basis and average cash is therefore the average of these weekly net balances. These balances are reported at prevailing exchange rates and in recent periods, year-on-year movements in average cash balances reflect the significant acquisitions and disposals which have taken place, most notably RRPS in 2011 and IAE restructuring in 2012. The impact on average cash balances will depend on when these transactions took place during the year.

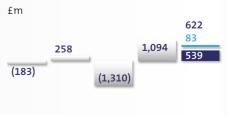


#### **CASH FLOW**

+£539m before RRPS

In a business requiring significant investment, the Board monitors cash flow to ensure that profitability is converted into cash generation, both for future investment and as a reward for shareholders. The Group measures cash flow as the movement in net funds/debt during the year, after taking into account the value of derivatives held to hedge the value of balances denominated in foreign currencies.

The figure for 2011 includes investment of £1,496 million in RRPS.



2011

2012

2013

2009

2010

# PRINCIPAL RISKS AND UNCERTAINTIES

The Group places great importance on the identification and effective management of risks. Our approach to enterprise risk management helps us to deliver our objectives and maximise the returns of the Group.

The following table describes the risks that the risk committee, with endorsement from the Board, considers to have the most material potential impact on the Group. They are specific to the nature of our business notwithstanding that there are other risks that may occur and may impact the achievement of the Group's objectives.

The risk committee discussions have been focused on these risks and the actions being taken to manage them.

#### Risk or uncertainty and potential impact

#### PRODUCT FAILURE

Product not meeting safety expectations, or causing significant impact to customers or the environment through failure in quality control.

#### How we manage it

- Operating a safety first culture
- Our engineering design and validation process is applied from initial design, through production and into service
- The safety committee reviews the scope and effectiveness of the Group's product safety policies to ensure that they operate to the highest industry standards (see safety committee report on page 52)
- · A safety management system (SMS) has been established by a dedicated team. This is governed by the Product Safety Review Board and is subject to continual improvement based on experience and industry best practice. Product safety training is an integral part of our SMS
- · Crisis management team led by the Director Engineering and Technology or General Counsel as appropriate

#### **BUSINESS CONTINUITY**

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.

- Continued investment in adequate capacity and modern equipment and facilities (see operations section on page 25)
- · Identifying and assessing points of weakness in our internal and external supply chain, our IT systems and our people skills
- Selection and development of stronger suppliers (see operations section on page 25)
- Developing dual sources or dual capability
- Developing and testing site-level incident management and business recovery plans
- · Crisis management team led by the Director Engineering and Technology or General Counsel as appropriate
- Customer excellence centres provide improved response to supply chain disruption

#### **COMPETITOR ACTION**

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 are few. Our main competitors have access to significant government funding programmes as well as the ability to invest heavily in technology and industrial capability.

- Accessing and developing key technologies and service offerings which differentiate us competitively (see engineering and technology section on page 24)
- Focusing on being responsive to our customers and improving the quality, delivery and reliability of our products and services
- Partnering with others effectively
- · Driving down cost and improving margins (see Chief Executive's review on pages 6 and 7 and Chief Financial Officer's review on page 10)
- Protecting credit lines (see additional financial information on pages 137 and 138)
- Investing in innovation, manufacturing and production (see operations section on page 25)
- Understanding our competitors

#### Risk or uncertainty and potential impact

#### INTERNATIONAL TRADE FRICTION

Geopolitical factors that lead to 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.

#### How we manage it

- Where possible, locating our domestic facilities in politically stable countries and/or ensuring that we maintain dual capability
- Diversifying global operations to avoid excessive concentration of risks in particular areas
- Network of regional directors proactively monitors local situations
- Maintaining a balanced business portfolio in markets with high technological barriers to entry and a diverse customer base
- · Understanding our supply chain risks
- Proactively influencing regulation where it affects us (see sustainability on page 28)

#### MAJOR PRODUCT PROGRAMME DELIVERY

Failure to deliver a major product programme on time, to specification or technical performance falling significantly short of customer expectations would have potentially significant adverse financial and reputational consequences, including the risk of impairment of the carrying value of the Group's intangible assets and the impact of potential litigation.

- Major programmes are subject to Board approval (see additional financial information on page 137)
- Major programmes are reviewed at levels and frequencies appropriate
  to their performance against key financial and non-financial
  deliverables and potential risks throughout a programme's life cycle
  (see additional financial information on page 137)
- Technical audits are conducted at pre-defined points performed by a team that is independent from the programme
- Programmes are required to address the actions arising from reviews and audits and progress is monitored and controlled through to closure
- Knowledge management principles are applied to provide benefit to current and future programmes

#### **COMPLIANCE**

Non-compliance by the Group with legislation or other regulatory requirements in the regulated environment in which it operates (for example: export controls; offset; use of controlled chemicals and substances; and anti-bribery and corruption legislation) compromising our 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 or export credit financing, any of which could have a material adverse effect.

- An uncompromising approach to compliance is now, and should always be, the only way to do business
- The Group has an extensive compliance programme. This programme and the Global Code of Conduct are promulgated throughout the Group and are updated and reinforced 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 ethics committee report on pages 49 and 50)
- A legal and compliance team has been put in place to manage the current specific issue (see ethics committee on pages 49 and 50) through to a conclusion and beyond
- Lord Gold has reviewed the Group's current compliance procedures and an improvement plan is being implemented

#### PRINCIPAL RISKS AND UNCERTAINTIES

#### Risk or uncertainty and potential impact

#### MARKET SHOCK

The Group is exposed to a number of market risks, some of which are of a macro-economic nature, for example, foreign currency exchange rates, and some which are more specific to the Group, for example liquidity and credit risks, reduction in air travel or disruption to other customer operations. Significant extraneous market events could also materially damage the Group's competitiveness and/ or credit worthiness. This would affect operational results or the outcomes of financial transactions.

#### How we manage it

- Maintaining a strong balance sheet, through healthy cash balances and a continuing low level of debt
- Providing financial flexibility by maintaining high levels of liquidity and an investment grade 'A' credit rating (see additional financial information on page 138)
- The portfolio effect from our business interests, both in terms of original equipment to aftermarket split and our different segments provide a natural shock absorber since the portfolios are not correlated
- Deciding where and what currencies to source in, where and how much credit risk is extended or taken and hedging residual risk through the financial derivatives markets (foreign exchange, interest rates and commodity price risk – see additional financial information on page 137)

#### IT VULNERABILITY

Breach of IT security causing controlled data to be lost, made inaccessible, corrupted or accessed by unauthorised users.

- Establishing '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
- · Security and network operations centres have been established
- Active sharing of information through industry, government and security forums (see risk committee report on page 51)

The strategic report was approved by the Board on 12 February 2014.

By order of the Board Nigel T Goldsworthy Company Secretary