

2016 FULL YEAR RESULTS

14 February 2017 - Spectris plc (SXS: LSE), the productivity-enhancing instrumentation and controls company, announces full year results for the twelve months ended 31 December 2016.

Adjusted*	2016	2015	Change	Change at CER**	Like-for-like change*
Reported sales, £m	1,345.8	1,190.0	13%	1%	-2%
Adjusted operating profit, £m*	200.8	181.1	11%	-2%	-6%
Adjusted profit before tax, £m*	195.8	176.3	11%		
Adjusted earnings per share, pence*	127.5p	114.3p	12%		
Adjusted return on sales, %*	14.9%	15.2%	-0.3pp		
Dividend, pence	52.0p	49.5p	5%		
Reported					
Reported sales, £m	1,345.8	1,190.0	13%		
Reported operating profit, £m***	38.3	143.6	-73%		
Reported profit before tax, £m***	31.9	141.6	-77%		
Basic earnings per share, pence***	8.6p	95.6p	-91%		
Reported return on sales, %***	2.8%	12.1%	-9.3pp		

* The adjusted performance measures represent the statutory results excluding certain non-operational items. Like-for-like ('LFL') measures include revenue and profit at constant exchange rates and exclude the impact of acquisitions. For a definition of the item and a reconciliation to the closest IFRS equivalent, see Note 2.

** At constant exchange rates ('CER') using the prior period's exchange rates.

*** Main adjusting item to reported profit is the £115 million impairment charge referred to in the Highlights below which also reduces EPS by 96.8 pence

Highlights

- 13% growth in reported sales; 1% sales growth at constant exchange rates; 2% LFL sales decline
- Adjusted operating margins broadly stable; strong operating cash conversion of 113%; dividend per share increase of 5%
- Reported profit includes a non-cash charge of £115 million relating to an impairment of goodwill and other intangibles at Omega Engineering and ESG Solutions, reducing EPS by 96.8 pence
- Good strategic progress in transition to customer-focused, solutions strategy
 - Acquisition of Millbrook brings high quality test service platform, expanding our automotive offering
 - Added further software, service and testing capability
 - Merger of Malvern and PANalytical to deliver a more complete range to a broader set of markets and customers
 - Project Uplift further supports delivery of our strategy; expected to deliver £35 million of recurring savings at a cost of £45 million over the period to end 2019; net P&L charge of £14 million in 2017

Commenting, John O’Higgins, Chief Executive, said: “The year ended well with LFL sales growth in the final quarter following challenging trading conditions in the first three quarters. We continue to make good strategic progress as we transition our customer offering from the supply of products towards the provision of solutions encompassing hardware, software and services, responding to our customer’s needs. As customers increasingly require an integrated solution, we are strategically positioning Spectris to align with their needs and this is transforming our business.

We added further software and service capability to the Group in the acquisitions made during the year, the most significant being Millbrook, a high quality automotive test services platform which enables us to expand our offering to automotive customers in conjunction with our existing products and software. We also took the decision to merge two of our larger operating companies, Malvern Instruments and PANalytical, enabling a more collaborative approach across the customers served by both companies.

We launched Project Uplift, a key enabler in the delivery of our strategy, aimed at reducing complexity, increasing efficiency and effectiveness and freeing up resources to stimulate growth.

End-market growth in the near-term is expected to be modest. However, the evolution now underway within Spectris is an exciting time for the business and will further enable and support delivery of our solutions strategy.”

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A meeting with analysts will be held at 8:30 am GMT today. This will be available as a live webcast on the company’s website at www.spectris.com, commencing at 8.30 am GMT, and a recording will be posted on the website shortly after the meeting.

Copies of this press release are available to the public from the registered office at Heritage House, Church Road, Egham, Surrey TW20 9QD, and on the company’s website at www.spectris.com.

About Spectris

Spectris plc is a leading supplier of productivity-enhancing instrumentation and controls. The Company’s products, technologies and services enable customers to improve product quality and performance, improve core manufacturing processes, reduce downtime and wastage and reduce time to market. Its global customer base spans a diverse range of end user markets. Spectris operates across four business segments which reflect the applications and industries it serves: Materials Analysis, Test and Measurement, In-line Instrumentation and Industrial Controls. Headquartered in Egham, Surrey, England, the Company employs around 8,900 people, with offices in more than 30 countries. For more information, visit www.spectris.com.

CHIEF EXECUTIVE'S REVIEW

Although reported sales increased by 13% for the year, 2016 proved to be a challenging year for the most part. We did, however, end the year on a more positive stance and the LFL sales decline of 4% in the first ten months contracted to 2% for the full year. Constant currency sales increased by 1%. Given the environment, we remain focused on self-help actions to better align cost growth to sales growth.

We took important steps forward in the development of the Group's strategy this year as we transition our customer offering towards the provision of solutions encompassing hardware, software and services. In this context, the acquisition of Millbrook is an important addition to our portfolio of a high quality automotive test service platform, which enables us to expand our offering to automotive customers. We launched Project Uplift, a Group-wide productivity improvement programme, a key enabler for delivering our strategy and aimed at reducing complexity to facilitate the delivery of growth, whilst also improving efficiency and effectiveness. And we took the decision to merge two of our larger operating companies, Malvern Instruments and PANalytical, enabling a more collaborative approach across the customers served by both companies. Within the Industrial Controls and In-Line Instrumentation segments, our IIoT strategy will see deployment of connectivity technologies and monitoring competencies more broadly to serve our customers' needs.

As customers increasingly require an integrated solution, we are strategically positioning Spectris to align with their needs and this is transforming our business.

2016 operational performance

The current demand backdrop has been one of lower growth and this is reflected in the 2% decline in LFL sales*. The performance varied notably across the segments. Materials Analysis was the only segment delivering LFL sales growth at 2% (reported sales growth +15%), with LFL declines of 4% in both Test and Measurement (reported +15%) and In-line Instrumentation (reported +8%) and of 2% in Industrial Controls (reported +12%).

On a regional basis, we experienced further declines in industrial investment and production in North America and business performance weakened through the year, picking up slightly towards the end. In Europe, sales declined, although the rate of decline eased thanks to a strong close to the year and Germany recorded LFL sales growth for the year. Asia saw sales growth, particularly in China. Sales to the Rest of the World continued to decline, driven by the economic recession in Brazil.

From an end-market perspective, there was good growth in the electronics, pharmaceuticals and web and converting industries. There was also good growth to the tissue market. LFL sales to energy and utilities continued to decline and we also saw lower sales to metals, minerals and mining and aerospace after a good performance in the previous year.

Adjusted operating profit increased 11% to £200.8 million and reported operating profit declined to £38.3 million. The reported operating profit included a non-cash impairment charge of £115.3 million pre-tax relating to a write-down of the balance sheet goodwill and other intangibles associated with Omega Engineering ('Omega') and ESG Solutions ('ESG'). The impairment charge arose from the recent weaker trading performance due to the challenging conditions experienced, particularly in North America, and ongoing process improvement requirements at Omega and for ESG, the continued weakness in the global oil and gas markets. On a LFL basis, adjusted operating profit decreased 6%, reflecting the effects of the lower sales volumes and a particularly weak performance by Industrial Controls, mainly driven by working capital write-downs in Omega.

In response to the weaker than expected trading environment, we continued our programme of restructuring measures introduced in 2015. They delivered a benefit of £11.7 million in 2016, ahead of our initial expectations, and were mainly targeted at rationalisation of our footprint in certain locations, with the bulk of the benefits arising in Materials Analysis and In-line Instrumentation. We also continued to deploy lean techniques to areas such as innovation and sales and marketing across the Group.

The Group's cash conversion remains strong with 113% of our adjusted operating profit being converted into cash and we maintain a robust financial position with net debt at £150.9 million, around 0.7 times the full year EBITDA.

The Board is proposing to pay a final dividend of 34.0 pence per share which, combined with the interim dividend of 18.0 pence per share, gives a total of 52.0 pence per share for the year, an increase of 5% over 2015. The dividend is covered 2.5 times.

Strategic progress in transition to customer-focused, solutions strategy

Our strategy is evolving from being the supplier of products towards the provision of complete solutions (a combination of hardware, software and services) to our customers, based on our deep application and technical expertise. As our customers focus on their core activities and seek to reduce cost and complexity, they have a greater need to outsource services to a trusted, reliable partner who is able to deliver high quality technical solutions. During the year, we have undertaken a number of strategic initiatives to ensure we align our customer offering to their evolving requirements and this is resulting in a number of transformational changes within Spectris.

During the course of 2016, we made six acquisitions and these have added test service and further software and services capabilities. The key acquisition was Millbrook, one of Europe's leading independent test, validation and engineering service providers primarily for the automotive and related markets. It is closely related to our existing test and measurement businesses and, as such, the acquisition is an important step forward in the realisation of our strategy to provide our automotive customers with differentiated solutions as we combine the Millbrook testing service with products, technology, services and customer contacts from other Spectris companies, such as HBM and Brüel & Kjær Sound & Vibration. This collaboration, in combination with the notable pipeline of organic investment opportunities at Millbrook, means that automotive test services will be a key focus area for Spectris going forwards.

We have also made a number of bolt-on acquisitions. The acquisition of Clean Air Services brought a high quality clean-room services business which we have integrated into our Particle Measuring Systems operating company in order to provide an enhanced offering to our customers from the combined product and service portfolios. The combination of Capstone's software tools with BTG's instruments enables us to provide market-leading solutions for process control and optimisation across our global pulp, tissue and packaging markets, and into other process industries and we have now built an extensive pipeline of opportunities. SVT brings software solutions and noise, vibration and harshness ('NVH') engineering services targeted at a wide spectrum of industry including automotive, aerospace and defence customers. SVT, and DISCOM which we acquired in July, have both been integrated into Brüel & Kjær Sound & Vibration accelerating the transition to becoming a single-stop solutions provider for our automotive customers.

In addition to M&A, we will deploy our solutions strategy in other ways, for example, through the merger of Malvern Instruments and PANalytical which became effective at the start of 2017. The companies are both leading suppliers of analytical instrumentation and the combined entity is a larger and stronger player in the materials characterisation market. The merger is being undertaken as there are benefits through this collaborative relationship, leveraging the very strong brands and highly-skilled employees of the two companies, in order to deliver a more complete range of products, solutions and services to a broader set of markets and customers.

Another strategic focus area for us is the industrial connectivity market and this growing area has presented a significant opportunity for product development for us, focused on simplifying the integration of customer-generated data with remote data analytics services. Here too we are also looking more closely at cross-group solutions, by leveraging existing operating company technologies and competencies to more broadly serve our customers' needs.

Project Uplift enables our strategy

Project Uplift is a new productivity improvement programme which we launched during the year. Over the medium term, this will deliver improvements in productivity, both within and across our operating companies, reducing complexity and identifying operational efficiencies whilst preserving the entrepreneurial spirit within our businesses. We have now identified total potential annualised recurring savings of £35 million by 2019. The majority of these savings will be derived from leveraging the Group's scale through for example, combining back-office functions such as IT and by securing improved terms for procurement of goods and services, both direct and indirect. It will also be delivered by a focus on business process excellence in our R&D and sales and marketing activities, which will standardise some of the processes across our operating companies and improve our effectiveness. This will further support our solutions, customer-focused strategy, freeing up resources to facilitate the delivery of our strategy by identifying and capitalising on cross-group opportunities and making it easier for our customers to do business with us. The total P&L cost to achieve these savings is currently estimated at £45 million over the same period, with the majority of the costs incurred by the end of 2018. In 2017, we expect there to be a recurring benefit of £6 million at a one-off cost of £20 million.

Our people help deliver the strategy

Ensuring we have the right people in place to deliver the strategy will also continue to be a key focus for us. In January 2017, our new Group HR Director joined the Company. Our talent management programme will be a key focus for him as well as promoting the strong ethical culture and values we have. I was delighted to participate in the selection process to identify the first winner of our Absolute Integrity Awards in December from a shortlist of six finalists and was pleased to see an outstanding commitment to our value of Absolute Integrity being demonstrated across the business.

Our Board help construct and support the strategy and there have been a number of changes during the year. Lisa Davis retired as a Non-executive Director following her promotion to the Siemens AG managing board and Peter Chambré stepped down as a Non-executive Director having completed over ten years' service. In January 2017, Kjersti Wiklund was appointed to the Board and brings significant knowledge of the international telecommunications sector to the Board's discussions. In December, the Chairman advised the Board that the timing was right for him to stand down as Chairman and Director having served almost nine years as Chairman and ten years as a Director. The process to find his successor is well underway and a further announcement will be made in due course.

Priorities for 2017 and beyond

The two key priorities in the coming years are continued implementation of the strategy to provide solutions-oriented offerings to our customers, as well as a focus on driving productivity and reducing complexity under Project Uplift to improve the financial performance of the Group. On the former, we will continue to use our robust financial position to make acquisitions to accelerate our strategic development, both in terms of our offering to customers and our geographical coverage. On the latter, implementing the Project Uplift initiatives will be a key focus in order to optimise efficiency and effectiveness, and consequently capture savings across our operating companies.

John O'Higgins

Chief Executive

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OPERATING REVIEW

	Materials Analysis		Test and Measurement		In-line Instrumentation		Industrial Controls		Total	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Reported sales (£m)	418.9	364.4	404.5	351.3	275.6	255.0	246.8	219.3	1,345.8	1,190.0
LFL growth (%)	2%	3%	-4%	1%	-4%	-1%	-2%	-7%	-2%	-
Adjusted operating profit* (£m)	76.2	53.7	61.8	55.3	41.2	36.8	21.6	35.3	200.8	181.1
Reported operating profit (£m)	66.2	42.6	26.7	43.6	37.6	34.2	(92.2)	23.2	38.3	143.6
LFL operating profit change (%)	27%	-2%	-12%	9%	-4%	-19%	-50%	-27%	-6%	-9%
Adjusted return on sales* (%)	18.2	14.7	15.3	15.8	15.0	14.4	8.7	16.1	14.9	15.2
Reported return on sales (%)	15.8	11.7	6.6	12.4	13.6	13.4	-37.4	10.6	2.8	12.1
% of Group sales	31	31	30	30	21	21	18	18	100	100
Aftermarket sales** (%)	32	32	23	20	44	41	1	1	26	25

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** Aftermarket sales comprises service revenues and sales of consumables and spare parts.

MATERIALS ANALYSIS

Our Materials Analysis operating companies provide products and services that enable customers to determine structure, composition, quantity and quality of particles and materials during their research and product development processes, when assessing materials before production, or during the manufacturing process. The operating companies in this segment are Malvern Instruments, PANalytical and Particle Measuring Systems. Malvern Instruments and PANalytical merged as from 1 January 2017.

Segment performance

	2016	2015	Change	Change at CER*	Like-for-like change
Reported sales (£m)	418.9	364.4	15%	3%	2%
Adjusted operating profit (£m)	76.2	53.7	42%	28%	27%
Reported operating profit (£m)	66.2	42.6	55%		
Adjusted return on sales (%)	18.2	14.7	+3.5pp		+3.7pp
Reported return on sales (%)	15.8	11.7	+4.1pp		
% of total Group sales	31	31	-		
Aftermarket sales (%)	32	32	-		

* Constant exchange rates ('CER')

Reported sales increased 15%, reflecting a 2% increase in LFL sales, a one percentage point ('pp') contribution from acquisitions and a 12pp positive impact from foreign exchange currency movements. Sales growth was driven primarily by Asia, particularly in China and Japan, while North America and Europe were down slightly. On a LFL basis, adjusted operating profit increased 27% and adjusted operating margins increased by 3.7 percentage points, primarily reflecting positive mix effects and the benefits of restructuring actions.

We announced our decision to merge two of this segment's operating companies, Malvern Instruments ('Malvern') and PANalytical, effective from January 2017. Both companies are leading suppliers of analytical instrumentation in their respective markets and the combined entity will be a larger and stronger player in the materials characterisation market, leveraging the strengths of the individual companies in their end markets, and working collaboratively to deliver a more complete range of products, solutions and services to a broader set of markets and customers. For example, in November, PANalytical launched Aeris, an easy-to-operate and user-friendly benchtop X-ray powder diffractometer. The target markets for Aeris have now been extended beyond the cement, minerals, metals and research markets, traditional strongholds of PANalytical, to include the pharmaceuticals and fine chemicals markets where Malvern holds a leading position.

Sales to the **pharmaceuticals and fine chemicals** industries rose on a LFL basis during the year, a positive sign given the strong year-on-year comparator, as 2015 benefited from a positive impact on demand from regulatory compliance requirements in the Indian pharmaceutical industry. Asia saw particularly strong growth, notably in China, India and Japan. In Europe and North America, LFL sales were up modestly.

In February, Spectris acquired CAS Clean Air Service AG ('CAS') a leading cleanroom-services company, providing measurement services, process qualification, calibration services and product sales, primarily to the pharmaceutical manufacturing market. Its monitoring and advisory service generated strong growth within this market as well as in medical technology, plastics technology and optics markets. CAS has been fully integrated into Particle Measuring Systems, although the CAS name has remained a distinct product brand. This has enabled us to offer its Good Manufacturing Practice service knowledge and expertise more extensively across their existing sales network.

The **metals, minerals and mining** sector reversed its better 2015 performance and we saw a LFL sales decline in 2016. All regions experienced a fall in LFL sales, although Germany, the UK and Japan bucked this trend. Large systems orders continue to be deferred or cancelled, and the growth within the cement and building materials markets in North America and Europe of recent years has slowed, although one area of investment is the increasing focus from mining companies on safety and productivity. Aftermarket sales were solid in this sector, as customers' production volumes continue at good levels.

Although we saw reasonable LFL sales growth to **academic research** institutes in North America and in Asia, underlying demand was subdued, especially in Europe with significant weakness in the UK.

Sales (LFL) to the **semiconductor, electronics and telecoms** industry grew strongly, particularly in Asia (outside of China and India). Sales in North America were notably weaker year-on-year on a LFL basis. Sales of our new ultra-high sensitivity particle counter products, UDI20 and Chem20, which were launched in 2015, have been performing well.

Segment outlook

In 2017, the merger of Malvern and PANalytical is expected to begin to generate revenue synergies as we benefit from a more comprehensive offering to our customers. However, the underlying trading conditions in our end-markets will be the key driver of near-term performance.

Within pharmaceuticals, we expect regulatory scrutiny of manufacturing processes to continue to increase, particularly in relation to the launch of new products and this will drive demand for our material characterisation and cleanroom products and services.

We expect that these factors will more than offset what is likely to remain an unpredictable academic research market given public sector budget constraints in certain regions.

We are seeing a cautiously improving investment climate in the mining sector but do not expect to see a major pick-up in demand as yet, with growth primarily expected to be from aftermarket sales.

TEST AND MEASUREMENT

Our Test and Measurement operating companies supply test, measurement and analysis equipment, software and services for product design optimisation and validation, manufacturing control, microseismic monitoring and environmental noise monitoring. The operating companies in this segment are Brüel & Kjær Sound & Vibration, ESG Solutions, HBM and Millbrook.

Segment performance

	2016	2015	Change	Change at CER*	Like-for-like change
Reported sales (£m)	404.5	351.3	15%	2%	-4%
Adjusted operating profit (£m)	61.8	55.3	12%	-2%	-12%
Reported operating profit (£m)	26.7	43.6	-38%		
Adjusted return on sales (%)	15.3	15.8	-0.5pp		-1.3pp
Reported return on sales (%)	6.6	12.4	-5.8pp		
% of total Group sales	30	30	-		
Aftermarket sales (%)	23	20	+3pp		

* Constant exchange rates ('CER')

Reported sales increased 15%, including a 6pp contribution from acquisitions, predominantly related to Millbrook, and a 13pp positive impact from foreign currency exchange movements. LFL sales fell by 4%. By region, only Asia reported LFL sales growth, in particular in China. LFL sales were notably lower in North America and down modestly in Europe. Adjusted operating profit declined 12% on a LFL basis and LFL operating margins declined by 1.3pp, with positive pricing and mix effects being offset by the impact of negative operating leverage.

Within the **automotive** sector, the acquisition of Millbrook in 2016 brings a high quality test service platform to the Group. Automotive customers are increasingly demanding the provision of an integrated solution, combining hardware, software and services, and in recent years we have been investing organically and via acquisitions to meet this growing demand. Millbrook provides the opportunity to combine their service excellence with the equipment and software from other Spectris operating companies to provide a joint offering to customers. Initial performance of Millbrook in the Group has been very good and it is our intention to invest in further organic and inorganic growth opportunities to expand the business globally. In addition to Millbrook, we also acquired DISCOM and SVT during the year and in combination with the acquisition of Sound Answers in 2015, these acquisitions provide the opportunity to grow our offering of software and engineering services to automotive customers. Following the acquisition of ReliaSoft in 2015, we have now united it with our other engineering software business, nCode, under a single brand, Prensicia, which allows engineers to access all our engineering simulation software solutions via one licensing system.

Underlying demand from the automotive sector remains healthy, particularly in R&D, with one of the key drivers of demand being the electrification of automotive power-trains for deployment in electric and hybrid vehicles. This creates opportunities for our eDrive testing solution which enables the electric motor, inverter and battery data to be directly and quickly evaluated. Electrification of drive trains also creates opportunities for our NVH service offering; as engine noise is reduced or eliminated from motor vehicles, noise evaluation and control shifts focus from the engine to sources elsewhere in the car, for example the electric motor, tyres, etc.

In **machine manufacturing**, a significant portion of which represents sales into the automotive supply chain, there was LFL sales growth. Sales into the two key regions, Europe and Asia, grew strongly on a LFL basis, whilst declined in North America.

Sales (LFL) to the **aerospace** sector decreased in 2016 and were lower in each of the regions, except North America, due to the completion of several major R&D programmes. A good example of how we continue to develop differentiated customer-driven offerings beyond just hardware was the work undertaken with Marengo Swisshelicopter to accelerate their design of an innovative new helicopter. We custom-developed sensing solutions for Marengo and deployed these in combination with our data acquisitions systems and software in order to provide them with high-tech solutions at critical points in the development process.

Sales (LFL) of our **environmental noise monitoring** services declined. However, it was a difficult year-on-year comparator given a one-off major contract in 2015. The UK and Japan were the only major markets to deliver growth during the year. We secured a key contract to provide Heathrow airport with 50 noise monitoring terminals and launched Airport Noise Monitoring on Demand, a service that enables airports to temporarily and cost-effectively increase noise monitoring when needs arise, such as before and after operational changes. We established a dedicated urban sales force to widen our market reach for noise monitoring equipment and services and secured several orders in this regard during the year.

Reflecting some pressure on public finances, LFL sales to **academic research** institutes declined with weakness in demand in all regions. Only Asia recorded growth, driven by China.

Sales (LFL) to our consumer **electronics** customers declined in 2016, although sales patterns are lumpy, reflecting the scheduling of projects by customers.

The weakness in the unconventional **oil and gas** markets continued in 2016 and we saw a further sizeable decline in LFL sales of our microseismic monitoring solutions, particularly in North America. As a result, we have looked to develop opportunities in other markets and are making progress in this regard in Latin America and the Middle East. Our performance was better in the mining sector where LFL sales were flat, with demand for microseismic monitoring growing. For example, we have been working more closely with Grasberg, the world's largest copper-gold mine, supplying microseismic monitoring equipment and analytics for different phases of development, as well as improving safety and efficiency.

Segment outlook

We expect the automotive and aerospace sectors to benefit from further growth in demand for engineering software applications, particularly in NVH simulation in automotive. Additionally, the continued robust investments we see globally in the development of electric and hybrid vehicles will support demand for our market-leading torque and eDrive solutions.

The underlying business trends in the consumer **electronics** market remain healthy in our view, given consumer electronic demand and good opportunities for sound quality testing applications and calibration services in this sector.

Market conditions in the oil and gas industry are expected to remain subdued and will be oil-price dependent. However, there may be more opportunities for deployment of our microseismic in the mining space as customers seek to make better use of data analytics to improve safety, productivity and profitability.

IN-LINE INSTRUMENTATION

In-line Instrumentation provides process analytical measurement, asset monitoring and on-line controls as well as associated consumables and services for both primary processing and the converting industries. The operating companies in this segment are Brüel & Kjær Vibro, BTG, NDC Technologies and Servomex.

Segment performance

	2016	2015	Change	Change at CER*	Like-for-like change
Reported sales (£m)	275.6	255.0	8%	-3%	-4%
Adjusted operating profit (£m)	41.2	36.8	12%	-3%	-4%
Reported operating profit (£m)	37.6	34.2			
Adjusted return on sales (%)	15.0	14.4	+0.6pp		0pp
Reported return on sales (%)	13.6	13.4	+0.2pp		
% of total Group sales	21	21	-		
Aftermarket sales (%)	44	41	+3pp		

* Constant exchange rates ('CER')

Reported sales increased 8%, reflecting a LFL sales decline of 4%, which was more than offset by an 11pp positive impact from foreign currency exchange movements and a 2pp contribution from acquisitions. On a regional basis, LFL sales were up slightly in North America and down in Europe and in Asia. The decline in LFL sales primarily reflected ongoing weakness in capital expenditure across many heavy process industries globally, though certain markets remained robust, such as tissue and wind energy. LFL adjusted operating profit fell 4% and LFL adjusted operating margins were flat year-on-year. As a result, there has been a focus on improving operating efficiency.

In the **pulp and paper** market, LFL sales were down slightly compared with 2015. We continued to see diversification away from graphic paper towards the tissue and pulp markets, translating into growth for our tissue business which is partly offsetting the decline in traditional coating blades sales. In June, we acquired Capstone Technology Corporation ('Capstone'), a leading provider of software solutions for process control optimisation and decision support. The acquisition enables us to combine Capstone's software tools with BTG's instruments to provide solutions for process control and optimisation in the pulp, tissue and packaging markets and we have now built an extensive pipeline of joint opportunities. For example, a major North American producer of pulp and paper recently implemented a process control solution consisting of BTG's single-point sensors in combination with Capstone's multi-predictive process control software which will reduce chemical cost and improve quality for the mill.

In the **energy and utilities** market, LFL sales were down notably on 2016 as the weak global oil and gas markets continued to have an adverse impact on the demand for some of our products. The effect on the downstream market has lagged that of the upstream, and therefore a lack of new larger projects in the hydro-carbon processing sector. However, other areas such as industrial gases, emissions monitoring, and our Hummingbird OEM sensor business continue to perform well. Against the weaker backdrop and fewer new order leads, we have continued to strengthen our sales and marketing organisation and focused on deepening our customer relationships through increased levels of service and support, and this has resulted in a number of orders for upgrades, retrofits and expansions. Our focus on innovative customer solutions also continues and in November, we launched our first moisture detector which allows the fast and accurate measurement of moisture in process applications. It is designed to integrate with MonoExact, our next-generation digital oxygen analyser, to measure both moisture and oxygen which is a common requirement in many applications.

We are continuing to see modest growth in the wind energy sector and have focused on wind farm owners and operators, in addition to the traditional turbine OEM segment, in order to offer them a post-warranty solution for their turbine fleet that is OEM independent. This effort is aiming at ensuring that end users can also benefit from our Condition Monitoring System and Remote Diagnostic Services, and this initiative has identified significant opportunities. We have also expanded our offering to non-wind power applications in other industrial markets, for example, our B&K Vibro business secured a condition monitoring contract with a biomass power plant in the UK and a contract to supply a turnkey condition monitoring and machine protection solution for remote monitoring at a polyethylene plant in Northern Asia. The latter comprises our machine protection system, software, portable instruments and sensors along with a complete package of services.

Sales (LFL) to the **web and converting** industries increased notably during 2016, with a particularly strong performance in the fourth quarter. This was an improving environment after 2015 when customers were delaying projects. We have seen a number of opportunities emerge in the medical market and in food, particularly in relation to snack products. For example, a medical tube manufacturer uses NDC Technologies' measurement and control system to tightly control the critical dimensions and quality of its high-value extruded products, and, in India, a snack manufacturer has improved quality and production efficiency with online moisture and oil measurement for crisps and snacks lines.

Segment outlook

The changing mix in our pulp and paper business is expected to continue during 2017 as our new instruments and solutions and the more robust tissue and pulp markets offset the ongoing structural challenges in the graphic paper and coated paperboard markets. We also expect to continue to benefit from the combination of Capstone's software tools with BTG's instruments to capture new opportunities.

We expect growth from the energy and utilities sector to be modest in 2017. The renewable energy sector remains healthy and the expansion of our offering to differing customer types and new areas of the market offer potential new sales opportunities. However, in the oil and gas sector demand remains fragile, despite an improving oil price, with the downstream market continuing to experience the lagged impact of the 2014/15 decline in prices.

We will also continue to increase the focus on operational excellence initiatives across the segment in order to improve future profitability.

INDUSTRIAL CONTROLS

Industrial Controls provides products and solutions that measure, monitor, control, inform, track and trace during the production process. The operating companies in this segment are Microscan, Omega Engineering ('Omega') and Red Lion Controls.

Segment performance

	2016	2015	Change	Change at CER*	Like-for-like change
Reported sales (£m)	246.8	219.3	12%	0%	-2%
Adjusted operating profit (£m)	21.6	35.3	-39%	-44%	-50%
Reported operating profit (£m)	(92.2)	23.3	-		
Adjusted return on sales (%)	8.7	16.1	-7.4pp		-7.9pp
Reported return on sales (%)	-37.4	10.6	-48.0pp		
% of total Group sales	18	18	-		
Aftermarket sales (%)	1	1	-		

* Constant exchange rates ('CER')

Reported sales increased 12%, reflecting a LFL sales decline of 2%, a 2pp contribution from acquisitions and a favourable impact of 12pp from foreign currency exchange movements. LFL adjusted operating profit declined by 50% and operating margins were down to 8.7%. This was driven by negative operating leverage from the sharp sales decline in North America, compounded by Omega's performance. The reported loss of £92.2 million was principally caused by the impairment charges booked by Omega (£94.4 million); further details are provided in the Financial Review.

Omega derives the majority of sales from the USA and the weak US industrial environment impacted demand for its products. In addition, the implementation of a new ERP system at Omega highlighted the need for certain processes to be improved with temporary additional resources required during the consolidation of two distribution centres on the US east coast. This resulted in significant inventory adjustments and higher labour costs. A new organisational structure and management team has been put in place and the focus is on remedial action to re-design the operational processes and improve customer service by improving product availability, shortening lead times and increasing on-time delivery. Our aim is for Omega to exit 2017 with gross margins running at historic levels.

For the segment as a whole, the LFL sales decline primarily reflected continuing broad-based weakness in US industrial production; all three operating companies in this segment have a high exposure to North America, although the impact was greatest in our industrial networking business.

In Asia, there was strong LFL sales growth, in particular driven by continued good progress in the expansion of our process measurement and control business, Omega, outside of the USA. The internationalisation of Omega continues to deliver promising results, with good LFL sales growth in all major markets outside of the USA. In Europe, overall segment sales were broadly flat on a LFL basis, with a challenging year for our industrial networking business being partially offset by LFL sales growth in process measurement and control products.

This segment made good progress in a number of strategic areas.

The increasing trend towards the Industrial Internet of Things ('IIoT'), driven by the need for smarter, more interconnected operations, is benefiting our industrial automation and networking business as organisations seek easy-to-use solutions to connect and expand the capabilities of legacy equipment within existing facilities. Red Lion provides IIoT-ready solutions that use protocol conversion, visual management, remote monitoring and industrial Ethernet technologies to help customers achieve this. Our IIoT product development was focused on simplifying the integration of customer-generated data and IIoT cloud platforms. Currently supporting nine industrial IIoT platforms, with world-wide coverage, Red Lion Controls industrial gateways provide a key solution for customers looking to connect and analyse their processes in the cloud.

During the year, we launched the latest version of our popular Crimson software, the common programming platform for a variety of Red Lion products, adding control capability to our products. This provides a key solution for customers as it removes the need to purchase stand-alone control components. We had further success with our networking products in the automotive industry, securing a contract for a major car maker's new plant in Latin America. We were also delighted to win the 2016 Control Design Readers' Choice Awards for panel meters for the 16th consecutive year.

The acquisition of Label Vision Systems in 2015 has delivered very positive results during 2016 with strong sales growth of its products as the market expands due to regulatory trends (e.g. legislation in the USA on product identification marking) and quality requirements. It has been fully integrated into Microscan and this has enabled the expansion of LVS products and solutions into key international markets, and to leverage the synergies between LVS and Microscan sales, technology, and operations. Following the launch in 2015 of the MicroHAWK, a modular and scalable industrial barcode imager and smart camera platform, further developments were made this year with autofocus and smart camera versions.

Segment outlook

Given the significant exposure to the USA, performance for this segment in 2017 will be largely driven by the performance in US industrial markets. Some leading indicators such as the PMI manufacturing index have turned more positive however, it is still too early to assess the extent of any positive industrial market momentum.

At Omega, we expect the organisational changes and restructuring measures we have taken, as well as the continued focus on lean and improving the customer experience, to deliver an improvement in performance and to exit the year with margins at historic levels.

In the medium term, we see additional opportunities for companies to adopt the capability to connect, monitor and control their manufacturing facilities and for further industrial networking in order to drive productivity and operational efficiencies. Spectris is positioning itself to take full advantage of these opportunities as the IIoT market evolves.

FINANCIAL REVIEW

Introduction

Spectris uses adjusted figures as key performance measures in addition to those reported under adopted IFRS, as management believe these measures enable them to assess the underlying trading performance of the businesses. Adjusted figures exclude certain non-operational items which management has defined in Note 2 to the Financial Statements.

Operating performance

	2016	2015	Change	Like-for-like change*
Adjusted				
Sales (£m)	1,345.8	1,190.0	+13.1%	-1.9%
Operating profit (£m)	200.8	181.1	+10.9%	-6.2%
Operating margin (%)	14.9	15.2	-0.3pp	-0.7pp
Reported				
Sales (£m)	1,345.8	1,190.0	+13.1%	
Operating profit (£m)	38.3	143.6	-73.3%	
Operating margin (%)	2.8	12.1	-9.3	

* At constant exchange rates and excluding acquisitions.

Reported sales increased by 13.1% to £1,345.8 million (2015: £1,190.0 million). The year-on-year contribution to sales from acquisitions was £36.7 million (+3.1%), and favourable foreign exchange movements were £141.1 million (+11.9%) arising from the weakness of Sterling against all major currencies, with the result that, on a constant currency like-for-like ('LFL') basis, sales decreased by £22.0 million (-1.9%) compared with 2015.

Reported gross margins of 56.5% of sales were 0.9 percentage points ('pp') lower than the prior year (57.4%). Excluding the dilutive effect of foreign exchange movements (+0.3pp) and the accretive effect of acquisitions (-0.3pp), LFL gross margins also decreased by 0.9pp. LFL gross margins improved in the Materials Analysis and Test and Measurement segments, and were flat year-on-year in the In-Line Instrumentation segment. In Industrial Controls, there was a significant weakening of the gross margin in the Omega Engineering ('Omega') business, which accounted for approximately 0.7pp of the decline in the Group's LFL gross margin. Trading performance for Omega in 2016 was impacted by weak demand and negative operating leverage from the LFL sales decline in its primary North American market (72% of sales), that was partly due to continuing weakness in US industrial production, but also internal factors. These factors stem from the ERP implementation, due to the lack of adequate processes compounded by the closure of the Connecticut warehousing operation, resulting in inventory adjustments and higher labour costs, all impacting gross margin and profitability. A new management team was appointed in 2016 tasked with remedying the operational issues and improving profitability which will require additional investment.

To mitigate the effects of the low growth environment and challenging trading conditions seen, particularly in North America, initiatives were put in place at the start of the year to better align LFL cost growth with LFL sales growth, with a focus on operational excellence and cost control. It is worth highlighting that even though there was no sales growth, LFL net overhead costs fell by 2.4% compared to the LFL sales decline of 1.9% and LFL total costs including the Omega one-offs fell by 1.1%.

We have continued to invest in our R&D programmes, with an R&D expense for 2016 of £98.6 million or 7.3% of sales (2015: £88.8m, 7.5%), which is flat LFL year-on-year.

During 2016, operating profit was impacted by a number of one-off items totalling a net £7 million expense. This primarily related to £9 million of inventory adjustments within Omega, Project Uplift costs of £3 million, offset by a profit of £2 million arising from the sale of a property in the UK within the Industrial Controls segment, and the release of specific legal risk provisions.

The net benefit arising in 2016 from the targeted restructuring programmes undertaken in 2015 amounted to £11.7 million (2015: net cost £3.0 million), partially offset by further restructuring activity undertaken by three operating companies in 2016 at a net cost of £1.1 million, resulting in a net year-on-year positive impact of £13.6 million. The annualised benefit in 2017 arising from the 2016 restructuring programme is anticipated to be approximately £3 million.

As shown in the table, adjusted operating profit increased by 10.9% from £181.1 million to £200.8 million in 2016. Acquisitions contributed £8.3 million (+4.6%) to operating profit and foreign currency exchange movements contributed £22.6 million (+12.5%), with the result that LFL adjusted operating profit declined by £11.2 million (-6.2%) for the year. The reported operating margin decreased by 0.3pp to 14.9% in 2016, and by 0.7pp on a LFL basis.

Included within statutory operating profit is an impairment charge of £115.3 million (2015: £1.6 million) relating to goodwill and other acquisition-related intangible assets, of which £94.4 million relates to Omega and £20.9 million to ESG Solutions ('ESG'). The impairment charge for Omega is a consequence of the 2016 performance, and lower projected cash flows. This has resulted in a reassessment of Omega's expected future business performance in light of the trading environment and the actions and time required to improve profitability and operational efficiency. For ESG, the impairment charge is due to the continuing difficult external market conditions caused by low global oil and gas prices, which has adversely impacted demand from ESG's customers for its products and services.

Adjusted net finance costs for the year increased by £0.2 million to £5.0 million (2015: £4.8 million) as a result of higher net debt levels, primarily due to the £166.3 million spent on acquisitions during the year. Operating cash generation during the year continued to be strong with an adjusted operating cash flow conversion rate of 113% compared with 91% in 2015, primarily due to lower LFL inventory levels.

Adjusted profit before tax increased by 11.1% from £176.3 million to £195.8 million.

Reported operating profit, after including impairment of goodwill and other acquisition-related intangibles of £115.3 million (2015: £1.6 million), acquisition-related intangible asset amortisation of £36.9 million (2015: £33.0 million), net acquisition-related costs and fair value adjustments of £10.1 million (2015: £2.9 million) and depreciation of acquisition related fair value adjustments to tangible assets of £0.2 million (2015: £nil) decreased by 73.3% from £143.6 million to £38.3 million. Reported profit before tax decreased by 77.5% from £141.6 million in 2015 to £31.9 million in 2016.

The reconciliation of reported and adjusted measures is shown in the table below.

	2016	2016	2016	2015	2015	2015
	IFRS (Reported) £m	Adjustments £m	Spectris adjusted £m	IFRS (Reported) £m	Adjustments £m	Spectris adjusted £m
Sales	1,345.8	-	1,345.8	1,190.0	-	1,190.0
Gross margin	760.5	-	760.5	683.1	-	683.1
Operating profit before acquisition-related items	200.8	-	200.8	181.1	-	181.1
Impairment of goodwill and other acquisition-related intangible assets	(115.3)	115.3	-	(1.6)	1.6	-
Amortisation and impairment of acquisition-related intangibles	(36.9)	36.9	-	(33.0)	33.0	-
Net acquisition-related costs and fair value adjustments	(10.1)	10.1	-	(2.9)	2.9	-
Depreciation of acquisition- related fair value adjustments to tangible assets	(0.2)	0.2	-	-	-	-
Operating profit	38.3	162.5	200.8	143.6	37.5	181.1
Net (loss)/gain on retranslation of short-term inter-company loan balances	(0.8)	0.8	-	3.0	(3.0)	-
Net bank interest payable	(4.6)	-	(4.6)	(4.6)	-	(4.6)
Unwinding of discount factor on deferred and contingent consideration	(0.6)	0.6	-	(0.2)	0.2	-
Net IAS 19 (Revised) finance cost	(0.3)	-	(0.3)	(0.1)	-	(0.1)
Other finance costs	(0.1)	-	(0.1)	(0.1)	-	(0.1)
Profit before tax	31.9	163.9	195.8	141.6	34.7	176.3

Acquisitions

The Group completed six acquisitions during the year. The total cost of acquisitions in the year was £174.2 million (2015: £45.0 million), including £6.9 million (2015: £2.7 million) for cash acquired. Included in the total cost of acquisitions is an amount of £7.6 million (2015: £2.7 million) attributable to the fair value of net deferred and contingent consideration which is expected to be paid in future years. A net £1.2 million (2015: £0.5 million) was paid in respect of prior year acquisitions, making the net cash outflow in the year £160.9 million (2015: £40.1 million). Furthermore, an amount of £5.4 million (2015: £3.9 million) was spent on acquisition-related legal and professional fees, which makes the total acquisition-related cash outflow for the year £166.3 million (2015: £44.0 million). Acquisitions contributed £36.7 million (2015: £36.1 million) of incremental sales and £8.3 million (2015: £5.2 million) of incremental operating profit during the year.

Taxation

The effective tax rate on adjusted profit before tax was 22.4% (2015: 22.8%), a decrease of 0.4pp primarily due to a reduction in the weighted average statutory tax rate arising from a change in the geographic mix of pre-tax profits. On a statutory basis, the effective tax rate of 67.7% (2015: 19.6%) was above the weighted average statutory tax rate of -13.8% (2015: 25.4%), primarily as a result of the non-deductibility of the impairment of goodwill and other acquisition-related intangibles.

Earnings per share

Adjusted earnings per share increased by 11.5% from 114.3p to 127.5p, reflecting the net impact of the 11.1% increase in adjusted profit before tax, the reduction in the effective tax rate and the increase in the weighted average number of shares from 119.0 million in 2015 to 119.1 million in 2016.

Reported basic earnings per share decreased by 91.0% from 95.6p to 8.6p, with the difference between the two measures shown in the table below. Excluding the £115.3 million impairment charge, reported basic earnings per share would have increased by 10.3% to 105.4p in 2016.

	2016	2015
	Pence	Pence
Reported basic earnings per share	8.6	95.6
Impairment of goodwill and other acquisition-related intangible assets	96.8	1.3
Amortisation and impairment of acquisition-related intangible assets	31.0	27.8
Net acquisition-related costs and fair value adjustments	8.5	2.4
Depreciation of acquisition-related fair value adjustments to tangible assets	0.2	-
Net loss/(gain) on retranslation of short-term inter-company loan balances	0.7	(2.5)
Unwinding of discount factor on deferred and contingent consideration	0.5	0.2
Tax effect of the above and other non-recurring items	(18.8)	(10.5)
Adjusted earnings per share	127.5	114.3

Cash flow		
Operating cash flow	2016	2015
	£m	£m
Adjusted operating profit	200.8	181.1
Adjusted depreciation and software amortisation	28.3	24.4
Working capital and other movements	27.4	(13.8)
Capital expenditure	(28.7)	(26.0)
Adjusted operating cash flow	227.8	165.7
Adjusted operating cash flow conversion	113%	91%
Non-operating cash flow		
Tax paid	(29.8)	(33.5)
Net interest paid	(4.1)	(4.5)
Dividends paid	(59.8)	(56.9)
Acquisition of businesses, net of cash	(160.9)	(40.1)
Acquisition-related costs paid	(5.4)	(3.9)
Foreign exchange	(20.3)	(0.1)
Exercise of share options	0.2	0.3
Total non-operating cash flow	(280.1)	(138.7)
Adjusted operating cash flow	227.8	165.7
(Increase)/decrease in net debt	(52.3)	27.0

The year-end trade working capital to sales ratio decreased from 16.6% in 2015 to 15.9% in 2016, a 0.7pp decrease. Average trade working capital, expressed as a percentage of sales, decreased to 14.2% (2015: 15.4%), a 1.2pp decrease. Excluding acquisitions and foreign exchange, the LFL reduction in average trade working capital was 0.9pp, with the improvement primarily arising within the Materials Analysis segment due to reduced trade receivables from strong cash collections and improved inventory management.

Capital expenditure during the year equated to 2.1% of sales (2015: 2.2%) and, at £28.7 million (2015: £26.0 million), was 101% of depreciation and software amortisation (2015: 107%), primarily due to ongoing investments in property and infrastructure in Europe and North America, and automotive testing cells within the recently acquired Millbrook business.

Overall, net debt increased by £52.3 million (2015: decrease of £27.0 million) from £98.6 million to £150.9 million. Adjusted interest costs, excluding the financing charge arising from IAS 19 (Revised) and other finance costs, were covered by adjusted operating profit 43.7 times (2015: 39.4 times).

Dividends

The Board is proposing to pay a final dividend of 34.0 pence per share which, combined with the interim dividend of 18.0 pence per share, gives a total dividend of 52.0 pence per share for the year, an increase of 5%. The dividend is covered 2.5 times by adjusted earnings and is consistent with our policy of making progressive dividend payments, based upon affordability and sustainability. In determining the level of dividend in any year, the Board considers a number of factors that influence the proposed dividend, including the level of distributable reserves in the Parent Company, future cash commitments and investment needs to sustain the long-term growth prospects of the Group and the level of dividend cover.

Financing and treasury

The Group finances its operations from both retained earnings and third-party borrowings, with the majority of the year-end gross debt balance being at fixed rates of interest.

As at 31 December 2016, the Group had £628.1 million of committed facilities denominated in different currencies, consisting of a five-year \$550 million (£447.0 million) revolving credit facility maturing in October 2019, a seven-year €94.8 million (£81.4 million) term loan maturing in October 2020, and a seven-year €116.2 million (£99.7 million) term loan maturing in September 2022. £406.0 million of the revolving credit facility was undrawn at the year end. In addition, the Group had a year-end cash balance of £83.5 million, bank overdrafts of £12.3 million and various uncommitted facilities available.

At the year end, the Group's borrowings amounted to £234.4 million, 77% of which was at fixed interest rates (2015: 99%). The ageing profile at the year-end showed that 5% (2015: 1%) of year-end borrowings is due to mature within one year, 52% between two and five years (2015: 44%) and 43% in more than five years (2015: 55%).

Currency

The Group has both translational and transactional currency exposures. Translational exposures arise on the consolidation of overseas company results into Sterling. Transactional exposures arise where the currency of sale or purchase invoices differs from the functional currency in which each company prepares its local accounts. The transactional exposures include situations where foreign currency denominated trade receivables, trade payables and cash balances are held.

After matching the currency of revenue with the currency of costs wherever practical, forward exchange contracts are used to hedge a proportion of the remaining forecast net transaction flows where there is reasonable certainty of an exposure. At 31 December 2016, approximately 73% of the estimated net Euro, US Dollar and Japanese Yen exposures for 2017 were hedged using forward exchange contracts, mainly against the Swiss Franc, Sterling, the Euro and the Danish Krone.

The largest translational exposures are to the US Dollar, Euro, Danish Krone, Japanese Yen and Swiss Franc. Translational exposures are not hedged. The table below shows the key average exchange rates compared to Sterling during 2016 and 2015.

	2016 (average)	2015 (average)	Change
USD	1.35	1.53	-11%
EUR	1.22	1.38	-11%
JPY	147	185	-20%
CHF	1.33	1.47	-9%

During the year, the translational foreign exchange gain on operating profit of £22.6 million, arising from the weakness of Sterling, was offset by a transactional foreign exchange loss of £7.8 million (2015: £0.3 million loss).

2017 OUTLOOK

In 2016, we launched Project Uplift, our group-wide productivity improvement programme, and we have now identified total potential annualised recurring savings of £35 million over the period to end 2019. The P&L cost to achieve these savings is currently estimated at £45 million. In 2017, the Group expects there to be a benefit of £6 million at a cost of £20 million, i.e. a net P&L charge of £14 million.

The 2016 restructuring programme is expected to generate an annualised benefit in 2017 of approximately £3 million.

Planned capital expenditure on a cash basis in 2017 is expected to be significantly higher than in 2016 at around £70 million, primarily related to expansion opportunities at Millbrook, as well as a number of infrastructure projects at HBM, Omega and Malvern Instruments.

The Group expects its effective tax rate to be around 22% in 2017 (2016: 22.4%).

The Group has both translational and transactional currency exposures, with a proportion (up to 75%) of net transactional exposures for the next 12 months being hedged. Translational exposures are not hedged and the Group's sensitivity to translational gains or losses for sales and operating profit in respect of two of our major currency exposures is as estimated below:

Impact of 1 cent change versus GBP of the average FX rate in 2017 compared to the average exchange rate in 2016	2017 FY reported sales £m	2017 FY adjusted operating profit £m
EUR	3.0	0.5
USD	4.0	0.5

Consolidated Income Statement

For the year ended 31 December 2016

	Note	2016 £m	2015 £m
Continuing operations			
Revenue	3	1,345.8	1,190.0
Cost of sales		(585.3)	(506.9)
Gross profit		760.5	683.1
Indirect production and engineering expenses		(108.9)	(98.6)
Sales and marketing expenses		(320.1)	(274.4)
Administrative expenses		(177.9)	(164.9)
Impairment of goodwill and other acquisition-related intangible assets		(115.3)	(1.6)
Operating profit before acquisition-related items and impairment		200.8	181.1
Net acquisition-related costs and fair value adjustments	2	(10.1)	(2.9)
Depreciation of acquisition-related fair value adjustments to tangible assets	2	(0.2)	-
Amortisation of acquisition-related intangible assets	2	(36.9)	(33.0)
Impairment of goodwill and other acquisition-related intangible assets	2	(115.3)	(1.6)
Operating profit	2,3	38.3	143.6
Financial income	4	0.5	3.3
Finance costs	4	(6.9)	(5.3)
Profit before tax		31.9	141.6
Taxation - UK	5	(4.4)	(1.3)
Taxation - Overseas	5	(17.2)	(26.5)
Profit after tax for the year from continuing operations attributable to owners of the Parent Company		10.3	113.8
Basic earnings per share	7	8.6p	95.6p
Diluted earnings per share	7	8.6p	95.4p
Interim dividends paid and final dividends proposed for the period (per share)	6	52.0p	49.5p
Dividends paid during the period (per share)	6	50.2p	47.8p

Spectris uses adjusted figures as key performance measures in addition to those reported under adopted IFRS. Reconciliations showing how the adjusted performance measures are derived from those reported under adopted IFRS are set out in Note 2.

Consolidated Statement of Comprehensive Income

For the year ended 31 December 2016

	Note	2016 £m	2015 £m
Profit for the year attributable to owners of the Parent Company		10.3	113.8
Other comprehensive income:			
Items that will not be reclassified to the Consolidated Income Statement:			
Re-measurement of net defined benefit obligations, net of foreign exchange		(12.6)	(7.9)
Tax on items above	5	3.0	1.7
		(9.6)	(6.2)
Items that are or may be reclassified subsequently to the Consolidated Income Statement:			
Net (loss)/gain on effective portion of changes in fair value of forward exchange contracts on cash flow hedges		(3.1)	0.1
Foreign exchange movements on translation of overseas operations		160.4	(1.9)
Tax on items above	5	0.7	-
		158.0	(1.8)
Total comprehensive income for the year attributable to owners of the Parent Company		158.7	105.8

Consolidated Statement of Changes in Equity

For the year ended 31 December 2016

	Share capital	Share premium	Retained earnings	Translation reserve	Hedging reserve	Merger reserve	Capital redemption reserve	Total equity
	£m	£m	£m	£m	£m	£m	£m	£m
Balance at 1 January 2016	6.2	231.4	694.9	33.0	(2.9)	3.1	0.3	966.0
Profit for the year	-	-	10.3	-	-	-	-	10.3
Other comprehensive income:								
Net loss on effective portion of changes in fair value of forward exchange contracts, net of tax	-	-	-	-	(2.4)	-	-	(2.4)
Foreign exchange movements on translation of overseas operations	-	-	-	160.4	-	-	-	160.4
Re-measurement of net defined benefit obligations, net of foreign exchange and tax	-	-	(9.6)	-	-	-	-	(9.6)
Total comprehensive income for the year	-	-	0.7	160.4	(2.4)	-	-	158.7
Transactions with owners recorded directly in equity:								
Equity dividends paid by the Company	-	-	(59.8)	-	-	-	-	(59.8)
Share-based payments, net of tax	-	-	2.3	-	-	-	-	2.3
Share options exercised from own shares (treasury) purchased	-	-	0.2	-	-	-	-	0.2
Balance at 31 December 2016	6.2	231.4	638.3	193.4	(5.3)	3.1	0.3	1,067.4

	Share capital	Share premium	Retained earnings	Translation reserve	Hedging reserve	Merger reserve	Capital redemption reserve	Total equity
	£m	£m	£m	£m	£m	£m	£m	£m
For the year ended 31 December 2015								
Balance at 1 January 2015	6.2	231.4	643.1	34.9	(3.0)	3.1	0.3	916.0
Profit for the year	-	-	113.8	-	-	-	-	113.8
Other comprehensive income:								
Net gain on effective portion of changes in fair value of forward exchange contracts, net of tax	-	-	-	-	0.1	-	-	0.1
Foreign exchange movements on translation of overseas operations	-	-	-	(1.9)	-	-	-	(1.9)
Re-measurement of net defined benefit obligations, net of foreign exchange and tax	-	-	(6.2)	-	-	-	-	(6.2)
Total comprehensive income for the year	-	-	107.6	(1.9)	0.1	-	-	105.8
Transactions with owners recorded directly in equity:								
Equity dividends paid by the Company	-	-	(56.9)	-	-	-	-	(56.9)
Share-based payments, net of tax	-	-	0.8	-	-	-	-	0.8
Share options exercised from own shares (treasury) purchased	-	-	0.3	-	-	-	-	0.3
Balance at 31 December 2015	6.2	231.4	694.9	33.0	(2.9)	3.1	0.3	966.0

Consolidated Statement of Financial Position

As at 31 December 2016

	2016	2015
	£m	£m
ASSETS		
Non-current assets		
Intangible assets:		
Goodwill	654.3	584.9
Other intangible assets	245.2	201.7
	899.5	786.6
Property, plant and equipment	238.8	160.8
Deferred tax assets	13.4	17.2
	1,151.7	964.6
Current assets		
Inventories	187.8	182.5
Income taxation recoverable	2.4	0.7
Trade and other receivables	306.6	253.1
Cash and cash equivalents	83.5	58.2
	580.3	494.5
Total assets	1,732.0	1,459.1
LIABILITIES		
Current liabilities		
Short-term borrowings	(12.3)	(1.7)
Derivative financial instruments	(4.2)	(0.4)
Trade and other payables	(259.2)	(206.6)
Income taxation payable	(36.8)	(27.5)
Provisions	(19.5)	(22.2)
	(332.0)	(258.4)
Net current assets	248.3	236.1
Non-current liabilities		
Medium- and long-term borrowings	(222.1)	(155.1)
Other payables	(29.0)	(16.6)
Retirement benefit obligations	(40.3)	(22.1)
Deferred tax liabilities	(41.2)	(40.9)
	(332.6)	(234.7)
Total liabilities	(664.6)	(493.1)
Net assets	1,067.4	966.0
EQUITY		
Share capital	6.2	6.2
Share premium	231.4	231.4
Retained earnings	638.3	694.9
Translation reserve	193.4	33.0
Hedging reserve	(5.3)	(2.9)
Merger reserve	3.1	3.1
Capital redemption reserve	0.3	0.3
Total equity attributable to equity holders of the Parent Company	1,067.4	966.0
Total liabilities and equity	1,732.0	1,459.1

Consolidated Statement of Cash Flows

For the year ended 31 December 2016

	Note	2016 £m	2015 £m
Cash flows from operating activities			
Profit after tax		10.3	113.8
Adjustments for:			
Taxation	5	21.6	27.8
Finance costs	4	6.9	5.3
Financial income	4	(0.5)	(3.3)
Depreciation		23.0	19.6
Amortisation of intangible assets		42.4	37.8
Impairment of goodwill and other acquisition-related intangible assets		115.3	1.6
Acquisition-related fair value adjustments		5.6	(0.1)
(Profit)/loss on sale of property, plant and equipment		(1.2)	0.2
Equity-settled share-based payment transactions		2.1	0.7
Operating cash flow before changes in working capital and provisions		225.5	203.4
Increase in trade and other receivables		(7.1)	(17.1)
Decrease/(increase) in inventories		25.4	(7.6)
Increase in trade and other payables		8.2	3.5
(Decrease)/increase in provisions and employee benefits		(6.3)	4.7
Net income taxes paid		(29.8)	(33.5)
Net cash flows generated from operating activities		215.9	153.4
Cash flows from investing activities			
Purchase of property, plant and equipment and software		(28.7)	(26.0)
Proceeds from disposal of property, plant and equipment and software		5.4	0.9
Acquisition of businesses, net of cash acquired	9	(160.9)	(40.1)
Interest received		0.5	0.2
Net cash flows used in investing activities		(183.7)	(65.0)
Cash flows from financing activities			
Interest paid		(4.6)	(4.7)
Dividends paid	6	(59.8)	(56.9)
Proceeds from exercise of share options (treasury shares)		0.2	0.3
Proceeds from borrowings		41.0	85.0
Repayment of borrowings		-	(85.5)
Net cash flows used in financing activities		(23.2)	(61.8)
Net increase in cash and cash equivalents		9.0	26.6
Cash and cash equivalents at beginning of year		56.5	32.3
Effect of foreign exchange rate changes		5.7	(2.4)
Cash and cash equivalents at end of year		71.2	56.5
Reconciliation of changes in cash and cash equivalents to movements in net debt			
Net increase in cash and cash equivalents		9.0	26.6
Proceeds from borrowings		(41.0)	(85.0)
Repayment of borrowings		-	85.5
Effect of foreign exchange rate changes		(20.3)	(0.1)
Movement in net debt		(52.3)	27.0
Net debt at start of year		(98.6)	(125.6)
Net debt at end of year		(150.9)	(98.6)

Notes to the Accounts

1. Basis of preparation and summary of significant accounting policies

Basis of accounting

The Consolidated Financial Statements have been prepared on a historical cost basis except for items that are required by IFRS to be measured at fair value, principally certain financial instruments. The Consolidated Financial Statements have been prepared in accordance with IFRS as issued by the International Accounting Standards Board ('IASB') and interpretations issued by the International Financial Reporting Interpretations Committee of the IASB, as adopted by the European Union ('adopted IFRS'), and in accordance with the provisions of the Companies Act 2006.

The full year results announcement has been prepared using consistent accounting policies. No revisions to adopted IFRS that became applicable in 2016 had a significant impact on the Group's Financial Statements. The full year results announcement is presented in millions of pounds Sterling rounded to the nearest one decimal place.

Basis of consolidation

The full year results announcement sets out the Group's financial position as at 31 December 2016 and the Group's financial performance for the year ended 31 December 2016.

Subsidiaries are those entities controlled by the Group. Control exists when the Group has the power, directly or indirectly, to govern the financial and operating policies of an entity so as to obtain benefits from its activities. Subsidiaries are consolidated from the date on which control is transferred to the Group and cease to be consolidated from the date on which control is transferred out of the Group. Associates are accounted for using the equity method of accounting and are initially recognised at cost.

All inter-company balances and transactions, including unrealised profits arising from intra-group transactions, have been eliminated in full. Unrealised losses are eliminated in the same way as unrealised gains except that they are only eliminated to the extent that there is no evidence of impairment.

Going concern

The Group's net debt balance at 31 December 2016 was £150.9m (2015: £98.6m), with available undrawn committed borrowing facilities of £406.0m (2015: £371.1m).

The Board has reviewed sensitivity analysis on the Group's forecasts to 30 June 2018, the maturity profile of its financial facilities and liabilities and the ability of the Group to re-finance these obligations as they fall due. The principal liquidity risk is mitigated through its financial risk management policies. For the foreseeable future, the Board has a high level of confidence that the Group will have the necessary liquid resources to meet its liabilities as they fall due and will be able to sustain its business model, strategy and operations and remain solvent, including the impact of reasonable scenarios. For this reason, it continues to adopt the going concern basis in preparing the Group Financial Statements. There are no key sensitivities identified in relation to this conclusion.

Significant accounting judgements and estimates

In preparing the Consolidated Financial Statements, management has made judgements, estimates and assumptions that affect the application of the Group's accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and assumptions are reviewed on an ongoing basis and are based on historical experience and various other factors that are believed to be reasonable under the circumstances.

Information about significant areas where judgements, estimates and assumptions are required is included in the following notes:

- Impairment of goodwill. The carrying amount of goodwill has been tested for impairment by estimating the value in use of the cash-generating units to which it has been allocated.
- Business combinations. Judgement is applied in relation to the estimation of the provisional fair values and useful lives of acquired assets and liabilities at the date of acquisition.
- Provisions against inventory. Judgement is applied to assess the level of provisions required to write down slow-moving, excess and obsolete inventory to its net realisable value.
- Taxation and deferred tax. The assessment and recognition of tax provisions requires judgement.

The financial statements were approved by the Board of Directors on 14 February 2017.

2. Adjusted performance measures

Spectris uses adjusted figures as key performance measures in addition to those reported under adopted IFRS, as management believe these measures enable them to assess the underlying trading performance of the businesses as they exclude foreign exchange movements and the impact of acquisitions. Adjusted figures exclude certain non-operational items that are predominantly acquisition or disposal related-items which management have defined as:

- Amortisation and impairment of acquisition-related goodwill and other intangible assets;
- Depreciation of acquisition-related fair value adjustments to tangible assets;
- Acquisition-related costs and contingent consideration fair value adjustments;
- Profits or losses on termination or disposal of businesses;
- Unwinding of the discount factor on deferred and contingent consideration;
- Unrealised changes in the fair value of financial instruments;
- Gains or losses on retranslation of short-term inter-company loan balances; and
- Related tax effects on the above and other tax items which do not form part of the underlying tax rate.

During the year, the Group acquired Millbrook Group Limited, an engineering services business that owns a significant amount of tangible assets. On acquisition, IFRS 3 (Revised) 'Business Combinations' requires tangible assets to be accounted for at fair value and as the book value of these tangible assets was lower than the fair value this has resulted in a significant fair value adjustment to increase the carrying value of the tangible assets.

In order for management to assess the underlying trading performance of the business, the additional depreciation charge due to the fair value adjustment on these assets above book value has been excluded from the adjusted figures.

The Board reviews and compares current and prior year segmental sales and adjusted profit at constant exchange rates. The constant exchange rate comparison uses the current year reported segmental information, stated in each entity's functional currency, and translates the results in to its presentation currency using prior year' monthly exchange rates, irrespective of the underlying transactional currency.

Within the In-Line Instrumentation segment, the BTG Business has large functional currency mismatches against its underlying transaction currencies which distort like-for-like ('LFL') comparison at times of significant currency movements. Accordingly, we have modified the basis on which BTG's LFL results are translated into sterling by using the actual underlying transaction currency mix for determining transactional gains/losses to provide more accurate and reliable information on BTG's underlying performance. This approach has not been applied to any other operating company as BTG is the only business with a significant functional currency mismatch for LFL reporting purposes.

The Board reviews current and prior year segmental sales and adjusted profit at constant exchange rates excluding the incremental impact of acquisitions for the first twelve months of ownership from the month of purchase. By removing the acquisition related sales and operating profit, this allows the Board to assess the underlying trading performance of the businesses on a LFL basis.

The adjusted performance measures are derived from the reported figures under adopted IFRS as follows:

	2016	2015
Sales	£m	£m
Sales as reported under adopted IFRS	1,345.8	1,190.0
Constant exchange rate adjustment	(141.1)	16.7
Sales at constant exchange rates	1,204.7	1,206.7
Acquisitions	(36.7)	(36.1)
LFL sales	1,168.0	1,170.6

	Materials Analysis £m	Test and Measurement £m	In-line Instrumentation £m	Industrial Controls £m	2016 Total £m
Sales by segment - 2016					
Sales as reported under adopted IFRS	418.9	404.5	275.6	246.8	1,345.8
Constant exchange rate adjustment	(41.9)	(44.9)	(27.4)	(26.9)	(141.1)
Sales at constant exchange rates	377.0	359.6	248.2	219.9	1,204.7
Acquisitions	(5.4)	(21.8)	(4.1)	(5.4)	(36.7)
LFL sales	371.6	337.8	244.1	214.5	1,168.0

	Materials Analysis £m	Test and Measurement £m	In-line Instrumentation £m	Industrial Controls £m	2015 Total £m
Sales by segment - 2015					
Sales as reported under adopted IFRS	364.4	351.3	255.0	219.3	1,190.0
Constant exchange rate adjustment	9.0	15.9	3.8	(12.0)	16.7
Sales at constant exchange rates	373.4	367.2	258.8	207.3	1,206.7
Acquisitions	(13.0)	(21.4)	-	(1.7)	(36.1)
LFL sales	360.4	345.8	258.8	205.6	1,170.6

	Materials Analysis %	Test and Measurement %	In-line Instrumentation %	Industrial Controls %	2016 Total %
Sales growth - 2016					
Sales as reported under adopted IFRS growth	15.0	15.1	8.1	12.4	13.1
Sales at constant exchange rates	3.5	2.4	(2.6)	0.2	1.2
LFL sales growth	2.0	(3.8)	(4.2)	(2.3)	(1.9)

	Materials Analysis %	Test and Measurement %	In-line Instrumentation %	Industrial Controls %	2015 £m %
Sales growth - 2015					
Sales as reported under adopted IFRS growth	4.5	2.4	(2.4)	(0.6)	1.4
Sales at constant exchange rates	7.0	7.1	(1.0)	(6.0)	2.8
LFL sales growth	3.3	0.9	(1.0)	(6.8)	(0.3)

	2016 £m	2015 £m
Adjusted operating profit		
Operating profit as reported under adopted IFRS	38.3	143.6
Net acquisition-related costs and fair value adjustments	10.1	2.9
Depreciation of acquisition-related fair value adjustments to tangible assets	0.2	-
Amortisation of acquisition-related intangible assets	36.9	33.0
Impairment of goodwill and other acquisition-related intangible assets	115.3	1.6
Adjusted operating profit	200.8	181.1
Constant exchange rate adjustment	(22.6)	4.8
Operating profit at constant exchange rates	178.2	185.9
Acquisitions	(8.3)	(5.2)
LFL operating profit	169.9	180.7

		Materials Analysis	Test and Measurement	In-line Instrumentation	Industrial Controls	2016 Total
Adjusted operating profit by segment - 2016	Note	£m	£m	£m	£m	£m
Operating profit as reported under adopted IFRS		66.2	26.7	37.6	(92.2)	38.3
Net acquisition-related costs and fair value adjustments		0.2	2.1	0.3	7.5	10.1
Depreciation of acquisition-related fair value adjustments to tangible assets		-	0.2	-	-	0.2
Amortisation of acquisition-related intangible assets		9.8	11.9	3.3	11.9	36.9
Impairment of goodwill and other acquisition-related intangible assets		-	20.9	-	94.4	115.3
Adjusted operating profit	3	76.2	61.8	41.2	21.6	200.8
Constant exchange rate adjustment		(7.7)	(7.8)	(5.4)	(1.7)	(22.6)
Operating profit at constant exchange rates		68.5	54.0	35.8	19.9	178.2
Acquisitions		(0.3)	(5.1)	(0.6)	(2.3)	(8.3)
LFL operating profit		68.2	48.9	35.2	17.6	169.9

		Materials Analysis	Test and Measurement	In-line Instrumentation	Industrial Controls	2015 Total
Adjusted operating profit by segment - 2015	Note	£m	£m	£m	£m	£m
Operating profit as reported under adopted IFRS		42.6	43.6	34.2	23.2	143.6
Net acquisition-related costs and fair value adjustments		0.2	1.5	0.1	1.1	2.9
Depreciation of acquisition-related fair value adjustments to tangible assets		-	-	-	-	-
Amortisation of acquisition-related intangible assets		9.3	10.2	2.5	11.0	33.0
Impairment of goodwill and other acquisition-related intangible assets		1.6	-	-	-	1.6
Adjusted operating profit	3	53.7	55.3	36.8	35.3	181.1
Constant exchange rate adjustment		1.5	3.6	2.2	(2.5)	4.8
Operating profit at constant exchange rates		55.2	58.9	39.0	32.8	185.9
Acquisitions		(2.8)	(2.2)	-	(0.2)	(5.2)
LFL operating profit		52.4	56.7	39.0	32.6	180.7

	Materials Analysis %	Test and Measurement %	In-line Instrumentation %	Industrial Controls %	2016 Total %
Operating profit growth - 2016					
Operating profit as reported under adopted IFRS	55.4	(38.8)	9.9	(497.4)	(73.3)
Adjusted operating profit	41.8	11.7	11.9	(38.7)	10.9
Operating profit at constant exchange rates	27.6	(2.4)	(2.9)	(43.5)	(1.6)
LFL operating profit	27.0	(11.6)	(4.4)	(50.2)	(6.2)

	Materials Analysis %	Test and Measurement %	In-line Instrumentation %	Industrial Controls %	2015 Total %
Operating profit growth - 2015					
Operating profit as reported under adopted IFRS	(11.3)	(4.5)	(25.0)	(20.0)	(14.7)
Adjusted operating profit	0.8	6.0	(23.3)	(21.1)	(8.6)
Operating profit at constant exchange rates	3.6	12.8	(18.7)	(26.4)	(6.1)
LFL operating profit	(1.7)	8.6	(18.7)	(26.7)	(8.8)

Net acquisition-related costs and fair value adjustments comprises acquisition costs of £4.5m (2015: £3.0m) that have been recognised in the Consolidated Income Statement under IFRS 3 (Revised) 'Business Combinations', fair value adjustments to inventory of £nil (2015: £0.7m) and other fair value adjustments resulting in a debit of £5.6m (2015: credit £0.8m). Net acquisition-related costs and fair value adjustments are included within administrative expenses. Acquisition-related costs have been excluded from the adjusted operating profit and acquisition costs paid of £5.4m (2015: £3.9m) have been excluded from adjusted operating cash flow.

	Materials Analysis %	Test and Measurement %	In-line Instrumentation %	Industrial Controls %	2016 Total %
Return on sales by segment - 2016					
Using operating profit as reported under adopted IFRS	15.8	6.6	13.6	(37.4)	2.8
Using adjusted operating profit	18.2	15.3	15.0	8.7	14.9
Using adjusted operating profit at constant exchange rates	18.2	15.0	14.4	9.0	14.8
Using adjusted LFL operating profit	18.4	14.5	14.4	8.2	14.5

	Materials Analysis %	Test and Measurement %	In-line Instrumentation %	Industrial Controls %	2015 Total %
Return on sales by segment - 2015					
Using operating profit as reported	11.7	12.4	13.4	10.6	12.1
Using adjusted operating profit	14.7	15.8	14.4	16.1	15.2
Using adjusted operating profit at constant exchange rates	14.8	16.1	15.1	15.8	15.4
Using adjusted operating profit on a LFL	14.5	16.4	15.1	15.9	15.4

		2016	2015
Reconciliation to adjusted profit before tax and adjusted operating profit	Note	£m	£m
Profit before tax as reported under adopted IFRS		31.9	141.6
Add/(deduct):			
Net acquisition-related costs and fair value adjustments		10.1	2.9
Depreciation of acquisition-related fair value adjustments to tangible assets		0.2	-
Amortisation of acquisition-related intangible assets		36.9	33.0
Impairment of goodwill and other acquisition-related intangible assets		115.3	1.6
Net loss/(gain) on retranslation of short-term inter-company loan balances	4	0.8	(3.0)
Unwinding of discount factor on deferred and contingent consideration	4	0.6	0.2
Adjusted profit before tax		195.8	176.3
Adjusted net finance costs (see below)		5.0	4.8
Adjusted operating profit		200.8	181.1

		2016	2015
Adjusted net finance costs	Note	£m	£m
Net interest costs as reported under adopted IFRS	4	(6.4)	(2.0)
Net loss/(gain) on retranslation of short-term inter-company loan balances	4	0.8	(3.0)
Unwinding of discount factor on deferred and contingent consideration	4	0.6	0.2
Adjusted net finance costs		(5.0)	(4.8)

		2016	2015
Adjusted operating cash flow		£m	£m
Net cash flows generated from operating activities under adopted IFRS		215.9	153.4
Acquisition-related costs paid		5.4	3.9
Net income taxes paid		29.8	33.5
Purchase of property, plant and equipment and software		(28.7)	(26.0)
Proceeds from sale of property, plant and equipment		5.4	0.9
Adjusted operating cash flow		227.8	165.7
Adjusted operating cash flow conversion		113%	91%

		2016	2015
Adjusted earnings per share	Note	£m	£m
Profit after tax as reported under adopted IFRS		10.3	113.8
Adjusted for:			
Net acquisition-related costs and fair value adjustments		10.1	2.9
Depreciation of acquisition-related fair value adjustments to tangible assets		0.2	-
Amortisation of acquisition-related intangible assets		36.9	33.0
Impairment of goodwill and other acquisition-related intangible assets		115.3	1.6
Net loss/(gain) on retranslation of short-term inter-company loan balances	4	0.8	(3.0)
Unwinding of discount factor on deferred and contingent consideration	4	0.6	0.2
Tax effect of the above and other non-recurring items	5	(22.3)	(12.4)
Adjusted earnings		151.9	136.1
Weighted average number of shares outstanding (millions)		119.1	119.0
Adjusted earnings per share (pence)		127.5	114.3

		2016	2015
Adjusted diluted earnings per share (pence)		£m	£m
Diluted weighted average number of shares outstanding (millions)		119.6	119.3
Adjusted diluted earnings per share (pence)		127.0	114.1

Basic and diluted earnings per share in accordance with IAS 33 'Earnings Per Share' are disclosed in Note 7.

	2016	2015
	£m	£m
Analysis of net debt		
Bank overdrafts	12.3	1.7
Bank loans - unsecured	222.1	155.1
Total borrowings	234.4	156.8
Cash balances	(83.5)	(58.2)
Net debt	150.9	98.6

3. Operating segments

The Group has four reportable segments, as described below, which are the Group's strategic business units. These units offer different applications, assist companies at various stages of the production cycle and are focussed towards specific industries. These segments reflect the internal reporting provided to the Chief Operating Decision Maker (considered to be the Board) on a regular basis to assist in making decisions on capital allocated to each segment and to assess performance. The segment results include an allocation of head office expenses. The following summary describes the operations in each of the Group's reportable segments:

- Materials Analysis provides products and services that enable customers to determine structure, composition, quantity and quality of particles and materials during their research and product development processes, when assessing materials before production, or during the manufacturing process. The operating companies in this segment are Malvern Instruments, PANalytical and Particle Measuring Systems. Malvern Instruments and PANalytical merged as from 1 January 2017.
- Test and Measurement supplies test, measurement and analysis equipment, software and services for product design optimisation and validation, manufacturing control, microseismic monitoring and environmental noise monitoring. The operating companies in this segment are Brüel & Kjær Sound & Vibration, ESG Solutions, HBM and Millbrook.
- In-line Instrumentation provides process analytical measurement, asset monitoring and on-line controls as well as associated consumables and services for both primary processing and the converting industries. The operating companies in this segment are Brüel & Kjær Vibro, BTG, NDC Technologies and Servomex.
- Industrial Controls provides products and solutions that measure, monitor, control, inform, track and trace during the production process. The operating companies in this segment are Microscan, Omega Engineering and Red Lion Controls.

	Materials Analysis £m	Test and Measurement £m	In-line Instrumentation £m	Industrial Controls £m	2016 Total £m
Information about reportable segments					
Segment revenues	419.0	404.7	275.6	247.5	1,346.8
Inter-segment revenue	(0.1)	(0.2)	-	(0.7)	(1.0)
External revenue	418.9	404.5	275.6	246.8	1,345.8
Reportable segment adjusted operating profit for continuing operations	76.2	61.8	41.2	21.6	200.8
Net acquisition-related costs and fair value adjustments	(0.2)	(2.1)	(0.3)	(7.5)	(10.1)
Depreciation of acquisition-related fair value adjustments to tangible assets	-	(0.2)	-	-	(0.2)
Amortisation of acquisition-related intangible assets	(9.8)	(11.9)	(3.3)	(11.9)	(36.9)
Impairment of goodwill and other acquisition-related intangible assets	-	(20.9)	-	(94.4)	(115.3)
Operating profit/(loss)	66.2	26.7	37.6	(92.2)	38.3
Financial income*					0.5
Finance costs*					(6.9)
Profit before tax					31.9
Tax*					(21.6)
Profit after tax					10.3

	Materials Analysis £m	Test and Measurement £m	In-line Instrumentation £m	Industrial Controls £m	2015 Total £m
Segment revenues	363.7	351.5	255.0	219.6	1,189.8
Inter-segment revenue	0.7	(0.2)	-	(0.3)	0.2
External revenue	364.4	351.3	255.0	219.3	1,190.0
Reportable segment adjusted operating profit for continuing operations	53.7	55.3	36.8	35.3	181.1
Net acquisition-related costs and fair value adjustments	(0.2)	(1.5)	(0.1)	(1.1)	(2.9)
Depreciation of acquisition-related fair value adjustments to tangible assets	-	-	-	-	-
Amortisation and impairment of acquisition-related intangible assets	(9.3)	(10.2)	(2.5)	(11.0)	(33.0)
Impairment of acquisition-related intangible assets	(1.6)	-	-	-	(1.6)
Operating profit	42.6	43.6	34.2	23.2	143.6
Financial income*					3.3
Finance costs*					(5.3)
Profit before tax					141.6
Tax*					(27.8)
Profit after tax					113.8

* Not allocated to reportable segments.

Reportable segment profit is consistent with that presented to the Chief Operating Decision Maker. Inter-segment revenue reflects the movements in internal cash flow hedges with inter-segment pricing on an arm's length basis. Segments are presented on the basis of actual inter-segment charges made.

	Carrying amount of segment assets		Carrying amount of segment liabilities	
	2016 £m	2015 £m	2016 £m	2015 £m
Materials Analysis	400.6	355.5	(118.2)	(93.6)
Test and Measurement	581.7	378.9	(104.5)	(85.8)
In-line Instrumentation	271.5	218.4	(53.4)	(41.5)
Industrial Controls	378.9	430.2	(31.6)	(24.5)
Total segment assets and liabilities	1,632.7	1,383.0	(307.7)	(245.4)
Cash and borrowings	83.5	58.2	(234.4)	(156.8)
Derivative financial instruments	-	-	(4.2)	(0.4)
Retirement benefit obligations	-	-	(40.3)	(22.1)
Taxation	15.8	17.9	(78.0)	(68.4)
Consolidated total assets and liabilities	1,732.0	1,459.1	(664.6)	(493.1)

Segment assets comprise: goodwill, other intangible assets, property, plant and equipment, inventories, trade and other receivables. Segment liabilities comprise: trade and other payables, provisions and other payables which can be reasonably attributed to the reportable operating segments. Unallocated items represent current and deferred taxation balances, defined benefit scheme assets and liabilities, derivative financial instruments and all components of net debt.

	Additions to non-current assets		Depreciation, amortisation and impairment	
	2016	2015	2016	2015
	£m	£m	£m	£m
Materials Analysis	17.3	8.8	16.4	16.9
Test and Measurement	170.3	42.7	43.6	18.5
In-line Instrumentation	23.4	7.2	9.5	8.0
Industrial Controls	2.9	8.6	111.2	15.6
	213.9	67.3	180.7	59.0

Geographical segments

The Group's operating segments are each located in several geographical locations and sell to external customers in all parts of the world.

No individual country amounts to more than 3% of revenue by location of customer, other than those noted below.

The following is an analysis of revenue by geographical destination.

					2016
	Materials Analysis	Test and Measurement	In-line Instrumentation	Industrial Controls	Total
	£m	£m	£m	£m	£m
UK	15.1	26.4	6.7	7.2	55.4
Germany	26.6	67.3	20.8	11.1	125.8
France	13.4	20.1	7.3	2.6	43.4
Rest of Europe	63.6	66.9	44.8	11.6	186.9
USA	88.5	80.7	80.7	159.9	409.8
Rest of North America	13.9	9.5	10.7	11.9	46.0
Japan	30.8	26.2	13.5	3.1	73.6
China	62.4	55.0	40.6	18.3	176.3
South Korea	16.4	14.6	6.9	5.5	43.4
Rest of Asia	54.9	21.4	25.6	11.8	113.7
Rest of the world	33.3	16.4	18.0	3.8	71.5
	418.9	404.5	275.6	246.8	1,345.8

					2015
	Materials Analysis	Test and Measurement	In-line Instrumentation	Industrial Controls	Total
	£m	£m	£m	£m	£m
UK	16.8	14.0	6.9	7.1	44.8
Germany	19.5	56.9	19.5	9.9	105.8
France	12.6	17.6	6.3	2.3	38.8
Rest of Europe	55.4	62.3	45.0	9.3	172.0
USA	80.2	81.7	67.1	144.6	373.6
Rest of North America	13.2	7.9	9.0	12.6	42.7
Japan	23.2	22.0	11.1	2.0	58.3
China	51.8	44.8	43.4	13.8	153.8
South Korea	13.6	10.6	5.5	4.1	33.8
Rest of Asia	46.3	18.9	25.6	9.8	100.6
Rest of the world	31.8	14.6	15.6	3.8	65.8
	364.4	351.3	255.0	219.3	1,190.0

	Non-current assets	
	2016	2015
	£m	£m
UK	183.9	85.1
Germany	63.8	25.2
France	0.2	0.1
Rest of Europe*	340.3	269.0
USA	477.6	487.0
Rest of North America	27.7	41.0
Japan	0.6	0.6
China	4.9	4.3
South Korea	4.2	4.4
Rest of Asia	31.4	27.9
Rest of the world	3.7	2.8
	1,138.3	947.4
Deferred taxation **	13.4	17.2
Total non-current assets	1,151.7	964.6

* Principally in Denmark and Switzerland.

** Not allocated to reportable geographical area in reporting to the Chief Operating Decision Maker.

4. Financial income and finance costs

	2016	2015
	£m	£m
Financial income		
Interest receivable	0.5	0.3
Net gains on retranslation of short-term inter-company loan balances	-	3.0
	0.5	3.3

	2016	2015
	£m	£m
Finance costs		
Interest payable on loans and overdrafts	5.1	4.9
Unwinding of discount factor on deferred and contingent consideration	0.6	0.2
Net losses on retranslation of short-term inter-company loan balances	0.8	-
Net interest cost on pension scheme liabilities	0.3	0.1
Other finance costs	0.1	0.1
	6.9	5.3

Net interest costs of £4.6m (2015: £4.6m) for the purposes of the calculation of interest cover comprise bank interest receivable of £0.5m (2015: £0.3m) and interest payable on loans and overdrafts of £5.1m (2015: £4.9m).

5. Taxation

	2016			2015		
	UK	Overseas	Total	UK	Overseas	Total
	£m	£m	£m	£m	£m	£m
Current tax charge	5.9	32.0	37.9	2.7	32.8	35.5
Adjustments in respect of current tax of prior years	0.7	(3.6)	(2.9)	(1.0)	(1.5)	(2.5)
Deferred tax - origination and reversal of temporary differences	(2.2)	(11.2)	(13.4)	(0.4)	(4.8)	(5.2)
	4.4	17.2	21.6	1.3	26.5	27.8

The standard rate of corporation tax for the year, based on the weighted average of tax rates applied to the Group's profits, is -13.8% (2015: 25.4%). The standard rate of corporation tax for the year is a credit due to the statutory tax rates applying to the impairment of goodwill and other acquisition-related intangible assets. In the absence of any impairment losses, the standard rate of corporation tax for the year, based on the weighted average of tax rates applied to the Group's profits, would have been a charge of 23.4% (2015: 25.4%). The tax charge for the year is higher (2015: lower) than the standard rate of corporation tax for the reasons set out in the following reconciliation.

	2016	2015
	£m	£m
Profit before taxation	31.9	141.6
Corporation tax (credit)/charge at standard rate of -13.8% (2015: 25.4%)	(4.4)	36.0
Non-deductible goodwill impairment losses	33.8	-
Non-taxable income and gains	(4.1)	(3.6)
Other non-deductible expenditure	3.6	1.3
Movements on unrecognised deferred tax assets	0.7	0.5
Tax credits and incentives	(4.4)	(5.0)
Change in tax rates	(0.4)	-
Adjustments relating to prior year acquisitions	(3.1)	-
Adjustments to prior year current and deferred tax charges	(0.1)	(1.4)
Total taxation	21.6	27.8

“Tax credits and incentives” above refers principally to research and development tax credits and other reliefs for innovation such as the UK patent box regime and Dutch innovation box regime, as well as tax reliefs available for manufacturing activities located in the USA.

Factors that may affect the future tax charge

The Group’s tax charge in future years is likely to be affected by the proportion of profits arising, and the effective tax rates, in the various territories in which the Group operates.

	2016	2015
	£m	£m
Tax on items recognised directly in the Consolidated Statement of Comprehensive Income		
Tax credit on net loss on effective portion of changes in fair value of forward exchange contracts	(0.7)	-
Tax credit on re-measurement of net defined benefit obligations, net of foreign exchange	(3.0)	(1.7)
Aggregate current and deferred tax credit relating to items recognised directly in the Consolidated Statement of Comprehensive Income	(3.7)	(1.7)

	2016	2015
	£m	£m
Tax on items recognised directly in the Consolidated Statement of Changes in Equity		
Tax credit in relation to share-based payments	(0.3)	(0.1)
Aggregate current and deferred tax credit on items recognised directly in the Consolidated Statement of Changes in Equity	(0.3)	(0.1)

The following tax (credits)/charges relate to items of income and expense that are excluded from the Group's adjusted performance measures.

	2016	2015
	£m	£m
Tax on items of income and expense that are excluded from the Group's adjusted profit before tax		
Tax credit on amortisation of acquisition-related intangible assets	(12.3)	(11.2)
Tax credit on impairment of goodwill and other acquisition-related intangible assets	(5.1)	-
Tax credit on net acquisition-related costs and fair value adjustments	(1.7)	(0.6)
Tax charge on retranslation of short-term inter-company loan balances	0.2	(0.5)
Tax credit on unwinding of discount factor on deferred and contingent consideration	(0.3)	(0.1)
Tax credit relating to prior year acquisitions	(3.1)	-
Total tax credit	(22.3)	(12.4)

The effective adjusted tax rate for the year was 22.4% (2015: 22.8%) as set out in the reconciliation below.

	2016	2015
Reconciliation of total tax charge on adopted IFRS basis to adjusted tax charge	£m	£m
Total tax charge on adopted IFRS basis	21.6	27.8
Tax credit on items of income and expense that are excluded from the Group's adjusted profit before tax	22.3	12.4
Adjusted tax charge	43.9	40.2

Management judgement is applied to determine the level of provisions required in respect of both direct and indirect taxes. The Group is potentially subject to tax audits in many jurisdictions. By their nature these are often complex and could take a significant period of time to be agreed with the tax authorities. Judgement is therefore applied based on the interpretation of country specific tax legislation and the likelihood of settlement. Spectris estimates and accrues taxes that will ultimately be payable when reviews or audits by tax authorities of tax returns are completed. These estimates include judgements about the position expected to be taken by each tax authority.

The Group applies judgement in respect of possible tax audit adjustments primarily in respect of transfer pricing as well as in respect of financing arrangements and tax credits and incentives. In respect of transfer pricing the level of provision is determined by reference to management judgements of the adjustments that would arise in the event that certain intra-group transactions are successfully challenged as not being at arm's length.

Management estimates of the level of risk arising from tax audit may change in the next year as a result of changes in legislation or tax authority practice or correspondence with tax authorities during a specific tax audit. It is not possible to quantify the impact that such future developments may have on the Group's tax positions. Actual outcomes and settlements may differ significantly from the estimates recorded in these Consolidated Financial Statements.

Judgement is also applied relating to the recognition of deferred tax assets which are dependent on an assessment of the generation of future taxable income in the countries concerned in which temporary differences become deductible or in which tax losses can be utilised. These estimates may change in the next year if there are changes in the forecast profitability of the relevant company.

The UK's dividend taxation regime prior to July 2009 is the subject of long running litigation between HMRC and other taxpayers in relation to the tax charge on dividends received from EU based companies. The outcome of this dispute is likely to be relevant to the Group in respect of certain dividends received by UK Group companies before that date. Pending resolution in the courts, a tax creditor of £12.6m (2015: £12.6m) continues to be held for the potential tax liabilities arising if the final decision is made by the courts in HMRC's favour.

Within the tax charge is a credit of £3.1m (2015: £nil) relating to recognition of the net benefit of unused tax losses arising from the acquisition of Spectraseis AG in 2015. The ultimate utilisation of these losses is now considered probable as a result of the post-acquisition restructuring of the business.

6. Dividends

	2016	2015
Amounts recognised and paid as distributions to owners of the Parent Company in the year	£m	£m
Final dividend for the year ended 31 December 2015 of 32.2p (2014: 30.5p) per share	38.4	36.3
Interim dividend for the year ended 31 December 2016 of 18.0p (2015: 17.3p) per share	21.4	20.6
	59.8	56.9
	2016	2015
Amounts arising in respect of the year	£m	£m
Interim dividend for the year ended 31 December 2016 of 18.0p (2015: 17.3p) per share	21.4	20.6
Proposed final dividend for the year ended 31 December 2016 of 34.0p (2015: 32.2p) per share	40.5	38.4
	61.9	59.0

The proposed final dividend is subject to approval by shareholders at the Annual General Meeting on 26 May 2017 and has not been included as a liability in these Financial Statements.

7. Earnings per share

Basic earnings per share amounts are calculated by dividing net profit for the year attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the year (excluding treasury shares).

Diluted earnings per share amounts are calculated by dividing the net profit attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the year but adjusted for the effects of dilutive options.

Basic earnings per share	2016	2015
Profit after tax (£m)	10.3	113.8
Weighted average number of shares outstanding (millions)	119.1	119.0
Basic earnings per share (pence)	8.6	95.6

Diluted earnings per share	2016	2015
Profit after tax (£m)	10.3	113.8
Basic weighted average number of shares outstanding (millions)	119.1	119.0
Weighted average number of dilutive 5p ordinary shares under option (millions)	0.8	0.6
Weighted average number of 5p ordinary shares that would have been issued at average market value from proceeds of dilutive share options (millions)	(0.3)	(0.3)
Diluted weighted average number of shares outstanding (millions)	119.6	119.3
Diluted earnings per share (pence)	8.6	95.4

8. Financial instruments

			2016
	Level 2	Level 3	Carrying
Fair value and carrying amount of financial instruments	fair value	fair value	amount
	£m	£m	£m
Trade and other receivables excluding prepayments and accrued income	-	-	280.2
Trade and other payables excluding deferred income	-	(16.2)	(246.5)
Cash and cash equivalents	-	-	83.5
Floating rate borrowings	-	-	(53.3)
Fixed rate borrowings	(189.9)	-	(181.1)
Forward exchange contracts	(4.2)	-	(4.2)
			(121.4)

			2015
	Level 2	Level 3	Carrying
Fair value and carrying amount of financial instruments	fair value	fair value	amount
	£m	£m	£m
Trade and other receivables excluding prepayments and accrued income	-	-	235.3
Trade and other payables excluding deferred income	-	(7.0)	(191.4)
Cash and cash equivalents	-	-	58.2
Floating rate borrowings	-	-	(1.7)
Fixed rate borrowings	(162.6)	-	(155.1)
Forward exchange contracts	(0.4)	-	(0.4)
			(55.1)

	2016	
	Deferred and contingent consideration	Level 3 fair value
	£m	£m
Reconciliation of level 3 fair values		
At 1 January 2016	(7.0)	(7.0)
Deferred and contingent consideration arising from acquisitions	(7.6)	(7.6)
Deferred and contingent consideration paid	2.6	2.6
Costs charged to the Consolidated Income Statement:		
Adjustments outside of the measurement period	(2.1)	(2.1)
Unwinding of discount factor on deferred and contingent consideration (unrealised)	(0.6)	(0.6)
Loss recognised in Other Comprehensive Income:		
Foreign exchange difference	(1.5)	(1.5)
Balance at 31 December 2016	(16.2)	(16.2)

The above tables show the fair value measurement of financial instruments by level following the fair value hierarchy:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 – inputs for the assets and liabilities derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data.

Deferred and contingent consideration relates to financial (2016: £10.4m, 2015: £7.0m) and non-financial (2016: £5.8m, 2015: £nil) milestones on current and prior year acquisitions, as disclosed in note 9. The financial milestones are mainly sensitive to risk-adjusted discount rates and annual future revenue targets.

There were no movements between different levels of the fair value hierarchy in the year.

The fair value of cash and cash equivalents, receivables and payables approximates to the carrying amount because of the short maturity of these instruments.

The fair value of floating rate borrowings approximates to the carrying amount because interest rates are at floating rates where payments are reset to market rates at intervals of less than one year.

The fair value of fixed rate borrowings is estimated by discounting the future contracted cash flow, using appropriate yield curves, to the net present value.

The fair value of forward exchange contracts is determined using discounted cash flow techniques based on readily available market data.

9. Acquisitions

On 23 February 2016, the Group acquired 100% of the share capital of CAS Clean Air Service AG ('CAS'), a company based in Switzerland, for a total consideration of £12.0m (£10.4m net of cash acquired). This extends the Group's capabilities in monitoring and calibration services within the life sciences market. The excess of the fair value of the consideration paid over the fair value of net tangible assets acquired is represented by the following intangible assets: contractual rights, customer-related (customer relations), technology, trade name and goodwill of £0.6m, £2.4m, £0.1m, £0.3m and £5.0m respectively. The goodwill arising is attributable to the acquired workforce and synergies from leveraging the customer base to optimise the sales potential of CAS and Spectris products. Goodwill includes an amount of £0.3m representing the requirement to recognise a net deferred tax liability on the fair value adjustments. The business is being integrated into the Material Analysis segment.

On 7 June 2016, the Group acquired the trade and certain assets of Integrated Process Systems ('IPS') India, an Indian agent, for a total consideration of £0.9m including £0.2m deferred consideration. The excess of the fair value of the consideration paid over the fair value of net tangible assets acquired is represented by the following intangible assets: customer-related (customer relations) and goodwill of £0.5m and £0.5m respectively. The goodwill arising is attributable to opportunities that will be generated from direct access to the Indian market and benefits arising from improving the productivity of the combined sales and support channels. The business is being integrated into the Test and Measurement segment.

On 17 June 2016, the Group acquired 100% of the share capital of Capstone Technology Corporation, a company based in the USA, for a total consideration of £14.8m (£14.7m net of cash acquired). The company is a provider of software solutions for process control optimisation and decision support, serving multiple industries such as pulp and paper, chemical, utilities, oil and gas and food and beverage. The excess of the fair value of the consideration paid over the fair value of net tangible assets acquired is represented by the following intangible assets: customer-related (customer relations), technology, contractual rights and goodwill of £1.9m, £7.1m, £0.4m and £9.6m respectively. The goodwill arising is considered to represent the value of the acquired workforce, broadening of the Group's solution offerings in the pulp and paper market and leveraging of the existing Spectris customer base. Goodwill includes an amount of £3.6m representing the requirement to recognise a net deferred tax liability on the fair value adjustments. The business is being integrated into the In-line Instrumentation segment.

On 1 July 2016, the Group acquired the trade and certain assets of Sound and Vibration Technology Limited, a UK business that provides sound and vibration test-based solutions, for a total consideration of £0.4m including £0.1m deferred consideration. The company is a provider of sound and vibration test-based solutions. The excess of the fair value of the consideration paid over the fair value of net tangible assets acquired is represented by the following intangible assets: customer-related (customer relations) and goodwill of £0.1m and £0.1m respectively. The goodwill arising is attributable to the acquired workforce and opportunities expected from expanding the Group's software solutions offering to the automotive market. The business is being integrated into the Test and Measurement segment.

On 26 July 2016, the Group acquired 100% of the share capital of DISCOM - Elektronische Systeme und Komponenten GmbH, a company based in Germany, for a total consideration of £20.4m (£20.0m net of cash acquired) including £5.8m contingent consideration which is based upon the achievement of non-financial integration milestones and £1.5m contingent consideration which is based upon incremental future revenues over the next three years. The company provides integrated solutions combining hardware and software to enhance production quality and identify potential problems in manufacturing processes. The excess of the fair value of the consideration paid over the fair value of net tangible assets acquired is represented by the following intangible assets: customer related (customer relations), technology, trade name and goodwill of £5.0m, £3.9m, £0.7m and £12.2m respectively. The goodwill arising is attributable to the acquired workforce and extension to the Group's product offering of innovative customer solutions using instrumentation, software and services. Goodwill includes an amount of £3m representing the requirement to recognise a net deferred tax liability on the fair value adjustments. The business is being integrated into the Test and Measurement segment.

On 1 September 2016, the Group acquired 100% of the share capital of Millbrook Group Limited ('Millbrook'), a company based in the UK, for a total consideration of £125.7m (£120.9m net of cash acquired). This extends the Group's capabilities to provide test, validation and engineering services to the automotive, transport and tyre, petrochemical, defence and securities industries, utilising its proving grounds in Bedfordshire and Finland. The excess of the fair value of the consideration paid over the fair value of net tangible assets acquired is represented by the following intangible assets: customer-related (customer relations), technology, trade name and goodwill of £8.9m, £2.2m, £10.9m and £54.1m respectively. The goodwill arising is attributable to the acquired workforce, and the opportunities expected as the business is integrated into the Group where there will be benefit from leveraging the Group's wider customer base and sales and marketing channels, together with sharing capabilities, facilities and technology with other operating companies. Goodwill includes an amount of £7.5m representing the requirement to recognise a net deferred tax liability on the fair value adjustments. The business is being integrated into the Test and Measurement segment.

The assets and liabilities acquired from the above acquisitions, together with the aggregate purchase consideration, are summarised in the table below. The revenue and operating profit contribution from the acquisitions in the year to the Group's results for the year were £28.9m and £2.1m respectively. Group revenue and operating profit would have been £1,381.5m and £39.2m (adjusted operating profit: £204.9m) respectively, had each of these acquisitions taken place on the first day of the financial year.

Acquisition costs incurred and paid during the year relating to the above acquisitions were £2.5m (2015: £1.3m).

The following fair value table is provisional, reflecting the timing of the acquisitions, and is expected to be finalised within 12 months of the acquisition date:

	Book value	Adjustments	2016 Fair value
	£m	£m	£m
Net assets acquired under 2016 acquisitions			
Intangible fixed assets	1.5	43.6	45.1
Tangible fixed assets	29.1	29.7	58.8
Inventories	1.3	(0.8)	0.5
Trade and other receivables	17.0	(1.3)	15.7
Trade and other payables	(14.5)	–	(14.5)
Provisions	(1.3)	(0.1)	(1.4)
Retirement benefit obligations	–	(2.3)	(2.3)
Current tax	(0.6)	–	(0.6)
Deferred tax liabilities	(1.1)	(14.4)	(15.5)
Cash	6.9	–	6.9
Net assets acquired	38.3	54.4	92.7
Goodwill			81.5
Total consideration in respect of 2016 acquisitions			174.2
Total consideration			174.2
Adjustment for cash acquired			(6.9)
Net consideration in respect of 2016 acquisitions			167.3

Analysis of cash outflow in Consolidated Statement of Cash Flows

Total consideration in respect of 2016 acquisitions	174.2
Adjustment for net cash acquired on 2016 acquisitions	(6.9)
Deferred and contingent consideration on 2016 acquisitions to be paid in future years	(7.6)
Cash paid in 2016 in respect of 2016 acquisitions	159.7

Acquisitions prior to 2016

Purchase price adjustments relating to prior year acquisitions	(1.4)
Deferred and contingent consideration in relation to prior years' acquisitions:	
– accrued at 31 December 2015	2.6
Cash paid in 2016 in respect of prior years' acquisitions	1.2
Net cash outflow relating to acquisitions	160.9

Where appropriate, a detailed exercise has been undertaken to assess the fair value of assets acquired and liabilities assumed, with the use of third party experts. The valuation of the above intangible and tangible assets requires the use of assumptions and estimates. Intangible asset assumptions consist of future growth rates, expected inflation and attrition rates, discount rates used and useful economic lives. Tangible asset (including automotive testing tracks) assumptions include comparable market values, replacement costs, expected rental yields and useful economic lives.

The fair value of contingent consideration on the 2016 acquisitions amounts to £7.6m. The contingent consideration payable on non-financial milestones could range from £nil to £6.4m depending on the achievement of certain business targets, contingent consideration payable on financial milestones could range from £nil to £2.2m dependant on incremental future revenues and the total contingent consideration is sensitive to risk adjusted discount rates.

Due to their contractual due dates, the fair value of receivables acquired approximates to the gross contractual amounts receivable. The amount of gross contractual receivables not expected to be recovered is immaterial.

£0.5m (2015: £4.0m) of the goodwill arising on acquisitions in the year is expected to be amortised and deductible for tax purposes.

There are no material contingent liabilities recognised in accordance with IFRS 3 (Revised).

Net assets acquired for significant 2016 acquisitions

	Book value Adjustments		Fair value
	£m	£m	£m
Net assets acquired for Millbrook			
Intangible fixed assets	0.1	21.9	22.0
Tangible fixed assets	26.4	27.9	54.3
Inventories	0.1	–	0.1
Trade and other receivables	12.3	(1.2)	11.1
Trade and other payables	(11.2)	0.4	(10.8)
Provisions	(1.3)	–	(1.3)
Deferred tax liabilities	(1.1)	(7.5)	(8.6)
Cash	4.8	–	4.8
Net assets acquired	30.1	41.5	71.6
Goodwill			54.1
Total consideration in respect of 2016 acquisitions			125.7
Total consideration			125.7
Adjustment for cash acquired			(4.8)
Net consideration in respect of 2016 acquisitions			120.9

The fair value adjustment in relation to tangible fixed assets reflects the increase in fair value of property, tracks and testing equipment amounting to £27.9m. The additional depreciation charge due to the fair value adjustment on these assets above book value depreciation on these assets is an adjusting item in arriving at adjusted operating profit, as stated in Note 2.

A detailed exercise has been undertaken to assess the fair value of the assets acquired and liabilities assumed for the Millbrook Group. The fair value of intangible assets and property, plant and equipment has been assessed by reference to work performed by several independent valuation specialists. The main judgements in the valuation of the intangible assets include the identification of existing customer relationships, the importance of the Millbrook trade name and the value attributed to specific technology. In valuing these intangibles a combination of the following estimates has been used: future growth rates, expected inflation rates, attrition rates, discount rates and contributory asset charges. The main judgements in the valuation of tangible assets (including the automotive testing track) include comparable market values, depreciated replacement costs, expected rental yields, and, useful economic lives.

The following presents the information related to 2015 acquisitions including the effect of the finalisation of acquisition fair values during 2016.

	Amounts previously recognised at 31 December 2015		2015 Final fair value
	Book value	Adjustments	
	£m	£m	£m
Net assets acquired under 2015 acquisitions			
Intangible fixed assets	0.8	22.2	23.0
Tangible fixed assets	1.3	0.1	1.4
Deferred tax assets	1.6	(1.6)	–
Inventories	0.4	(0.1)	0.3
Trade and other receivables	3.7	(0.3)	3.4
Trade and other payables	(5.2)	0.5	(4.7)
Provisions	(0.1)	(0.2)	(0.3)
Deferred tax liabilities	–	(4.8)	(4.8)
Cash	2.7	–	2.7
Net assets acquired	5.2	15.8	21.0
Goodwill			23.8
Total consideration in respect of 2015 acquisitions			44.8
Total consideration			44.8
Adjustment for cash acquired			(2.7)
Net consideration in respect of 2015 acquisitions			42.1

Analysis of cash outflow in Consolidated Statement of Cash Flows

Total consideration in respect of 2015 acquisitions	44.8
Adjustment for net cash acquired on 2015 acquisitions	(2.7)
Deferred and contingent consideration on 2015 acquisitions to be paid in future years	(3.0)
Working capital adjustment receivable in future years	0.5
Cash paid in 2015 in respect of 2015 acquisitions	39.6

Acquisitions prior to 2015

Deferred and contingent consideration in relation to prior years' acquisitions:	
– accrued at 31 December 2014	0.5
Cash paid in 2015 in respect of prior years' acquisitions	0.5
Net cash outflow relating to acquisitions	40.1

In accordance with IFRS 3 (Revised), the figures above have been amended from those published in the 2015 Annual Report to reflect the working capital receivable of £0.2m relating to the 2015 acquisition of Label Vision Systems.

10. Company information

The financial information included in the full year results announcement does not constitute statutory accounts of the Company for the years ended 31 December 2016 and 2015. Statutory accounts for the year ended 31 December 2015 have been reported on by the Company's auditor and delivered to the Registrar of Companies. Statutory accounts for the year ended 31 December 2016 have been audited and will be delivered to the Registrar of Companies following the Company's Annual General Meeting. The report of the auditors for both years was (i) unqualified, (ii) did not include a reference to any matters to which the auditors drew attention by way of emphasis without qualifying their report, and (iii) did not contain a statement under Section 498 (2) or (3) of the Companies Act 2006.

11. Annual Report

The Annual Report will be made available to shareholders on 15 March 2017, either by post or online, and will be available to the general public on the Company's website at www.spectris.com or on written request to the registered office at Heritage House, Church Road, Egham, Surrey TW20 9QD.