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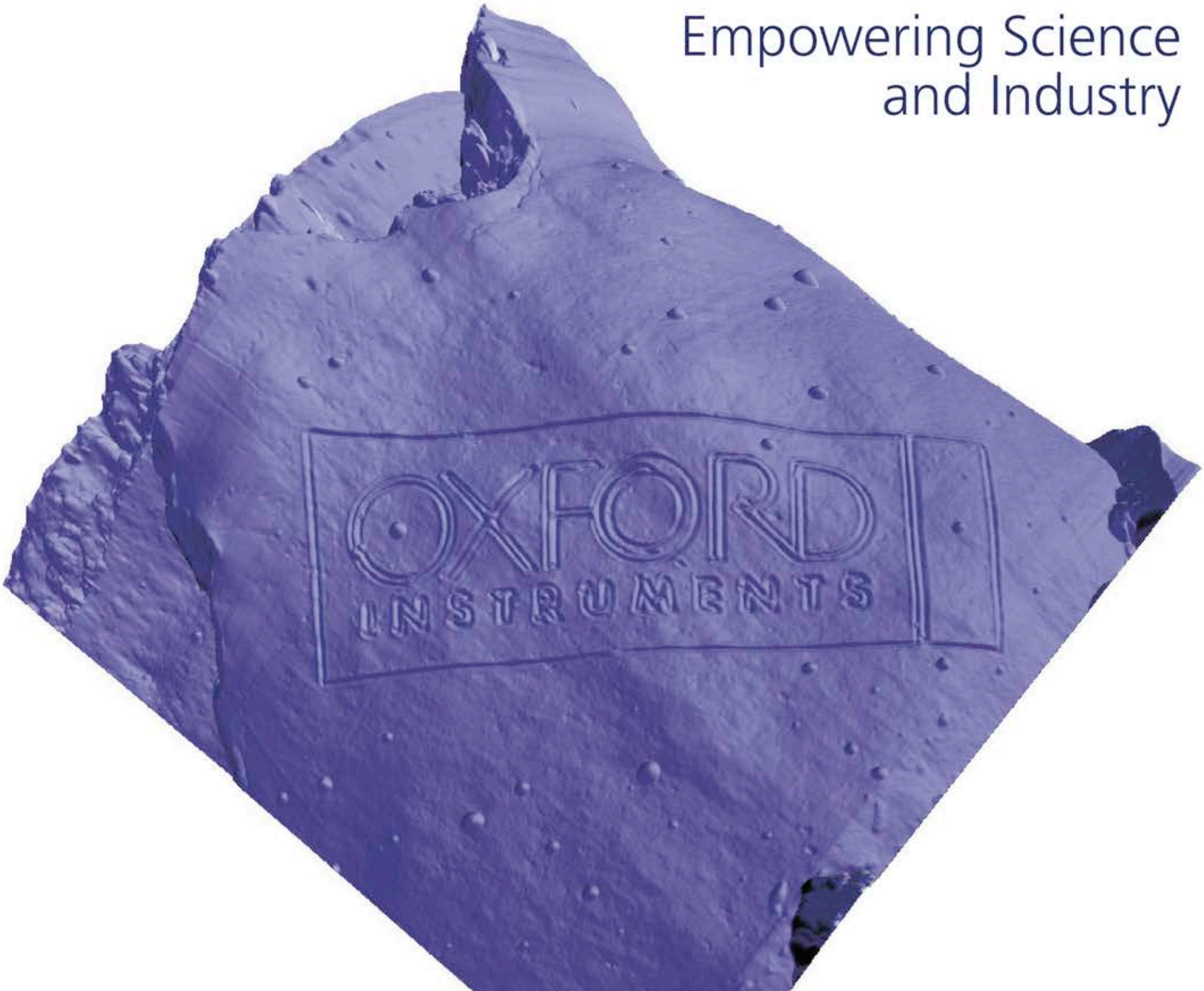

Oxford Instruments plc

Half Year Report September 2016

Chief Executive's Review

Overview

Despite challenging markets, the business has continued to deliver a stable performance in the first half underpinned by growth in NanoTechnology Tools.

Reported revenue was up 4.1% to £171.5 million (2015: £164.8 million) although down 6.9% at constant currency. Adjusted operating profit fell by 5.0% to £19.0 million (2015: £20.0 million) with an increase in profit in NanoTechnology Tools being more than offset by a fall in Service.

The order book (orders for future delivery) at 30 September 2016 increased to £162.2 million, an increase of 18.5% (5.1% at constant currency) compared to September 2015. Constant currency order book grew in NanoTechnology Tools and Service by 7.0% and 14.6% respectively.

Continuing adjusted basic EPS fell by 1.4% to 21.4 pence (2015: 21.7 pence). Basic EPS was a negative 1.2 pence, largely as a result of the mark-to-market of currency hedges.

Net debt at the end of the period increased as expected to £141.1 million (2015: £139.5 million) partly due to an increase in inventory ahead of planned shipments, a reduction in payables and the payment of deferred consideration relating to previous acquisitions.

Turning to the performance of our individual sectors, NanoTechnology Tools saw reported revenue growth of 6.4% to £90.9 million (2015: £85.4 million), adjusted operating profit growth of 17.9% to £11.2 million, with an increase in operating margin of 120 basis points to 12.3%. This performance was achieved as a result of the success of recently launched products, supported by improved efficiencies.

Reported revenue in Industrial Products fell by 5.0% due to the expected revenue decline in the Superconducting Wire business. Revenue growth in the other parts of the sector grew by just over 1.0%, a good performance in the face of challenging end markets. Reported adjusted operating profit fell by £0.3 million to £1.4 million (2015: £1.7 million) in the period, with a fall in profit of £0.9 million within the Superconducting Wire business being partially offset by profit growth in the sector's remaining businesses.

Reported revenue grew by 11.2% in Service to £37.7 million (2015: £33.9 million), driven by increased demand for services relating to our own products. Our OI Healthcare business in the US sells refurbished imaging systems and provides mobile imaging solutions, maintenance services and replacement parts. Performance in the first half was impacted by a lower level of sales of refurbished systems compared to the prior year. This has been driven by both a particularly high level of activity in the prior year but also a recent change in software licensing policy by one of the large original manufacturers. As a result we anticipate a reduction in operating profit from the Healthcare component of our Service division for the full year.

From a customer perspective, our end market segment distribution remained relatively unchanged compared to the previous year, with over half our revenue coming from research and academia.

On a geographical basis, reported revenue grew in Europe and Asia by 5.6% and 14.2% respectively and declined by 5.1% in North America. On a constant currency basis revenue grew by 0.7% in Asia supported by strong growth in China; revenue in Europe and North America declined by 4.2% and 14.7% respectively. The declines in North America and Europe arise predominantly from reduced sales of superconducting wire and lower levels of academic funding.

Whilst we have seen no material direct business impact due to Brexit I have formed a senior committee to continue to monitor and evaluate potential implications of any changing policies or trade agreements.

People

The skills and experience of our people are key to the success of our business. Our thanks go to all our employees for their ongoing commitment, energy and contribution.

As previously reported, Alan Thomson was appointed Chairman following the AGM on 13 September 2016. Alan took over from Nigel Keen, who stepped down after 17 years. Also stepping down from the Board at that time were Jock Lennox and Jennifer Allerton. We would like to thank each of them for their valuable support and contributions during their time with the Group.

R&D

We continue to invest in future products for our customers, and in the period we have increased our investment in R&D initiatives by 11.9% to £15.1 million (2015: £13.5 million).

Dividends

The Board has declared an interim dividend of 3.7 pence per share (2015: 3.7 pence), in line with last year.

Delivering sustainable growth

In my first six months as Chief Executive I have focused on identifying the priorities that will enable us to return to long-term sustainable growth. I remain confident that the increasing role of nanotechnology in both research and the broadening range of industrial markets will provide long-term structural growth for our products. In order to translate this opportunity into long-term shareholder value I have identified a number of areas for improvement that we will make core capabilities across the Group.

Customer and Market Focus

We will enhance our approach to develop even deeper relationships with our customers to ensure our products better meet their current and future needs. This will enable us to enhance our capabilities and better identify growth trends in both existing and new market segments where we can provide increased value to our customers. We will increasingly focus our capital investment and sales efforts to align with customer needs and market trends where we have the opportunity to build sustainable market-leading positions.

Innovation and New Product Development

We will continue to build on our heritage of product innovation investing in our customers' future, aligning our R&D roadmaps with their needs. We will increase the exploitation of our technical capabilities and synergies across the Group to create new opportunities and enhance our new product delivery.

Delivering Enhanced Product Solutions

We will create more value for our customers by increasingly offering enhanced product solutions that allow them to achieve their outcomes more efficiently and effectively. For some of our customers this will mean the presentation of results without the need for further interpretation or intervention. For other customers this will mean higher performing, easier to use instruments that will increase their capabilities and productivity. By way of example, our NanoScience business is increasingly providing complete measurement systems, not just the cryogenic hardware.

Delivering Operational Excellence

We will make operational excellence a core capability across the Group. This includes how we manufacture and deliver our products and services to our customers. In combination with our leading products, this will provide the opportunity to drive efficiencies and productivity gains to enhance our customers' experiences and our profitability.

Current Trading and Outlook

The increased role of nanotechnology in both life and physical sciences will continue to yield long-term sustainable growth in the demand for our high technology solutions and services for use in research and a broad range of industrial applications. We will continue to invest in growing the business in our core markets while further expanding into life sciences and other application areas where we can create value for our customers.

Revenue and order book are ahead of last year, but given continued slower academic funding in the US and Europe, and lower sales in our OI Healthcare business, the Board expects the Group to deliver a current year performance in line with last year.

Looking further ahead, assuming no change to current foreign exchange rates and assuming a constant mix of currency results, we expect a benefit from currency of approximately £7.0 million to operating profit in the 2017/18 financial year.

Operations Review

Our Group reports in three sectors: NanoTechnology Tools, Industrial Products and Service.

NanoTechnology Tools

	2016 £m	2015 £m	Growth	Constant Currency Growth[1]
Revenue	**90.9**	85.4	6.4%	(4.9%)
Adjusted[2] Operating Profit	**11.2**	9.5		
Adjusted[2] Operating Margin	**12.3%**	11.1%		

[1]Excludes foreign exchange
[2]Details of adjusting items can be found in Note 2 of these Financial Statements

The NanoTechnology Tools sector produces our highest technology products, which are sold primarily to academic and industrial research customers. Over three quarters of the revenues of the products and associated services within this sector come from research and academia with over a quarter of this coming from biological sciences. Our customers in this sector are exploring fundamental science through to the practical application of nanotechnology, in a broad range of customer application segments. In the physical and life science research fields, our tools are used to advance the frontiers of science, and we count many Nobel laureates amongst our customers. Our relationships with customers working on breakthrough applications in research and industry allow us to gain insight into future commercial areas. This informs our roadmaps, ensuring we continue to offer the most relevant range of products for the broad base of research and industrial customers with whom we work.

The NanoTechnology Tools sector comprises two divisions: NanoCharacterisation, which includes NanoAnalysis, Andor Technology and Asylum Research; and NanoSolutions, which includes NanoScience, Plasma Technology and our minority share in the ScientaOmicron JV.

Our NanoTechnology Tools sector continues to show improvement, with increased profitability despite a backdrop of reduced funding in academic markets. The slow release of academic funding and weaker industrial markets are particularly impacting order intake in the Americas and Eastern Europe. We continue to see strong growth in China as the move to a higher technology economy continues to drive the demand for high performance products. Whilst overall academic funding remains subdued, we see continued demand in the nanotechnology arena, with particular growth in the newly emerging quantum technology segment. The strength of our brand and the ongoing success of our recent product launches have allowed us to maintain pricing in these challenging market conditions, driving improved profitability across the sector. Our focus on solutions that offer increased performance and ease of use is creating more value for our customers, providing them with additional information and higher productivity.

Our NanoAnalysis business delivers leading-edge solutions and services that enable materials characterisation and sample manipulation at the nano scale. Our products are used on electron microscopes and ion-beam systems in academic institutions and industrial applications including semi-conductors, renewable energy, mining, metallurgy and forensics. NanoAnalysis continues to deliver a strong technical and financial performance. We are creating more value for our customers by providing application specific solutions that tackle new and emerging industrial applications in steels and metals manufacturing, and precision manufacturing. We have extended our AZtec range of automated particle analysis products to address specific applications for contamination control in the automotive and data storage industries. AZtecClean supports automotive manufacturers in certifying the cleanliness of their parts according to the ISO 16232 standard. AZtecHPA allows the identification of nano sized particles that cause hard disk failures with a proprietary classification scheme enabling the identification of contamination back to the source and supplier. This provides higher productivity levels and improved consistency of results between suppliers.

Andor Technology is a global leader in the design and manufacture of high performance scientific imaging cameras, spectroscopy solutions and microscopy systems for research and industrial markets. Andor continues to show good progress in the year driven by the continued success of strong product launches and a focus on ongoing efficiencies across the business. We have completed the transfer and integration of our Canadian production facility and commenced shipping these products from Belfast. We continue to improve our camera performance in our physical science markets and have built on our world class sCMOS knowhow to deliver the iStar sCMOS camera. We recently launched our flagship 3D microscopy platform, Dragonfly, which resolves many of the barriers life science researchers face when using conventional confocal microscopy. Dragonfly lets researchers capture sharper and higher contrast images at high speeds, something they have never been able to do before. Dragonfly utilises our unique optical illumination system combined with our sensitive cameras to deliver unprecedented performance, resolution and sensitivity. The lower light level causes less sample damage, which is critical to cancer researchers who need to visualise deep into their samples, enabling more accurate data analysis. In addition, the uniformed illumination combined with acquisition speed enables researchers working with brain samples to practically capture images across large samples with sufficient resolution and integrity. Dragonfly uses our new software platform, Fusion, providing ease of use and immediate visual feedback of acquired images.

Asylum Research is the technology leader in atomic force microscopy (AFM) for both materials and bioscience applications. Asylum has been particularly impacted by the slowdown in research funding in US and European markets. This has resulted in a contraction in the overall scanning probe microscopy (SPM) market and we have made appropriate reductions to the cost base as a result. Despite this, we continue to invest in Asylum as we see good growth potential through a broader range of platforms and solutions for our customers. We have added electrochemical capabilities to our Cypher AFM to provide the best platform for those undertaking research into batteries and energy storage devices. Cypher offers superior environmental control and unprecedented imaging resolution, of great importance within this area of research. A recent Nobel Prize winner is using our AFM for his current research into new flexible materials that could be used for applications such as wearable electronics and other flexible nano-devices. As our AFMs continue to be used by customers needing the highest performing systems, we are looking at how we can offer this level of performance to a broader range of customers.

Plasma Technology provides material etch and deposition processes and solutions to semi-conductor research laboratories and advanced specialised production facilities that develop devices and materials for novel applications in nanotechnology. Recovery in the Plasma business is starting to gain momentum, with a stronger order intake in the first half of the year. We have shifted our focus and capabilities to provide customers with the broader range of processes they need to give them the capabilities they are searching for. Growth was seen in the US, while European markets remained stable with increasing opportunities in Asia. We are seeing increased market interest in the recently enhanced PlasmaPro 100 largely due to its wide range of processes and its flexibility. As an extension to this product, the new Polaris tool is gaining ground with highly competitive process performance, especially for the etching of silicon carbide for power semiconductor applications.

NanoScience designs, manufactures and supports market-leading research tools that enable quantum technologies, new materials and device development in the physical sciences. We have increased revenues driven by the strength of sales of our recently launched next generation Triton and Optistat Dry products, primarily linked to increased global funding in quantum technologies, cementing our market and technical leadership. Product, engineering consultancy and service revenues all improved on the same period last year. We continue to provide higher value for our research customers through increased productivity, throughput and integrated measurement systems, providing a solution to our customers working in quantum technologies and physical sciences at low and ultra-low temperatures.

The ScientaOmicron joint venture created the largest player in the Ultra-High Vacuum surface science field. The integration and ongoing restructuring of ScientaOmicron continues in line with expectations. The financial performance is improving and continuing to make good progress toward profitability. The Group has a 47% share in the joint venture.

Industrial Products

	2016 £m	2015 £m	Growth	Constant Currency Growth[1]
Revenue	**43.7**	46.0	(5.0%)	(14.3%)
Adjusted[2] Operating Profit	**1.4**	1.7		
Adjusted[2] Operating Margin	**3.2%**	3.7%		

[1]Excludes foreign exchange
[2]Details of adjusting items can be found in Note 2 of these Financial Statements

Our Industrial Products sector sells more mature, though still technically advanced, products primarily to industrial customers. 57% of the sector's products and service revenues come from industrial customers who are working in areas such as the environment, construction and energy. In the industrial field, our tools are used to improve production efficiency, ensure high standards of quality control and demonstrate compliance with environmental legislation. The proportion of the revenue from MRI wire continued to decline and now accounts for 29%. Industrial Products comprises the Industrial Analysis, Superconducting Wire and X-ray Technology businesses.

The sector saw a decline in sales due to the reduced demand for superconducting wire from our customers who manufacture MRI systems as previously reported. Continued weakness across the metals and construction markets reduced the demand from our customers in these sectors. However, the launch of new products, combined with improved efficiencies across this sector, has delivered an improved profitability from the Industrial portfolio if we exclude the decline in Superconducting Wire.

Industrial Analysis designs and sells a range of spectrometers into a broad range of industrial markets. Our customers span global industries from metals, steel foundries and scrap recycling through to automotive, solar, petrochemicals, cement, recycling, and food and agriculture. Our customers continue to be impacted by declining commodity and oil prices. However, despite the difficult trading conditions we continue to make margin improvements through our new product introductions, improved routes to market and further business efficiencies. Our new products include a new nuclear magnetic resonance (NMR) analyser, the GeoSpec 12, offering improved shale measurements, expanding our range of industry-leading rock core analysers. We continue to focus on operational excellence and are working to maximise uptime for our industrial customers. We have seen an increase in the sales of our Pulsar benchtop NMR spectroscopy system across academic customers and a broad range of industrial applications. We have recently launched the Hero™ window for our handheld XRF analysers, allowing hot samples up to 400°C to be directly analysed for alloying elements, minimising the downtime previously required to let samples cool before analysis.

Our Superconducting Wire business supplies wire for customers manufacturing MRI scanners and those working in high magnetic field research and National and International science facilities. During the first half of the year we successfully completed the supply of the last batch of MRI wire to an OEM and renegotiated the future long-term supply of wire with another MRI manufacturer. The long-term market fundamentals remain challenging with continued pricing pressures and uncertainty regarding the funding of large international facilities.

Our X-ray Technology business supplies X-ray sources for industry, research and medical applications including material composition analysis, real time medical imaging and analysis of multi-layer printed circuit boards. We have increased revenues in the period and continue to see interest in our integrated X-ray sources from medical applications and electronic OEM customers. We, however, continue to be impacted by softening in our industrial customers' end markets.

Service Sector

	2016 £m	2015 £m	Growth	Constant Currency Growth[1]
Revenue	**37.7**	33.9	11.2%	(0.9%)
Adjusted[2] Operating Profit	**6.4**	8.8		
Adjusted[2] Operating Margin	**17.0%**	26.0%		

[1]Excludes foreign exchange
[2]Details of adjusting items can be found in Note 2 of these Financial Statements

The Service sector comprises the Group's maintenance service contracts, billable repairs and spare part sales for Oxford Instruments' own products; and the service, sale and rental of refurbished third party MRI and CT machines under the OI Healthcare brand.

Our OI Healthcare business in the US sells refurbished imaging systems and provides mobile imaging solutions, maintenance services and replacement parts. Performance in the first half was impacted by a lower level of sales of refurbished systems compared to the prior year, which we expect to continue. This has been driven by both a particularly high level of activity in the prior year but also a recent change in software licensing policy by one of the large original manufacturers. As a result we anticipate a reduction in operating profit from the Healthcare component of our Service division for the full year.

We continue to see an increase in our revenues from the support and additional services related to our own products in NanoTechnology Tools and Industrial Products. We are focusing on expanding the range of services we offer customers. This includes the recent launch of new consumable webstores in the USA, Europe and China. These, alongside our existing webstores, enable customers to easily find and purchase consumables, services and training for both our products and other related activities.

Finance Review

The business had a stable performance in the first half of 2016. Reported revenue grew by 4.1% to £171.5 million (2015: £164.8 million), with adjusted operating profit declining by 5.0% to £19.0 million (2015: £20.0 million). Revenue, excluding currency effects, declined by 6.9%, with the movement in average currency exchange rates over the last year positively impacting reported revenue by £18.0 million. Orders during the period were broadly flat at £181.4 million (2015: £183.9 million). At the end of the period the Group order book for future deliveries stood at £162.2 million (2015: £136.9 million), growth of 18.5% (5.1% at constant currency).

Adjusted operating profit, excluding currency effects, declined by 13.5%. Adjusted operating margin fell by 100 basis points to 11.1% (2015: 12.1%), due to a fall in margin from our Service sector arising from lower Healthcare sales and a reduction in profitability from our Superconducting Wire business. Adjusted operating profit includes realised losses on the maturity of currency hedges resulting from the devaluation of Sterling against the US Dollar, Euro and Japanese Yen since the inception of the hedges.

Non-recurring items and acquisition related costs were £1.7 million and the mark-to-market valuation of currency hedges in place was a loss of £6.4 million.

Adjusted profit before tax of £15.7 million (2015: £16.3 million) represents a margin of 9.2% (2015: 9.9%). A loss before tax of £0.5 million (2015: profit of £6.1 million) is after the mark-to-market of unrealised currency hedges.

Continuing adjusted basic earnings per share fell by 1.4% to 21.4 pence (2015: 21.7 pence). Earnings per share was a loss of 1.2 pence (2015: 4.9 pence).

Cash generated from operations fell by 68.4% to £3.7 million, primarily due to an increase in inventories ahead of planned shipments and a reduction in payables. Adjusted operating cash (defined as adjusted EBITDA, less working capital, capitalised research & development and capital expenditure) represents 10.5% (2015: 69.5%) of adjusted operating profit. Free cash flow declined to £0.4 million (2015: £7.5 million). Deferred consideration paid in the first half of this year and the increase in working capital led to an increase in net debt to £141.1 million from £128.2 million at the year end, representing a net debt to EBITDA ratio (for banking covenant purposes) of 2.6 times, comfortably within our banking covenant of 3.5 times.

Adjusted operating profit is stated before amortisation of acquired intangibles, non-recurring items and acquisition-related costs, and the mark-to-market valuation of unrealised currency hedges.

1. Income statement

The Group's income statement is summarised below.

Table 1: Income statement

	Half year to 30 September 2016 £m	Half year to 30 September 2015 £m	Change
Revenue	**171.5**	164.8	+4.1%
Gross profit	**82.7**	75.3	+9.8%
Administrative expenses	**(63.7)**	(55.3)	
Adjusted operating profit	**19.0**	20.0	-5.0%
Net finance costs	**(3.3)**	(3.7)	
Adjusted profit before tax	**15.7**	16.3	-3.7%
Amortisation of acquired intangibles	**(8.1)**	(8.4)	
Non-recurring items and acquisition-related costs	**(1.7)**	(2.6)	
Mark-to-market of currency hedges	**(6.4)**	0.8	
(Loss)/profit before tax	**(0.5)**	6.1	
Tax	**(0.2)**	(3.1)	
(Loss)/profit for the period	**(0.7)**	3.0	
Effective tax rate[1]	**22.3%**	23.9%	
Continuing adjusted earnings per share – basic	**21.4p**	21.7p	-1.4%
Continuing adjusted earnings per share – diluted	**21.3p**	21.6p	-1.4%
Earnings per share – basic	**(1.2)p**	4.9p	n/a
Earnings per share – diluted	**(1.2)p**	4.9p	n/a
Dividend per share	**3.70p**	3.70p	

[1] The effective tax rate is calculated excluding amortisation on acquired intangibles, non-recurring items and acquisition-related costs, and the mark-to-market of financial derivatives

1.1 Revenue

Reported revenue of £171.5 million (2015: £164.8 million) increased by 4.1%. NanoTechnology Tools and Service grew by 6.4% and 11.2% respectively while Industrial Products declined by 5.0%.

The depreciation of Sterling against the US Dollar, Euro and Japanese Yen has increased reported revenue by £18.0 million. Revenue growth, excluding currency effects, showed a decline of 6.9% with NanoTechnology Tools declining by 4.9%, Service by 0.9% and Industrial Products by 14.3%.

At constant currency, revenue grew by 0.7% in Asia with strong growth in China. Revenue in Europe, North America and Rest of World declined by 4.2%, 14.7% and 23.8% respectively.

The transfer of our Omicron business into a joint venture, ScientaOmicron, led to a reduction in revenue of £2.0 million compared to the comparative period as under equity accounting we no longer consolidate the joint venture's revenue.

1.2 Gross profit

Gross profit grew by 9.8% to £82.7 million (2015: £75.3 million), representing a gross profit margin of 48.2%, an increase of 250 basis points over last year. At constant currency, gross margin was 47.3%, an increase of 160 basis points.

1.3 Operating profit

Adjusted operating profit declined by 5.0% to £19.0 million (2015: £20.0 million), representing an adjusted operating profit margin of 11.1%, a decrease of 100 basis points against last year. The NanoTechnology Tool margin rose by 120 basis points to 12.3% (2015: 11.1%) while lower Healthcare sales led to margin falling in Service to 17.0% (2015: 26.0%). A reduction in profit made by the Superconducting Wire business led to fall in margin in Industrial Products of 50 basis points to 3.2% (2015: 3.7%). Adjusted operating profit includes realised losses on the maturity of currency hedges resulting from the devaluation of Sterling against the US Dollar, Euro and Japanese Yen since the inception of the hedges.

Our ScientaOmicron joint venture showed a loss of £0.5 million in the period, an improvement of £1.0 million against the comparative period (which includes four months when the joint venture was in operation and two months when Omicron was a 100% subsidiary of the Group).

Currency effects (including the impact of transactional currency hedging) have increased reported adjusted operating profit by £1.7 million when compared to blended hedged exchange rates for the comparative period. Blended hedged exchange rates for the US Dollar, Euro and Japanese Yen against Sterling are all at stronger rates than last year.

At constant currency the adjusted operating profit margin was 11.3%, a decline of 80 basis points.

1.4 Non-recurring items and acquisition related costs

Net non-recurring items and acquisition-related costs during the period were £1.7 million. Acquisition related costs were £0.9 million comprising professional fees and final deferred consideration (including the unwind of discount) on financial commitments made by Andor Technology (‘Andor’) prior to its acquisition by Oxford Instruments. In the period we have written down development costs of £0.7 million on a specific project that has been stopped as we focus and direct resources so as to accelerate key projects. The ScientaOmicron joint venture incurred restructuring costs in the period of £0.1 million.

The Group uses derivative products to hedge its exposure to fluctuations in foreign exchange rates. It is Group policy to have in place at the beginning of the financial year hedging instruments to cover 80% of its forecast transactional exposure for that year. The Group has decided that the additional costs of meeting the extensive documentation requirements of IAS 39 to apply hedge accounting to these foreign exchange hedges cannot be justified. Accordingly, the Group does not use hedge accounting for these derivatives.

Net movements on marking-to-market such derivatives at the balance sheet date are disclosed in the Income Statement as financial expenditure and excluded from our calculation of adjusted profit before tax.

The mark-to-market loss in respect of derivative financial instruments was £6.4 million (2015: £0.8 million gain). This reflects the fair value on currency derivatives that are hedging future transactional currency exposures for the Group. The unrealised loss is attributable to a fall in the value of Sterling at the balance sheet date against the US Dollar, Euro and Japanese Yen, against a blended rate achieved on forward contracts that will mature over the next eighteen months.

1.5 Net finance costs

The Group’s net finance costs fell by £0.4 million to £3.3 million (2015: £3.7 million) with finance charges falling by £0.3 million to £2.8 million, pension financing charges falling by £0.2 million to £0.6 million and financial income falling by £0.1 million.

1.6 Profit before tax

Adjusted profit before tax fell by 3.7% to £15.7 million (2015: £16.3 million). The adjusted profit before tax margin declined 70 basis points to 9.2% (2015: 9.9%).

A loss before tax of £0.5 million (2015: profit of £6.1 million) is after the mark-to-market charge on derivative financial instruments of £6.4 million.

1.7 Amortisation of acquired intangibles

Amortisation of acquired intangibles of £8.1 million relates to intangible assets identified on acquisitions, being the value of technology, customer relationships and brands.

1.8 Tax

The tax charge (excluding tax on non-recurring items and on the amortisation of acquired intangibles) of £3.5 million (2015: £3.9 million) represents an effective tax rate of 22.3% (2015: 23.9%). The decrease is due to a change in the proportional mix in territories where profits are generated.

1.9 Earnings per share (EPS)

Continuing adjusted basic earnings per share and continuing adjusted diluted earnings per share, after adjusting for amortisation of intangibles and non-recurring items, decreased by 1.4%. After amortisation of acquired intangibles, non-recurring items and acquisition related costs (including the mark-to-market of derivative financial instruments), basic and diluted earnings per share were both a negative 1.2 pence.

Undiluted weighted average shares have stayed flat at 57.1 million.

2.0 Foreign Exchange

The Group faces transactional and translational currency exposure, most notably against the US Dollar, Euro and Japanese Yen. For the first half of the year, approximately 10% of Group revenue was denominated in Sterling, 61% in US Dollars, 16% in Euros, 8% in Japanese Yen and 5% in other currencies. The Group has both translational and transactional exposure. Translational exposures arise on the consolidation of overseas company results into Sterling. Transactional exposures arise where the currency of sale or purchase transactions differs from the functional currency in which each company prepares its local accounts.

The Group maintains a hedging programme against its net transactional exposure using internal projections of expected currency trading transactions expected to arise over a period extending from 12 to 24 months. As at 30 September 2016 the Group had currency hedges in place extending up to 18 months forward.

We have seen recent weakening of Sterling against our major trading currencies. If currencies were to continue at current levels and assuming a constant mix of currency results, we expect a currency benefit of approximately £7 million to operating profit in the 2017/18 financial year.

2. Dividend

The Group's policy is to increase the total dividend each year in line with the increase in underlying earnings. As adjusted basic earnings per share were at a similar level to last year, the Board has declared an interim dividend of 3.7 pence, in line with last year. The dividend will be paid on 7 April 2017 to shareholders on the register as at 10 March 2017.

3. Cash flow

The Group cash flow is summarised below.

Table 2: Cash flow

	Half year to 30 September 2016 £m	Half year to 30 September 2015 £m
Adjusted operating profit	**19.0**	20.0
Non-cash items	**5.7**	4.7
Adjusted EBITDA	**24.7**	24.7
Working capital movement	**(17.0)**	(5.3)
Acquisition related costs paid	**(0.8)**	(1.2)
Restructuring costs	**-**	(3.5)
Pension scheme payments above charge to op. profit	**(3.5)**	(3.3)
Equity settled share schemes	**-**	0.2
Loss on disposal of plant and equipment	**0.3**	0.1
Cash generated from operations	**3.7**	11.7
Interest	**(2.6)**	(2.8)
Tax	**(0.7)**	(1.4)
Free cash flow	**0.4**	7.5
Capitalised development expenditure	**(4.0)**	(3.3)
Expenditure on tangible and intangible assets	**(2.0)**	(2.3)
Acquisition of subsidiaries, net of cash acquired	**(6.8)**	(15.6)
Increase in long term receivables	**-**	(3.1)
Dividends paid	**(2.1)**	(2.1)
Increase in borrowings	**11.6**	10.8
Net decrease in cash and cash equivalents from continuing operations	**(2.9)**	(8.1)

Note: Adjusted EBITDA is earnings before interest, tax, depreciation, intangible amortisation, mark-to-market of financial derivatives and other non-cash items

3.1 Cash generated from operations

Cash generated from operations in the year decreased by 68.4% to £3.7 million (2015: £11.7 million). Adjusted operating cash (defined as adjusted EBITDA, less working capital, capitalised research & development and capital expenditure) represents 10.5% (2015: 69.5%) of adjusted operating profit due to an outflow of working capital over the period. Free cash flow declined to £0.4 million (2015: £7.5 million).

The business normally experiences a working capital outflow in the first half of the year resulting in a cash conversion rate much lower than seen at the year end. This half year cash conversion has been impacted by three principal factors. First, an increase in inventories of £5.0 million reflects work in progress and inventory building prior to the second half across NanoTechnology Tools and Industrial Products, in line with anticipated shipments. Second, within the Healthcare business we have had a build up of refurbished imaging system inventory prior to sale or rental in the second half of the year. Finally, we have experienced a reduction in payables due to phasing of payments compared to the year end and, in addition, within our optical microscopy business, we transferred a significant manufacturing component from an external supplier to self manufacture, resulting in a one-off reduction this year of £2.0 million in payables.

3.2 Interest

Net interest paid was £2.6 million (2015: £2.8 million), broadly in line with last year.

3.3 Tax

Tax paid was £0.7 million (2015: £1.4 million), the reduction reflecting utilisation of brought forward tax losses.

3.4 Investment in research and development (R&D)

Total cash spend on R&D in the year was £15.1 million, equivalent to 8.8% of revenue, (2015: £13.5 million, 8.2% of revenue). A reconciliation between the amounts charged to the Income Statement and the cash spent is given below:

Table 3: Investment in research and development (R&D)

	Half year to 30 September 2016 £m	Half year to 30 September 2015 £m
R&D expense charged to the Income Statement	**13.3**	11.8
Less: depreciation of R&D related fixed assets	**(0.4)**	(0.4)
Add: amounts capitalised as fixed assets	**0.2**	0.4
Less: amortisation of R&D costs capitalised as intangibles	**(2.0)**	(1.6)
Add: amounts capitalised as intangible assets	**4.0**	3.3
Total cash spent on R&D during the year	**15.1**	13.5

3.5 Financing

The increase in borrowings reflects the draw-down of debt on our multi-currency revolving credit facility.

4. Acquisitions

Acquisition of subsidiaries relates to the final payment of deferred consideration of US$ 10.1 million (£6.5 million) for Medical Imaging Resources, Inc ('MIR') and £0.3 million attributable to the purchase of Asylum Research Corporation ('Asylum').

5 Net debt and funding

5.1 Net debt

Net debt increased in the period from £128.2 million to £141.1 million. Free cash flow of £0.4 million was before acquisition payments, capital and expenditure, capitalised research and development, and dividend payments. Expenditure of £6.8 million relates to deferred consideration payable for MIR and Asylum. The Group invested in tangible and intangible assets of £2.0 million and capitalised research and development of £4.0 million.

In October 2016 we paid deferred consideration of Canadian Dollar 5.0 million (£3.1 million) on financial commitments made by Andor. Net debt at the end of the 2016/17 financial year is expected to be marginally above the previous financial year.

Table 4: Movement in net debt

	£m
Net debt as at 31 March 2016	**128.2**
Free cash flow	(0.4)
Capital expenditure on tangible and intangible assets	2.0
Capitalised development expenditure	4.0
Acquisitions, net of cash acquired and loan to associate	6.8
Dividends paid	2.1
Foreign exchange	(1.6)
Net debt as at 30 September 2016	**141.1**

5.2 Funding

The Group has in place an unsecured multi-currency revolving facility agreement which is committed until February 2020. The facility has been entered into with a group of three banks and comprises a Sterling denominated multi-currency facility of £100 million and a US Dollar denominated multi-currency facility of $37.0 million.

The Group has also issued a bilateral private placement note of £44.5 million, which matures in 2021 and a £25.0 million amortising fixed rate loan from the European Investment Bank that matures in 2020. In addition, the Group has uncommitted facilities of £21.2 million.

Debt covenants are net debt to EBITDA less than 3.5 times, reducing to 3.0 times from 31 March 2017 thereafter, and EBITDA to interest greater than 4.0 times. As at 30 September 2016 net debt to EBITDA was at 2.6 times and EBITDA to interest was 9.5 times.

6 Pensions

The Group has defined benefit pension schemes in the UK and USA. Both have been closed to new entrants since 2001 and closed to future accrual from July 2010.

At 30 September 2016, the net liability arising from our defined benefit scheme obligations was £47.5 million (2015 year end: £35.0 million), an increase of £12.5 million. Macroeconomic conditions have resulted in a fall in bond yields leading to a reduction in the discount rate and an increase in liabilities. An increase in the value of scheme assets has partially offset the movement in liabilities.

7.0 Forward-Looking Statements

This document contains certain forward-looking statements. The forward-looking statements reflect the knowledge and information available to the Company during the preparation and up to the publication of this document. By their very nature, these statements depend upon circumstances and relate to events that may occur in the future thereby involving a degree of uncertainty. Therefore, nothing in this document should be construed as a profit forecast by the Company.

Gavin Hill
Group Finance Director
15 November 2016

Condensed Consolidated Statement of Income

Half year ended 30 September 2016 – unaudited

	Notes	Half Year to 30 Sept 2016 Adjusted £m	Half Year to 30 Sept 2016 Adjusting items* £m	Half Year to 30 Sept 2016 Total £m	Half Year to 30 Sept 2015 Adjusted £m	Half Year to 30 Sept 2015 Adjusting items* £m	Half Year to 30 Sept 2015 Total £m
Revenue	3	**171.5**	—	**171.5**	164.8	—	164.8
Cost of sales		**(88.8)**	—	**(88.8)**	(89.5)	—	(89.5)
Gross profit		**82.7**	—	**82.7**	75.3	—	75.3
Research and development	4	**(13.3)**	**(0.7)**	**(14.0)**	(11.8)	—	(11.8)
Selling and marketing		**(31.0)**	—	**(31.0)**	(28.3)	—	(28.3)
Administration and shared services		**(15.5)**	**(8.8)**	**(24.3)**	(15.6)	(13.3)	(28.9)
Share of loss of associate, net of tax		**(0.4)**	**(0.1)**	**(0.5)**	—	(0.2)	(0.2)
Other operating income		—	—	—	—	3.2	3.2
Foreign exchange (loss)/gain		**(3.5)**	—	**(3.5)**	0.4	—	0.4
Operating profit		**19.0**	**(9.6)**	**9.4**	20.0	(10.3)	9.7
Other financial income		**0.1**	—	**0.1**	0.2	0.8	1.0
Financial income		**0.1**	—	**0.1**	0.2	0.8	1.0
Interest charge on pension scheme net liabilities		**(0.6)**	—	**(0.6)**	(0.8)	—	(0.8)
Other financial expenditure		**(2.8)**	**(6.6)**	**(9.4)**	(3.1)	(0.7)	(3.8)
Financial expenditure		**(3.4)**	**(6.6)**	**(10.0)**	(3.9)	(0.7)	(4.6)
(Loss)/profit before income tax from continuing operations	3	**15.7**	**(16.2)**	**(0.5)**	16.3	(10.2)	6.1
Income tax (expense)/credit	8	**(3.5)**	**3.3**	**(0.2)**	(3.9)	0.8	(3.1)
(Loss)/profit for the period from continuing operations		**12.2**	**(12.9)**	**(0.7)**	12.4	(9.4)	3.0
Loss from discontinued operations after tax		—	—	—	(0.3)	—	(0.3)
(Loss)/profit for the period attributable to equity holders of the parent		**12.2**	**(12.9)**	**(0.7)**	12.1	(9.4)	2.7
		pence		**pence**	pence		pence
Earnings per share							
Basic earnings per share	9						
From continuing operations		**21.4**		**(1.2)**	21.7		5.3
From discontinued operations		—		—	(0.4)		(0.4)
From (loss)/profit for the period		**21.4**		**(1.2)**	21.3		4.9
Diluted earnings per share	9						
From continuing operations		**21.3**		**(1.2)**	21.6		5.2
From discontinued operations		—		—	(0.3)		(0.3)
From loss/profit for the period		**21.3**		**(1.2)**	21.3		4.9
Dividends per share							
Dividends paid	10			**3.70**			3.70
Dividends proposed	10			**3.70**			3.70

* Adjusted numbers are stated to give a better understanding of the underlying business performance. Details of adjusting items can be found in note 2 of this Half Year Report.

Condensed Consolidated Statement of Income

Half year ended 30 September 2016 – unaudited

	Notes	Year to 31 March 2016 Adjusted £m	Adjusting items* £m	Total £m
Revenue	3	***361.6***	—	***361.6***
Cost of sales		(199.7)	(1.0)	(200.7)
Gross profit		161.9	(1.0)	160.9
Research and development	4	(24.6)	—	(24.6)
Selling and marketing		(59.8)	—	(59.8)
Administration and shared services		(33.4)	(23.0)	(56.4)
Share of loss of associate, net of tax		(0.2)	(1.3)	(1.5)
Other operating income		—	4.9	4.9
Foreign exchange gain		0.7	—	0.7
Operating profit		***44.6***	***(20.4)***	***24.2***
Other financial income		—	—	—
Financial income		—	—	—
Interest charge on pension scheme net liabilities		(1.7)	—	(1.7)
Other financial expenditure		(5.9)	(3.5)	(9.4)
Financial expenditure		***(7.6)***	***(3.5)***	***(11.1)***
Profit before income tax from continuing operations		***37.0***	***(23.9)***	***13.1***
Income tax (expense)/credit	8	(8.9)	5.0	(3.9)
Profit for the period from continuing operations		***28.1***	***(18.9)***	***9.2***
Loss from discontinued operations after tax		(0.3)	(1.9)	(2.2)
Profit for the period attributable to equity holders of the parent		***27.8***	***(20.8)***	***7.0***
Earnings per share				
Basic earnings per share	9			
From continuing operations		49.2		16.1
From discontinued operations		(0.5)		(3.9)
From profit for the period		48.7		12.2
Diluted earnings per share	9			
From continuing operations		49.1		16.1
From discontinued operations		(0.5)		(3.8)
From profit for the period		48.6		12.3
Dividends per share				
Dividends paid	10			13.0
Dividends proposed	10			13.0

*Adjusted numbers are stated to give a better understanding of the underlying business performance. Details of adjusting items can be found in note 2 of this Half Year Report.

Condensed Consolidated Statement of Comprehensive Income

Half year ended 30 September 2015 - unaudited

	Half year to 30 Sept 2016 £m	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
(Loss)/profit for the period	**(0.7)**	2.7	*7.0*
Other comprehensive income/(expense):			
Items that may be reclassified subsequently to profit or loss			
Foreign exchange differences recycled from other comprehensive income on disposal of subsidiary	**—**	1.8	*—*
Foreign exchange translation differences	**14.7**	(2.1)	*5.6*
Net foreign exchange loss on disposal of subsidiaries taken to the Income Statement	**—**	—	*1.2*
Gain/(loss) on effective portion of changes in fair value of cash flow hedges, net of amounts recycled	**0.1**	0.1	*(0.1)*
Tax on items that may be reclassified to profit or loss	**—**	—	*—*
Items that will not be reclassified subsequently to profit or loss			
Remeasurement (loss)/gain in respect of post retirement benefits	**(15.1)**	10.5	*13.6*
Tax on items that will not be reclassified to profit or loss	**2.7**	(2.2)	*(2.6)*
Total other comprehensive income	**2.4**	8.1	*17.7*
Total comprehensive income for the period attributable to equity shareholders of the parent	**1.7**	10.8	*24.7*

Condensed Consolidated Statement of Changes in Equity

Half year ended 30 September 2016 – unaudited

	Share capital £m	Share premium account £m	Other reserves £m	Foreign exchange translation reserve £m	Retained earnings £m	Total £m
Balance at 1 April 2016	**2.9**	**61.5**	**0.1**	**9.7**	**68.8**	**143.0**
Total comprehensive income:						
Loss for the period	**—**	**—**	**—**	**—**	**(0.7)**	**(0.7)**
Other comprehensive income:						
– Foreign exchange translation differences	**—**	**—**	**—**	**14.7**	**—**	**14.7**
– Gain on effective portion of changes in fair value of cash flow hedges, net of amounts recycled	**—**	**—**	**0.1**	**—**	**—**	**0.1**
– Remeasurement loss in respect of post-retirement benefits	**—**	**—**	**—**	**—**	**(15.1)**	**(15.1)**
– Tax on items recognised directly in other comprehensive income	**—**	**—**	**—**	**—**	**2.7**	**2.7**
Total comprehensive income/(expense) attributable to equity shareholders of the parent	**—**	**—**	**0.1**	**14.7**	**(13.1)**	**1.7**
Transactions with owners recorded directly in equity:						
– Credit in respect of employee service costs settled by award of share options	**—**	**—**	**—**	**—**	**—**	**—**
– Dividends payable	**—**	**—**	**—**	**—**	**(7.4)**	**(7.4)**
Total transactions with owners recorded directly in equity:	—	—	—	—	**(7.4)**	**(7.4)**
Balance at 30 September 2016	**2.9**	**61.5**	**0.2**	**24.4**	**48.3**	**137.3**

	Share capital £m	Share premium account £m	Other reserves £m	Foreign exchange translation reserve £m	Retained earnings £m	Total £m
Balance at 1 April 2015	**2.9**	**61.5**	**0.2**	**2.9**	**58.0**	**125.5**
Total comprehensive income:						
Profit for the period	—	—	—	—	**2.7**	**2.7**
Other comprehensive income:						
– Foreign exchange differences recycled from other comprehensive income on disposal of subsidiary	—	—	—	1.8	—	1.8
– Foreign exchange translation differences	—	—	—	(2.1)	—	(2.1)
– Gain on effective portion of changes in fair value of cash flow hedges, net of amounts recycled	—	—	0.1	—	—	0.1
– Remeasurement gain in respect of post-retirement benefits	—	—	—	—	10.5	10.5
– Tax on items recognised directly in other comprehensive income	—	—	—	—	(2.2)	(2.2)
Total comprehensive income/(expense) attributable to equity shareholders of the parent	—	—	**0.1**	**(0.3)**	**11.0**	**10.8**
Transactions with owners recorded directly in equity:						
– Credit in respect of employee service costs settled by award of share options	—	—	—	—	0.2	0.2
– Dividends payable	—	—	—	—	(7.4)	(7.4)
Total transactions with owners recorded directly in equity:	—	—	—	—	**(7.2)**	**(7.2)**
Balance at 30 September 2015	**2.9**	**61.5**	**0.3**	**2.6**	**61.8**	**129.1**

Condensed Consolidated Statement of Changes in Equity

Half year ended 30 September 2016 – unaudited *continued*

	Share capital £m	Share premium account £m	Other reserves £m	Foreign exchange translation reserve £m	Retained earnings £m	Total £m
Balance at 1 April 2015	***2.9***	***61.5***	***0.2***	***2.9***	***58.0***	***125.5***
Total comprehensive income:						
Profit for the year	—	—	—	—	*7.0*	*7.0*
Other comprehensive income:						
– Foreign exchange translation differences	—	—	—	*5.6*	—	*5.6*
– Net foreign exchange loss on disposal of subsidiaries taken to the Income Statement	—	—	—	*1.2*	—	*1.2*
– Loss on effective portion of changes in fair value of cash flow hedges, net of amounts recycled	—	—	*(0.1)*	—	—	*(0.1)*
– Remeasurement gain in respect of post-retirement benefits	—	—	—	—	*13.6*	*13.6*
– Tax on items recognised directly in other comprehensive income	—	—	—	—	*(2.6)*	*(2.6)*
Total comprehensive (expense)/income attributable to equity shareholders of the parent	—	—	***(0.1)***	***6.8***	***18.0***	***24.7***
Transactions with owners recorded directly in equity:						
– Charge in respect of employee service costs settled by award of share options	—	—	—	—	*0.4*	*0.4*
– Dividends payable	—	—	—	—	*(7.6)*	*(7.6)*
Total transactions with owners recorded directly in equity:	—	—	—	—	***(7.2)***	***(7.2)***
Balance at 31 March 2016	***2.9***	***61.5***	***0.1***	***9.7***	***68.8***	***143.0***

Condensed Consolidated Statement of Financial Position

As at 30 September 2016 - unaudited

	Notes	**As at 30 Sept 2016 £m**	As at 30 Sept 2015 £m	*As at 31 March 2016 £m*
Assets				
Non-current assets				
Property, plant and equipment		**36.0**	35.2	*35.2*
Intangible assets		**220.7**	225.8	*220.8*
Investment in associate		**12.6**	14.4	*13.1*
Long-term receivables		**3.6**	3.1	*3.4*
Deferred tax assets		**21.5**	17.8	*19.0*
		294.4	296.3	*291.5*
Current assets				
Inventories		**69.8**	68.8	*61.1*
Trade and other receivables		**79.2**	71.5	*77.5*
Current income tax receivable		**2.4**	4.1	*2.7*
Derivative financial instruments		—	2.3	*1.5*
Assets of discontinued operations held for sale	7	—	1.2	—
Cash and cash equivalents		**20.9**	15.3	*21.8*
		172.3	163.2	*164.6*
Total assets		**466.7**	459.5	*456.1*
Equity				
Capital and reserves attributable to the Company's equity shareholders				
Share capital		**2.9**	2.9	*2.9*
Share premium		**61.5**	61.5	*61.5*
Other reserves		**0.2**	0.3	*0.1*
Translation reserve		**24.4**	2.6	*9.7*
Retained earnings		**48.3**	61.8	*68.8*
		137.3	129.1	*143.0*
Liabilities				
Non-current liabilities				
Bank loans		**154.0**	154.8	*147.0*
Other payables		—	1.2	—
Retirement benefit obligations		**47.5**	40.5	*35.0*
Deferred tax liabilities		**1.8**	7.1	*5.7*
		203.3	203.6	*187.7*
Current liabilities				
Bank loans and overdrafts		**8.0**	—	*3.0*
Trade and other payables		**87.3**	102.6	*102.4*
Current income tax payables		**3.5**	5.2	*2.1*
Accrued dividend		**5.3**	5.3	—
Derivative financial instruments		**10.9**	2.0	*5.8*
Liabilities of discontinued operations held for sale	7	—	0.4	—
Provisions		**11.1**	11.3	*12.1*
		126.1	126.8	*125.4*
Total liabilities		**329.4**	330.4	*313.1*
Total liabilities and equity		**466.7**	459.5	*456.1*

Condensed Consolidated Statement of Cash Flows half year ended 30 September 2016 - unaudited

	Half year to 30 Sept 2016 £m	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
(Loss)/profit for the period from continuing operations	**(0.7)**	3.0	*9.2*
Adjustments for:			
Income tax (credit)/expense	**0.2**	3.1	*3.9*
Net financial expense	**9.9**	3.6	*11.1*
Reversal of acquisition related fair value adjustments	—	—	*1.0*
Acquisition related costs	**0.7**	0.8	*2.5*
Restructuring costs	—	0.6	*2.9*
Restructuring costs – relating to associate	**0.1**	0.2	*1.3*
Loss on disposal of subsidiary	—	—	*0.9*
Contingent consideration deemed no longer payable	—	(3.2)	*(4.9)*
Contingent consideration – further amount deemed payable	—	0.7	—
Share of loss from associate	**0.4**	—	*0.2*
Impairment loss of assets held for sale	—	2.8	—
Amortisation and impairment of acquired intangibles	**8.1**	8.4	*16.7*
Depreciation of property, plant and equipment	**3.3**	3.1	*6.3*
Amortisation and impairment of capitalised development costs	**2.7**	1.6	*3.9*
Adjusted earnings before interest, tax, depreciation and amortisation	**24.7**	24.7	*55.0*
Loss on disposal of plant, property and equipment	**0.3**	0.1	*0.1*
Cost of equity settled employee share schemes	—	0.2	*0.4*
Acquisition related costs paid	**(0.8)**	(1.2)	*(1.8)*
Restructuring costs paid	—	(3.5)	*(4.7)*
Cash payments to the pension scheme more than the charge to operating profit	**(3.5)**	(3.3)	*(6.7)*
Operating cash flows before movements in working capital	**20.7**	17.0	*42.3*
(Increase)/decrease in inventories	**(5.0)**	(6.7)	*2.7*
Decrease in receivables	**3.7**	7.6	*9.3*
Decrease in payables and provisions	**(15.3)**	(9.4)	*(1.2)*
Increase/(decrease) in customer deposits	**0.1**	3.2	*(0.5)*
Purchase of rental assets held for subsequent sale	**(0.5)**	—	*(3.0)*
Cash generated by operations	**3.7**	11.7	*49.6*
Interest paid	**(2.6)**	(2.8)	*(5.6)*
Income taxes paid	**(0.7)**	(1.4)	*(3.5)*
Net cash from operating activities	**0.4**	7.5	*40.5*
Cash flows from investing activities			
Acquisition of subsidiaries – deferred consideration paid	**(6.8)**	(15.6)	*(27.1)*
Acquisition of property, plant and equipment	**(1.9)**	(2.1)	*(2.5)*
Acquisition of intangible assets	**(0.1)**	(0.2)	*(0.2)*
Net cash flow on disposal of subsidiary	—	—	*0.6*
Capitalised development expenditure	**(4.0)**	(3.3)	*(8.2)*
Net cash used in investing activities	**(12.8)**	(21.2)	*(37.4)*
Cash flows from financing activities			
Increase in long-term receivables	—	(3.1)	*(3.0)*
Increase in borrowings	**11.6**	10.8	*4.6*
Dividends paid	**(2.1)**	(2.1)	*(7.6)*
Net cash generated from/(used in) financing activities	**9.5**	5.6	*(6.0)*
Net decrease in cash and cash equivalents from continuing operations	**(2.9)**	(8.1)	*(2.9)*
Decrease in cash from discontinued operations	—	(0.4)	*(0.9)*
Cash and cash equivalents at beginning of the period	**20.4**	25.1	*25.1*
Effect of exchange rate fluctuations on cash held	**1.6**	(1.3)	*(0.9)*
Cash and cash equivalents at end of the period	**19.1**	15.3	*20.4*

Reconciliation of changes in cash and cash equivalents to movement in net debt

	Half year to 30 Sept 2016 £m	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
Decrease in cash and cash equivalents	**(2.9)**	(8.5)	*(3.8)*
Effect of foreign exchange rate changes on cash and cash equivalents	**1.6**	(1.3)	*(0.9)*
	(1.3)	(9.8)	*(4.7)*
Cash inflow from increase in debt	**(11.6)**	(10.8)	*(4.6)*
Increase in net debt in the period	**(12.9)**	(20.6)	*(9.3)*
Net debt at start of the period	**(128.2)**	(118.9)	*(118.9)*
Net debt at the end of the period	**(141.1)**	(139.5)	*(128.2)*

Notes on the Half Year Financial Statements

Half year ended 30 September 2016 – unaudited

1 BASIS OF PREPARATION OF ACCOUNTS

Reporting entity

Oxford Instruments plc is a company incorporated in England and Wales. The condensed consolidated half year financial statements consolidate the results of the Company and its subsidiaries (together referred to as the Group). They have been prepared and approved by the Directors in accordance with International Financial Reporting Standard (IFRS) IAS 34 Interim Financial Reporting as adopted by the EU. They do not include all of the information required for full annual financial statements, and should be read in conjunction with the consolidated financial statements of the Group for the year ended 31 March 2016.

The financial information contained herein is unaudited and does not constitute statutory accounts as defined by Section 435 of the Companies Act 2006. The comparative figures for the financial year ended 31 March 2016 are not the company's statutory accounts for that financial year. Those accounts have been reported on by the Company's auditors and delivered to the registrar of companies. The report of the auditors 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.

Significant accounting policies

As required by the Disclosure and Transparency Rules of the Financial Conduct Authority, the condensed set of financial statements has been prepared applying the accounting policies and presentation that were applied in the preparation of the Company's published consolidated financial statements for the year ended 31 March 2016, except as explained below.

Adoption of new and revised standards

At present, there are no other new standards, amendments to standards or interpretations mandatory for the first time for the year ending 31 March 2017.

Estimates

The preparation of half year financial statements requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, income and expense. Actual results may differ from these estimates.

In preparing these half year financial statements, the significant judgements made by management in applying the group's accounting policies and key sources of estimation uncertainty were the same as those that applied to the Consolidated Financial Statements as at and for the year ended 31 March 2016.

Going concern

The condensed consolidated half year financial statements have been prepared on a going concern basis, based on the Directors' opinion, after making reasonable enquiries, that the Group has adequate resources to continue in operational existence for the foreseeable future.

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

1 BASIS OF PREPARATION OF ACCOUNTS *continued*

Exchange rates
The principal exchange rates used to translate the Group's overseas results were as follows:

Period end rates	**Half year to 30 Sept 2016**	Half year to 30 Sept 2015	*Year to 31 March 2016*
US Dollar	**1.30**	1.51	*1.44*
Euro	**1.16**	1.36	*1.26*
Yen	**132**	181	*162*

Average translation rates	**US Dollar**	**Euro**	**Yen**
Half year to 30 September 2016			
April	**1.45**	**1.27**	**159**
May	**1.46**	**1.30**	**159**
June	**1.41**	**1.27**	**150**
July	**1.35**	**1.21**	**138**
August	**1.32**	**1.18**	**134**
September	**1.31**	**1.16**	**132**

Average translation rates year ended 30 March 2016	**US Dollar**	**Euro**	**Yen**
April	*1.50*	*1.37*	*180*
May	*1.52*	*1.37*	*186*
June	*1.55*	*1.40*	*192*
July	*1.57*	*1.41*	*194*
August	*1.55*	*1.39*	*190*
September	*1.53*	*1.36*	*184*
October	*1.53*	*1.38*	*184*
November	*1.53*	*1.41*	*186*
December	*1.49*	*1.39*	*181*
January	*1.45*	*1.33*	*175*
February	*1.40*	*1.29*	*165*
March	*1.41*	*1.27*	*160*

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

2 NON-GAAP MEASURES

The Directors present the following non-GAAP measures as they believe it gives a better indication of the underlying performance of the business.

RECONCILIATION BETWEEN PROFIT BEFORE INCOME TAX AND ADJUSTED PROFIT

	Half year to 30 Sept 2016 £m	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
(Loss)/profit before income tax from continuing operations	**(0.5)**	6.1	*13.1*
Reversal of acquisition related fair value adjustments to inventory	—	—	*0.2*
Reversal of acquisition related fair value adjustments to property, plant and equipment	—	—	*0.8*
Acquisition related costs	**0.7**	0.8	*2.5*
Restructuring costs	—	0.8	*2.9*
Restructuring costs – relating to associate	**0.1**	—	*1.3*
Loss on disposal of subsidiary	—	—	*0.9*
Amortisation and impairment of acquired intangibles	**8.1**	8.4	*16.7*
Impairment loss on assets held for sale	—	2.8	—
One-off impairment of capitalised development costs	**0.7**	—	—
Contingent consideration – further amount deemed payable	—	0.7	—
Contingent consideration deemed no longer payable	—	(3.2)	*(4.9)*
Unwind of discount in respect of deferred consideration and acquisition related accruals	**0.2**	0.7	*0.8*
Mark to market loss/(gain) in respect of derivative financial instruments	**6.4**	(0.8)	*2.7*
Adjusted profit before income tax from continuing operations	**15.7**	16.3	*37.0*
Share of taxation	**(3.5)**	(3.9)	*(8.9)*
Adjusted profit from continuing operations	**12.2**	12.4	*28.1*

Acquisition related costs comprise professional fees incurred in relation to mergers and acquisitions activity and any consideration which, under IFRS 3 (revised), falls to be treated as a post-acquisition employment expense.

Restructuring costs relating to the Group's investment in ScientaOmicron relate to the ongoing integration programme of the former Scienta and Omicron businesses.

In common with a number of other companies adjusted profit excludes the non-cash amortisation and impairment of acquired intangible assets and the unwind of discounts in respect of contingent consideration relating to business combinations.

During the year the Group has impaired development costs of £0.7 million on a specific project that has been stopped as we focus and direct resources so as to accelerate key projects.

Under IAS 39, all derivative financial instruments are recognised initially at fair value. Subsequent to initial recognition, they are also measured at fair value. In respect of instruments used to hedge foreign exchange risk and interest rate risk the Group does not take advantage of the hedge accounting rules provided for in IAS 39 since that standard requires certain stringent criteria to be met in order to hedge account, which, in the particular circumstances of the Group, are considered by the Board not to bring any significant economic benefit. Accordingly, the Group accounts for these derivative financial instruments at fair value through profit or loss. To the extent that instruments are hedges of future transactions, adjusted profit for the year is stated before changes in the valuation of these instruments so that the underlying performance of the Group can be more clearly seen.

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

2 NON-GAAP MEASURES *continued*

In the prior year the reversal of acquisition related fair value adjustments to inventory and property, plant and equipment were excluded from adjusted profit to provide a measure that includes results from acquired businesses on a consistent basis over time to assist comparison of performance.

Prior year restructuring costs comprise one-off costs in respect of the cost reduction programme begun in 2014/15, including an impairment of inventory and capitalised development costs in the Plasma Technology business in relation to the exit from the HBLED market.

In the prior half year the Group classified its Austin Scientific Business as held for sale and recognised an impairment charge of £2.8 million to reduce the carrying value of the net assets of the Austin Scientific Business to the fair value less costs to sell. By the year end, this amount had been transferred to discontinued operations.

In the prior year, the Group made a loss on disposal of its Omicron business of £0.9 million and £4.9 million was released relating to contingent consideration on the acquisition of Asylum Research Corporation following the end of the earnout period.

In calculating the share of tax attributable to adjusted profit before tax in 2011 a one-off recognition of deferred tax assets relating to the Group's UK businesses of £11.3 million was excluded. At that time the Group announced its intention to exclude the reversal of this deferred tax from the calculation of the share of tax attributable to adjusted profit before tax in the years in which it reverses. In the prior half year deferred tax of £0.4 million reversed and consequently was excluded from the tax attributable to adjusted profit before tax.

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

3 SEGMENT INFORMATION

The Group has eight operating segments. These operating segments have been combined into three aggregated operating segments to the extent that they have similar economic characteristics, with relevance to products and services, type and class of customer, methods of sale and distribution and the regulatory environment in which they operate. Each of these three aggregated operating segments is a reportable segment.

The Group's internal management structure and financial reporting systems differentiate the three aggregated operating segments on the basis of the economic characteristics discussed below:

- the NanoTechnology Tools segment contains a group of businesses supplying similar products, characterised by a high degree of customisation and high unit prices. These are the Group's highest technology products serving research customers in both the public and private sectors;
- the Industrial Products segment contains a group of businesses supplying high technology products and components manufactured in medium volume for industrial customers; and
- the Service segment contains the Group's service, rental and refurbished asset sales business as well as service revenues from other parts of the Group.

Reportable segment results include items directly attributable to a segment as well as those which can be allocated on a reasonable basis. Inter-segment pricing is determined on an arm's length basis. The operating results of each are regularly reviewed by the Chief Operating Decision Maker, which is deemed to be the Board of Directors. Discrete financial information is available for each segment and used by the Board of Directors for decisions on resource allocation and to assess performance. No asset information is presented below as this information is not presented in reporting to the Group's Board of Directors.

Half year to 30 September 2016

	NanoTechnology Tools £m	**Industrial Products £m**	**Service £m**	**Total £m**
External revenue	**90.9**	**42.9**	**37.7**	**171.5**
Inter-segment revenue	**—**	**0.8**	**—**	
Total segment revenue	**90.9**	**43.7**	**37.7**	
Segment operating profit from continuing operations	**11.2**	**1.4**	**6.4**	**19.0**

Half year to 30 September 2015

	NanoTechnology Tools £m	Industrial Products £m	Service £m	Total £m
External revenue	85.4	45.5	33.9	164.8
Inter-segment revenue	—	0.5	—	
Total segment revenue	85.4	46.0	33.9	
Segment operating profit from continuing operations	9.5	1.7	8.8	20.0

Year to 31 March 2016

	NanoTechnology Tools £m	*Industrial Products £m*	*Service £m*	*Total £m*
External revenue	*187.3*	*95.9*	*78.4*	*361.6*
Inter-segment revenue	*0.1*	*0.7*	*—*	
Total segment revenue	*187.4*	*96.6*	*78.4*	
Segment operating profit from continuing operations	*21.3*	*4.5*	*18.8*	*44.6*

Notes on the Half Year Financial Statements (continued)

Half year ended 30 September 2016 – unaudited

3 SEGMENT INFORMATION *continued*

Reconciliation of reportable segment profit from continuing operations

	Half year to 30 Sept 2016 £m	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
Operating profit for reportable segments from continuing operations	**19.0**	20.0	*44.6*
Reversal of acquisition related fair value adjustments to inventory	—	—	*(0.2)*
Reversal of acquisition related fair value adjustments to property, plant and equipment	—	—	*(0.8)*
Acquisition related costs	**(0.7)**	(0.8)	*(2.5)*
Restructuring costs	—	(0.8)	*(2.9)*
Restructuring costs – relating to associate	**(0.1)**	—	*(1.3)*
Loss on disposal of subsidiary	—	—	*(0.9)*
Amortisation of acquired intangibles	**(8.1)**	(8.4)	*(16.7)*
Impairment loss on assets held for sale	—	(2.8)	—
One-off impairment of capitalised development costs	**(0.7)**	—	—
Contingent consideration – further amount deemed payable	—	(0.7)	—
Contingent consideration deemed no longer payable	—	3.2	*4.9*
Financial income	**0.1**	1.0	—
Financial expenditure	**(10.0)**	(4.6)	*(11.1)*
Profit before income tax from continuing operations	**(0.5)**	6.1	*13.1*

4 RESEARCH AND DEVELOPMENT

Adjusted research and development spend by the Group is as follows:

	Half year to 30 Sept 2016 £m	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
Research and development expense charged to the consolidated statement of income	**13.3**	11.8	*24.6*
Less: depreciation of R&D related fixed assets	**(0.4)**	(0.4)	*(0.8)*
Add: amounts capitalised as fixed assets	**0.2**	0.4	*1.2*
Less: amortisation and impairment of R&D costs previously capitalised as intangibles	**(2.0)**	(1.6)	*(3.9)*
Add: amounts capitalised as intangible assets	**4.0**	3.3	*8.2*
Total cash spent on research and development during the period	**15.1**	13.5	*29.3*

Notes on the Half Year Financial Statements (continued)

Half year ended 30 September 2016 – unaudited

5 ACQUISITIONS – PRIOR PERIOD

Medical Imaging Resources, Inc.

On 1 May 2015 the Group acquired 100% of the issued share capital of Medical Imaging Resources, Inc. (MIR) for a net cash consideration of £8.7 million. Further contingent consideration of up to £6.3 million was payable based on the performance of the Oxford Instruments Healthcare business in the year to 31 March 2016. MIR specialises in the build, lease and service of mobile medical imaging labs.

The book and fair values of the assets and liabilities acquired are given in the table below. Fair value adjustments have been made to better align the accounting policies of the acquired business with the Group accounting policies and to reflect the fair value of assets and liabilities acquired. The business has been acquired for the purpose of integrating into the Oxford Instruments Healthcare business where it is believed that a number of synergies can be obtained.

	Book value £m	Provisional Adjustments £m	Provisional Fair value £m
Intangible fixed assets	—	5.7	5.7
Tangible fixed assets	3.8	0.5	4.3
Inventories	1.4	0.1	1.5
Trade and other receivables	0.9	—	0.9
Trade and other payables	(1.7)	—	(1.7)
Deferred tax	0.2	(0.4)	(0.2)
Net debt	(2.6)	—	(2.6)
Net assets acquired	2.0	5.9	7.9
Goodwill			4.5
Total consideration			12.4
Net debt acquired			2.6
Contingent consideration at acquisition			(6.3)
Net cash outflow relating to the acquisition			8.7

The goodwill arising is not tax deductible and is considered to represent the value of the acquired workforce and synergistic benefits expected to arise from the acquisition. Further contingent consideration of £6.5 million was paid during May 2016 based on the performance of the Oxford Instruments Healthcare business in the year to 31 March 2016. The difference of £0.2 million between contingent consideration at acquisition and that paid during May 2016 was due to foreign currency movements.

The book value of receivables in the tables above represents the gross contractual amounts receivable.

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

6 INVESTMENT IN ASSOCIATE – PRIOR PERIOD

On 27 May 2015 the Group entered into a strategic alliance with GD Intressenter AB of Sweden ("GDI") to create the world's largest company in the highly specialised Ultra High Vacuum Surface Science field. The alliance comprises Oxford Instruments' Omicron Nanotechnology GmbH ("Omicron") and associated subsidiaries and GDI's Scienta Scientific AB ("Scienta") and associated subsidiaries. Scienta Scientific AB is registered and has its principal place of business in Sweden.

In consideration for new shares in Scienta, Oxford Instruments transferred all of its shares in the capital of Omicron to Scienta. Oxford Instruments holds a 47% interest in the share capital of Scienta and GDI holds 53%. The investment has been accounted for as an associate taking into account the following factors:

- The Group holds substantial, but minority, voting rights (47%). All other rights are controlled by a single shareholder;
- The Group has a minority number of non-executive board seats (two of five), with the remaining seats held by representatives of GDI;
- Whilst the Group has certain veto rights in respect of key decisions, it cannot unilaterally direct the activities of the Scienta Group.

The book value of the net assets disposed of was £14.9 million. The value of the shareholding acquired in Scienta was considered to be £14.6 million and as a result a £0.3 million loss on disposal arose on the transaction. In addition, a further £0.6 million has been provided in respect of certain liabilities arising from the transaction.

The Group's share of loss in its equity accounted associate for the period was £0.5 million (half year to September 2015: £0.2 million; full year to March 2016: £1.5 million).

7 DISPOSAL OF SUBSIDIARY AND DISCONTINUED OPERATIONS – PRIOR PERIOD

On 23 November 2015 the Group disposed of its Austin Scientific business for a final consideration of £0.6 million.

Effect of disposal on the financial position of the Group	**2016** **£m**
Other intangible assets	(1.7)
Property, plant and equipment	(0.2)
Inventory	(1.4)
Trade and other receivables	(0.5)
Trade and other payables	0.3
Net assets divested	**(3.5)**
Consideration received, satisfied in cash	0.6
Cash disposed of	—
Transaction expenses	(0.1)
Net cash inflow	0.5
Carrying value of net assets disposed of	(3.5)
Impairment of net assets to fair value less costs to sell	2.8
Currency translation differences transferred from translation reserve	0.7
Gain on disposal before impairment	**0.5**
Less impairment loss	(2.8)
Loss on disposal	**(2.3)**
Tax on loss on disposal	0.4
Loss on disposal net of tax	**(1.9)**

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

7 DISPOSAL OF SUBSIDIARY AND DISCONTINUED OPERATIONS – PRIOR PERIOD *continued*

Discontinued operations
At 30 September 2016 the Group's Austin Scientific business was classified as a discontinued operation. It was considered a major class of business on the basis that it was previously an operating segment referred to in the Group Strategic Report.

Results of discontinued operations	**Half year to 30 Sept 2016 £m**	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
Revenue	—	1.7	*2.3*
Expenses	—	(2.1)	*(2.8)*
Loss from operating activities before tax	—	(0.4)	*(0.5)*
Tax	—	0.1	*0.2*
Loss from operating activities after tax	—	(0.3)	*(0.3)*
Loss on disposal			*(2.3)*
Tax on loss on disposal			*0.4*
Loss from discontinued operations after tax			*(2.2)*
Basic loss per share (pence)	—	(0.5)	*(3.9)*
Diluted loss per share (pence)	—	(0.5)	*(3.8)*

Cash flows from discontinued operations	**Half year to 30 Sept 2016 £m**	Half year to 30 Sept 2015 £m	*Year to 31 March 2016 £m*
Net cash used in operating activities	—	(0.4)	*(0.9)*
Net cash from investing activities	—	—	—
Net cash from financing activities	—	—	—
Net cash flows	—	(0.4)	*(0.9)*

8 TAXATION

The total effective tax rate on profits for the half year is 40% (2015: 35%). The weighted average tax rate in respect of adjusted profit before tax (see note 2) for the half year is 22% (2015: 24%).

9 EARNINGS PER SHARE
a) Basic
The calculation of basic earnings per share is based on the profit or loss for the period after taxation and a weighted average number of ordinary shares outstanding during the period, excluding shares held by the Employee Share Ownership Trust, as follows:

	Half year to 30 Sept 2016 Shares million	Half year to 30 Sept 2015 Shares million	*Year to 31 March 2016 Shares million*
Weighted average number of shares outstanding	**57.3**	57.3	*57.3*
Less: weighted average number of shares held by Employee Share Ownership Trust	**(0.2)**	(0.2)	*(0.2)*
Weighted average number of shares used in calculation of earnings per share	**57.1**	57.1	*57.1*

Notes on the Half Year Financial Statements (continued)

Half year ended 30 September 2016 – unaudited

9 EARNINGS PER SHARE *continued*

b) Diluted

The following table shows the effect of share options on the calculation of both adjusted and unadjusted diluted basic earnings per share.

	Half year to 30 Sept 2016 Shares million	Half year to 30 Sept 2015 Shares million	*Year to 31 March 2016 Shares million*
Number of ordinary shares per basic earnings per share calculations	**57.1**	57.1	*57.1*
Effect of shares under option	**0.1**	0.2	*0.1*
Number of ordinary shares per diluted earnings per share calculations	**57.2**	57.3	*57.2*

10 DIVIDENDS PER SHARE

The following dividends per share were paid by the Group:

	Half year to 30 Sept 2016 pence	Half year to 30 Sept 2015 pence	*Year to 31 March 2016 pence*
Previous period interim dividend	**3.70**	3.70	*3.70*
Previous period final dividend	—	—	*9.30*
	3.70	3.70	*13.00*

The following dividends per share were proposed by the Group in respect of each accounting period presented:

	Half year to 30 Sept 2016 pence	Half year to 30 Sept 2015 pence	*Year to 31 March 2016 pence*
Interim dividend	**3.70**	3.70	*3.70*
Final dividend	—	—	*9.30*
	3.70	3.70	*13.00*

The final dividend for the year to 31 March 2016 was approved by shareholders at the Annual General Meeting held on 13 September 2016. Accordingly it is no longer at the discretion of the company and has been included as a liability as at 30 September 2016. It was paid on 20 October 2016.

The interim dividend for the year to 31 March 2017 of 3.7 pence was approved by the Board on 15 November 2016, the same value as the previous year and has not been included as a liability as at 30 September 2016. The interim dividend will be paid on 7 April 2017 to shareholders on the register at the close of business on 10 March 2017.

Notes on the Half Year Financial Statements (continued)
Half year ended 30 September 2016 – unaudited

11 FAIR VALUE OF FINANCIAL INSTRUMENTS

The fair values of financial assets and liabilities together with the carrying amounts shown in the Consolidated Statement of Financial Position are as follows:

	Fair value hierarchy	**Carrying amount 30 Sept 2016 £m**	**Fair value 30 Sept 2016 £m**	Carrying amount 30 Sept 2015 £m	Fair value 30 Sept 2015 £m	*Carrying amount 31 March 2016 £m*	*Fair value 31 March 2016 £m*
Assets carried at amortised cost							
Trade receivables		**69.2**	**69.2**	58.4	58.4	*67.2*	*67.2*
Other receivables		**6.4**	**6.4**	5.7	5.7	*6.0*	*6.0*
Cash and cash equivalents		**20.9**	**20.9**	15.3	15.3	*21.8*	*21.8*
Assets carried at fair value							
Derivative financial instruments:							
– Copper hedging contracts (designated as an IAS 39 hedge)	2	—	—	0.2	0.2	*—*	*—*
– Foreign currency contracts	2	—	—	2.1	2.1	*1.5*	*1.5*
		—	—	2.3	2.3	*1.5*	*1.5*
Liabilities carried at fair value							
Derivative financial instruments:							
– Foreign currency contracts	2	**(10.9)**	**(10.9)**	(2.0)	(2.0)	*(5.8)*	*(5.8)*
– Copper hedging contracts (designated as an IAS 39 hedge)	2	—	—	—	—	*(0.1)*	*(0.1)*
Contingent consideration	3	—	—	(19.1)	(19.1)	*(6.6)*	*(6.6)*
		(10.9)	**(10.9)**	(21.1)	(21.1)	*(12.5)*	*(12.5)*
Liabilities carried at amortised cost							
Trade and other payables		**(55.9)**	**(55.9)**	(69.5)	(69.5)	*(82.4)*	*(82.4)*
Bank overdraft		**(1.8)**	**(1.8)**	—	—	*(1.4)*	*(1.4)*
Borrowings		**(160.2)**	**(160.2)**	(154.8)	(154.8)	*(148.6)*	*(148.6)*

The following summarises the major methods and assumptions used in estimating the fair values of financial instruments reflected in the above table.

Derivative financial instruments
Derivative financial instruments are marked-to-market using market prices.

Fixed and floating rate borrowings
The fair value of fixed and floating rate borrowings is estimated by discounting the future contracted principal and interest cash flows using the market rate of interest at the reporting date.

Trade and other receivables/payables
For receivables/payables with a remaining life of less than one year, the carrying amount is deemed to reflect the fair value. All other receivables/payables are discounted to determine their fair value. Advances received are excluded from other payables above as these are not considered to be financial liabilities.

Contingent consideration
The fair value of contingent consideration is estimated based on the forecast future performance of the acquired business over a timeframe determined as part of the acquisition agreement, discounted as appropriate. Key assumptions include growth rates, expected selling volumes and prices and direct costs during the period.

Notes on the Half Year Financial Statements (continued)

Half year ended 30 September 2016 – unaudited

11 FAIR VALUE OF FINANCIAL INSTRUMENTS *continued*

Fair value hierarchy

The table above gives details of the valuation method used in arriving at the fair value of financial instruments. The different levels have been identified as follows:

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 asset or liability that are not based on observable market data.

There have been no transfers between levels during the year.

Contingent consideration relates to amounts payable in respect of acquisitions. It is reassessed at the end of each year to its fair value.

Contingent consideration	**30 Sep 2016 £m**	30 Sep 2015 £m	*31 March 2016 £m*
Balance brought forward at beginning of period	**6.6**	17.5	*17.5*
Fair value of contingent consideration on acquisitions in the year	—	6.7	*6.3*
Unwind of discount in respect of contingent consideration	—	0.7	*0.6*
Contingent consideration paid	**(6.5)**	(2.6)	*(13.3)*
Increase in contingent consideration	—	0.7	—
Contingent consideration released to the consolidated statement of income	—	(3.2)	*(4.9)*
Effect of movement in foreign exchange	**(0.1)**	(0.7)	*0.4*
Balance carried forward at end of period	—	19.1	*6.6*

12 RELATED PARTIES

All transactions with related parties are conducted on an arm's length basis and in accordance with normal business terms. Transactions between related parties that are Group subsidiaries are eliminated on consolidation.

During the period, the Group supplied services and materials to its associate, Scienta Omicron Gmbh, on an arm's length basis. The following transactions occurred during the period:

Half year to 30 September 2016	**Revenue £m**	**Receivables £m**
Scienta Omicron GmbH	**0.1**	**3.6**

Half year to 30 September 2015	Revenue £m	Receivables £m
Scienta Omicron GmbH	0.3	3.4

Included in receivables is a non-current loan receivable of £3.6 million (2015: £3.1 million). The loan is repayable at the end of May 2020. During the period the Group received interest charged on the loan of £0.1m (2015: £0.1m).

Principal Risks and Uncertainties

The Group has in place a risk management structure and internal controls which are designed to identify, manage and mitigate risk.

In common with all businesses, Oxford Instruments faces a number of risks and uncertainties which could have a material impact on the Group's long term performance.

On pages 22 to 24 of its 2016 Annual Report and Accounts (a copy of which is available at www.oxford-instruments.com), the Company set out what the Directors regarded as being the principal risks and uncertainties facing the Group's long term performance and these are reproduced in the table below. Many of these risks are inherent to Oxford Instruments as a global business and they remain valid as regards their potential impact during the remainder of the second half of the year.

The impact of the economic and end market environments in which the Group's businesses operate are considered in the Half Year Statement of this Half Year Report, together with an indication if management is aware of any likely change in this situation.

Specific Risk	Context	Risk	Possible Impact	Associated strategic priorities	Mitigation
Technical Risk	The Group provides high technology equipment and systems to its customers.	Failure of the advanced technologies applied by the Group to produce commercial products, capable of being manufactured and sold profitably.	Lower profitability and financial returns. Negative impact on the Group’s reputation.	‘Realising the Brand’ ‘Liberating Cash’	The Group has moved away from large scale, single customer development programmes towards more commercially orientated products. The New Product Introduction programme that any new R&D projects must pass through provides a framework within which the commercial viability of projects are scrutinised and assessed.
Economic Environment	Government spend on R&D has been constrained.	Demand for the Group’s products may be lower than anticipated.	Lower profitability and financial returns.	‘Realising the Brand’ ‘Delivering Shareholder Value’	The Group has a broad spread of customers, applications and geographical markets.
Acquisitions	Part of the growth of Oxford Instruments is planned to come from acquisitions which provide the Group with complementary technologies.	Appropriate acquisition targets may fail to provide the planned value.	Lower profitability and financial returns. Management focus taken away from the core business in order to manage integration issues.	‘Realising the Brand’ ‘Inventing the Future’ ‘Adding Personal Value’	Extensive financial, technical and commercial due diligence is undertaken by the Group during any acquisition programmes. Each transaction has a comprehensive post acquisition integration plan which is monitored at the highest level.
Foreign Exchange Volatility	A significant proportion of the Group’s profit is made in foreign currencies. Most costs are in Sterling.	The Group’s profit levels are exposed to fluctuations in exchange rates.	Lower profitability and financial returns	‘Delivering Shareholder Value’ ‘Liberating Cash’	The Group seeks to mitigate the exposure to transactional risk by the use of natural hedges wherever possible. The remaining transactional foreign exchange risk in any year is mitigated through the use of forward and non-premium option exchange contracts.

Political Risk	The Group operates in global markets and can be required to secure export licences from government.	Changes in political relations may affect the granting of licences.	An inability to sell certain products to certain countries	'Delivering Shareholder Value' 'Liberating Cash'	Maintain a diversified geographical customer base. Ensure low commitment to inventory before attaining export licences
Customer Concentration	The Group's Superconducting Wire business in reliant on a small number of MRI manufacturers as customers .	These customers can exert significant customer power in terms of price and volume	Lost sales, decreased margins	'Delivering Shareholder Value' 'Liberating Cash'	Attempt to broaden customer base to include all OEMS Explore alternative applications for superconducting wire
Outsourcing	The Group's strategic plan includes the outsourcing of a significantly higher proportion of the costs of its products to benefit from economies of scale and natural currency hedges.	Failures in the supply chain impacting sales.	Disruption to customers. Negative impact on the Group's reputation.	'Liberating Cash' 'Realising the Brand'	Relationships with outsourcing businesses are monitored closely and any potential issues are acted upon swiftly to avoid disruption. Where practical dual sources are used for key components and services.
Pensions	The Group's calculated pension deficit is sensitive to changes in the actuarial assumptions.	Movements in the actuarial assumptions may have an appreciable effect on the reported pension deficit.	Additional cash required by the Group to fund the deficit. Reduction in net assets.	'Delivering Shareholder Value' 'Liberating Cash'	The Group has closed its defined benefit pension schemes in the UK and US to future accrual. The Group has a funding plan in place to reduce the pension deficit over the short to medium term.
People	A number of the Group's employees are business critical.	The employee leaves the Group.	Lower profitability and financial returns.	'Adding Personal Value' 'Inventing the Future'	The Group undertakes a regular employee survey and implements and reviews resulting action plans. A comprehensive succession planning process is in place, together with a talent network which identifies and manages contacts with people who could provide external succession for critical current and future roles. A management development programme provides exposure to key skills needed for growth. Regular individual performance reviews take place.
Routes to Market	In some instances the Group's products are components of higher level systems and thus the Group does not control its route to market.	The systems integrator switches supplier denying the Group's route to market.	Lower profitability and financial returns.	'Inventing the Future' 'Realising the Brand'	Use of the stage gate process and 'Voice of the Customer' to make sure that the Group's products are the best in the market. Co-marketing with system integrators to promote the merits of the Group's products to end customers. Seeking to increase the number of integrators supplied by the Group .

Responsibility Statement of the Directors in respect of the Half Year Financial Statements

We confirm that to the best of our knowledge:

- the condensed set of financial statements has been prepared in accordance with IAS 34 Interim Financial Reporting as adopted by the EU;

- the interim management report includes a fair review of the information required by:

  (a) DTR 4.2.7R of the Disclosure and Transparency Rules, being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed set of financial statements; and a description of the principal risks and uncertainties for the remaining six months of the year; and

  (b) DTR 4.2.8R of the Disclosure and Transparency Rules, being related party transactions that have taken place in the first six months of the current financial year and that have materially affected the financial position or performance of the entity during that period; and any changes in the related party transactions described in the last annual report that could do so.

Ian Barkshire, Chief Executive
Gavin Hill, Group Finance Director
15 November 2016

Independent review report to Oxford Instruments plc

Introduction
We have been engaged by the company to review the condensed set of financial statements in the half-yearly financial report for the six months ended 30 September 2016 which comprises the Condensed Consolidated Statement of Income, the Condensed Consolidated Statement of Comprehensive Income, Condensed Consolidated Statement of Financial Position, Condensed Consolidated Statement of Changes in Equity, Condensed Consolidated Statement of Cash Flows and the related explanatory notes.

We have read the other information contained in the half-yearly financial report and considered whether it contains any apparent misstatements or material inconsistencies with the information in the condensed set of financial statements.

This report is made solely to the company in accordance with the terms of our engagement to assist the company in meeting the requirements of the Disclosure and Transparency Rules ("the DTR") of the UK's Financial Conduct Authority ("the UK FCA"). Our review has been undertaken so that we might state to the company those matters we are required to state to it in this report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company for our review work, for this report, or for the conclusions we have reached.

Directors' responsibilities
The half-yearly financial report is the responsibility of, and has been approved by, the directors. The directors are responsible for preparing the half-yearly financial report in accordance with the DTR of the UK FCA.

The annual financial statements of the group are prepared in accordance with IFRSs as adopted by the EU. The condensed set of financial statements included in this half-yearly financial report has been prepared in accordance with IAS 34 *Interim Financial Reporting* as adopted by the EU.

Our responsibility
Our responsibility is to express to the company a conclusion on the condensed set of financial statements in the half-yearly financial report based on our review.

Scope of review
We conducted our review in accordance with International Standard on Review Engagements (UK and Ireland) 2410 *Review of Interim Financial Information Performed by the Independent Auditor of the Entity* issued by the Auditing Practices Board for use in the UK. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK and Ireland) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion
Based on our review, nothing has come to our attention that causes us to believe that the condensed set of financial statements in the half-yearly financial report for the six months ended 30 September 2016 is not prepared, in all material respects, in accordance with IAS 34 as adopted by the EU and the DTR of the UK FCA.

Greg Watts
for and on behalf of KPMG LLP
Chartered Accountants
One Snowhill, Snow Hill Queensway
Birmingham, B4 6GH

15 November 2016

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