Smiths Group plc annual results for the year ended 31 July 2018

London, Friday 21 September 2018

Return to growth

	Headline[1]				Statutory	
	FY2018 £m	FY2017 £m	Reported growth	Underlying[2] growth	FY2018 £m	FY2017 £m
Revenue	3,213	3,280	(2)%	2%	3,213	3,280
Operating profit	544	589	(8)%	3%	494	674
Operating margin	16.9%	18.0%	(110)bps	10bps	15.4%	20.5%
Pre-tax profit	487	528	(8)%	-	435	601
Free cash-flow	-	-	-	-	302	370
Return on capital employed	14.6%	16.2%	(160)bps	-	-	-
Continuing basic EPS	90.7p	97.6p	(7)%	4%	70.0p	144.1p
Dividend	44.55p	43.25p	3%	-	-	-

[1]In addition to statutory reporting, the Group reports its continuing operations on a headline basis. Definitions of headline metrics, and information about the adjustments to statutory measures are provided in note 3 to the financial statements.

[2] Underlying modifies headline performance to: adjust prior year to reflect an equivalent period of ownership for divested businesses; include restructuring and pension administration costs as headline for both years; and exclude the effects of foreign exchange, acquisitions and supplemental sales for divested businesses.

Highlights

- Return to growth with underlying[2] revenue up 2% to £3,213m. Reported revenue down (2)% due to adverse foreign exchange translation
- Underlying[2] headline[1] operating profit up 3%. Reported headline operating profit down (8)% due to the reclassification of restructuring and pension administration costs as headline items, and adverse foreign exchange translation
- Continued focus on operational excellence with stock turns at 3.7x (FY2017: 3.5x)
- Good cash generation with cash conversion of 99% and strong balance sheet
- Continued investment for sustainable growth with R&D at 4.6% of sales (FY2017: 4.6%)
- Further progress on portfolio optimisation:
  - $30m synergies from the Morpho acquisition will be delivered ahead of schedule
  - Agreement to sell Smiths Medical's sterile water bottling business for $40m
- Proposed final dividend of 30.75 pence per share. Full year dividend growth of 3%.

Andy Reynolds Smith, Group Chief Executive, commented:

"FY2018 marks an important milestone on our journey. We said that this would be the year we returned to growth, and we've done that. Our next objective is to deliver continued, sustainable growth, on the way to outperforming our markets.

With the exception of Smiths Medical, where the second half was disappointing, we delivered a good performance. As anticipated, our growth rate accelerated in the second half of the year driven by John Crane, Smiths Detection, Smiths Interconnect and Flex-Tek.

We continued to progress the high-grading of the portfolio through organic and inorganic investment with approximately 80% of the Group now well positioned in attractive markets. Our acquisitions of Morpho Detection, Seebach and the heating element division of Osram are being successfully integrated, with synergies being delivered ahead of schedule. The disposal of two non-core businesses

in Smiths Medical and John Crane has supported our increasing focus on products and services with scalable, technology-differentiated leadership positions in our chosen markets.

We're focused on world-class competitiveness. We delivered further stock turn improvements, now at 3.7x, and good cash conversion of 99%. This has helped to fund disciplined investment in commercially focused R&D and innovation.

In FY2019 we anticipate at least sustaining the rate of underlying[1] revenue growth. As in previous years, Group performance in FY2019 is expected to be weighted towards the second half. Foreign exchange will provide a tailwind to reported revenue and operating profit, if current rates prevail.

Over the medium-term, we remain confident that we can grow faster than our markets. This is driven by our strategy to focus the portfolio for growth and deliver world-class competitiveness, underpinned by our strong financial framework. In parallel with continued active portfolio management, the Board remain confident that this will drive long-term sustainable growth and attractive returns."

Statutory reporting

Statutory reporting takes account of all items excluded from headline performance. On a statutory basis, pre-tax profit from continuing operations was £435m (FY2017: £601m) and continuing basic earnings per share were 70.0p (FY2017: 144.1p).

See accounting policies for an explanation of the presentation of results and note 3 to the accounts for an analysis of non-headline items.

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Presentation

The presentation slides and a live webcast of the analyst presentation will be available at https://smiths.com/investors/results-reports-and-presentations at 09.00 (UK time) today. A recording of the webcast will be made available from 13.00 (UK time).

Photography

Original high-resolution photography is available to the media from the media contacts above or from http://www.smiths-images.com/

This document contains certain statements that are forward-looking statements. They appear in a number of places throughout this document and include statements regarding the intentions, beliefs and/or current expectations of Smiths Group plc (the "Company") and its subsidiaries (together, the "Group") and those of their respective officers, directors and employees concerning, amongst other things, the results of operations, financial condition, liquidity, prospects, growth, strategies and the businesses operated by the Group. By their nature, these statements involve uncertainty since future events and circumstances can cause results and developments to differ materially from those anticipated. The forward-looking statements reflect knowledge and information available at the date of preparation of this document and, unless otherwise required by applicable law, the Company undertakes no obligation to update or revise these forward-looking statements. Nothing in this document should be construed as a profit forecast. The Company and its directors accept no liability to third parties. This document contains brands that are trademarks and are registered and/or otherwise protected in accordance with applicable law.

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Group results overview

£m	FY2017	Reclassification	Foreign exchange	Acquisitions & disposals[1]	FY2017 proforma	Underlying[3] movement	FY2018
Group revenue	3,280	-	(126)	1	3,155	58	**3,213**
Group headline operating profit	589	(40)	(26)	8	531	13	**544**

	Headline[2] revenue		Headline[2] operating profit margin	
	Underlying growth[3]	Reported growth	**FY2018**	FY2017
John Crane	**5%**	flat	**22.9%**	23.0%
Smiths Medical	**(2)%**	(7)%	**17.6%**	22.0%
Smiths Detection	**1%**	15%	**16.9%**	15.0%
Smiths Interconnect	**(1)%**	(28)%	**14.1%**	13.4%
Flex-Tek	**10%**	4%	**18.9%**	19.3%
Group	**2%**	(2)%	**16.9%**	18.0%

Revenue

The Group returned to growth, with underlying[3] revenue up 2%. This marked an important milestone on our journey to deliver sustained outperformance.

Reported revenue of £3,213m (FY2017: £3,280m) was down (2)% primarily due to £(126)m of adverse foreign exchange translation. Underlying[3] revenue was up 2%, or £58m. Growth in John Crane, Flex-Tek and Smiths Detection was partially offset by the performance in Smiths Medical and Smiths Interconnect. Second half growth was 5%, reflecting an improving trend over the year.

Revenue from higher-growth regions, which represent 17% of Group sales, grew 6% on an underlying[3] basis. This was driven by good sales growth in India and China.

Operating profit

On a reported basis, headline operating profit of £544m (FY2017: £589m) was down (8)%. After adjustment for £(40)m of restructuring and pension administration costs (reported as non-headline in FY2017), £(26)m of adverse foreign exchange translation and an £8m net impact from acquisitions and disposals, headline operating profit was up 3% on an underlying[3] basis. This was driven by good underlying[3] headline operating profit growth in Smiths Detection, John Crane and Flex-Tek, partially offset by the disruptions in Smiths Medical. Central costs decreased by £5m on an underlying[3] basis to £(57)m, but included increased investment in innovation to support sustainable growth.

Operating margin

Headline operating margin increased 10bps to 16.9% on an underlying[3] basis. This improvement was driven by continued focus on operational excellence, as well as volume growth and Morpho cost synergies, partially offset by the disruptions in Smiths Medical. On a reported basis headline operating margin decreased (110)bps.

Operational excellence

Operational excellence through the Smiths Excellence System remains a key focus for the Group. We continue to improve speed and efficiency. Stock turns increased to 3.7x (FY2017: 3.5x) and working capital as a percentage of sales[4] improved to 26% (FY2017: 27%). This resulted in good cash conversion of 99% (FY2017:118%) and free cash-flow of £302m (FY2017: £370m).

R&D

The Group's investment in R&D was maintained with R&D cash costs at 4.6% of sales or £147m (FY2017: 4.6% or £150m). R&D P&L costs increased to £131m (FY2017: £125m) an underlying[3] increase of 8%. In FY2018, we reported our Vitality Index of 13% for the first time. It measures the revenue from new products launched in the past three years as a percentage of total revenue.

Portfolio

[1] Includes disposals and 2018 performance from acquisitions that do not have comparators for the prior year

[2] In addition to statutory reporting, the Group reports its continuing operations on a headline basis. Definitions of headline metrics, and information about the adjustments to statutory measures are provided in note 3 to the financial statements.

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[4] Working capital as a percentage of sales is calculated as the 12 month rolling average of inventory, trade receivables and associated provisions, unbilled receivables, trade payables and deferred revenue as a percentage of total annual sales

We are focused on maximising value for Smiths' shareholders. As part of this process, we actively manage our portfolio of businesses and review all options to enhance our leadership positions.

We made further progress on portfolio optimisation through organic and inorganic investment; approximately 80% of the Group is now well positioned in attractive markets.

The integration of Morpho Detection continues to progress well with the benefits of the combination supporting new contract wins, including a $50m contract with Airports of India. The $30m of annualised cost synergies are ahead of schedule and now expected to be delivered in full by the end of FY2019.

Flex-Tek completed the acquisition of the heating element division of Osram Sylvania, Inc in November 2017. John Crane completed the sale of its Bearings business for an enterprise value of $35m in May 2018 and the acquisition of Seebach GmbH, a highly engineered filtration solutions business, for an enterprise value of €60m in June 2018.

Post year end, Smiths Medical made further progress on focusing the business on scalable leading positions in its chosen markets and agreed the sale of its sterile water bottling business to Amsino Healthcare (USA), Inc., for an enterprise value of $40m. The deal is expected to complete in the first half of FY2019.

ROCE

ROCE declined (160)bps to 14.6% (FY2017: 16.2%) primarily due to the reclassification of restructuring and pension administration costs as headline items. The ROCE movement also reflects recent investments, such as the acquisition of Morpho Detection, which are expected to generate superior returns over the longer-term.

Taxation

The headline tax charge for the year of £126m (FY2017: £140m) represents an effective rate of 25.8% (FY2017: 26.5%). This was impacted by the new US tax legislation, where 44% of our revenue originates. The statutory tax rate of 35.9% includes one-time costs associated with US tax reform.

An effective tax rate of c.25% is expected for the year ending 31 July 2019.

Earnings per share

On a reported basis, basic headline earnings per share decreased (7)% to 90.7p (FY2017: 97.6p), but was up 4% on an underlying[1] basis.

Debt

Net debt at 31 July 2018 was £893m, a reduction of £74m in the period. Net debt to EBITDA remained unchanged at 1.4x. Gross debt was £1,610m (FY2017: £1,749m) and cash reserves were £717m (FY2017: £782m). Of the gross debt, £203m fell due within one year; the majority was repaid in September 2018 when the Group redeemed $250m 7.2% Notes. Our strong balance sheet continues to allow us to deploy significant further investment capacity to support sustainable growth.

Pension

The net accounting pension position has improved to a surplus of £381m (FY2017: £224m).

The Group continues to work with the Trustees to de-risk the pension schemes. In August 2017, the Smiths Industries Pension Scheme (SIPS) entered a £207m buy-in with Canada Life, and in December 2017 the US scheme paid $36m to members who opted to take lump sums in lieu of pension.

In FY2017, formal valuations of the Group's principal UK defined benefit schemes were undertaken one year ahead of the triennial deadline and concluded in June 2018. The updated valuations showed that SIPS had a surplus of £32m and the TI Group Pension Scheme had a £35m deficit on a funding basis. The Company has agreed to continue funding these schemes with total annual contributions of £24m (FY2017: £27m). For FY2019, we expect total cash contributions of up to £45m across all schemes (FY2018: £49m).

Dividend

The Board has a progressive dividend policy, aiming to increase dividends in line with long-term underlying growth in earnings and cash-flow. This policy enables us to retain sufficient cash-flow to finance investment in the drivers of growth and meet our financial obligations. In setting the level of dividend payments, the Board takes into account prevailing economic conditions and future investment plans, along with the objective to maintain minimum dividend cover of around 2.0x.

The Board is recommending a final dividend of 30.75p per share (FY2017: 29.70p per share), to be paid on 16 November 2018 to shareholders on the register at close of business on 19 October 2018. This will bring the total dividend for the year to 44.55p per share (FY2017: 43.25p per share), a year-on-year increase of 3%.

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Dividends paid in the year on ordinary shares amounted to £172m (FY2017: £167m), which were covered by the Group's free cash-flow generation.

Statutory results

On a statutory basis, after taking into account all items excluded from headline performance, operating profit of £494m was £180m lower than last year (FY2017: £674m), reflecting the benefit in the prior year of £175m of profit on disposal of businesses.

Foreign exchange

With over 95% of our revenue outside the UK, we are exposed to foreign exchange movements, mainly the USD and the EUR. For each $0.10 move, the annual operating profit impact is c.£25m. For each €0.10 move, the annual operating profit impact is c.£10m. Foreign exchange rates will provide a tailwind to reported headline revenue and operating profit, if current rates prevail.

IFRS 15 - revenue from contracts with customers

A number of new accounting standards and amendments to standards and interpretations have been issued but are not yet effective for the current accounting period. These include IFRS 15 which will impact the timing of and the disclosures for recognising revenue from contracts with customers. A reasonable estimate of the expected impact on the reported results for FY2018 would have been a £(16)m reduction in revenue, no impact on operating profit and a £(1)m reduction in net assets.

Outlook

In FY2019 we anticipate at least sustaining the rate of underlying[1] revenue growth. As in previous years, Group performance in FY2019 is expected to be weighted towards the second half. Foreign exchange will provide a tailwind to reported headline revenue and operating profit, if current rates prevail.

John Crane is expected to sustain its rate of growth with further progress in the sales of original equipment and a slower rate of improvement in aftermarket. In Smiths Medical, regulatory and contract challenges will progressively abate – and we anticipate revenue returning to growth in the second half. In Smiths Detection, we anticipate growth driven by continued demand in Air Transportation with programme phasing further weighted to the second half. Smiths Interconnect is expected to return to growth with its focus on core growing end markets. Flex-Tek is expected to deliver continued good growth, albeit against a strong prior year comparator.

Over the medium-term, we remain confident that we can grow faster than our markets. This is driven by our strategy to focus the portfolio for growth and deliver world-class competitiveness, underpinned by our strong financial framework. In parallel with continued active portfolio management, the Board remain confident that this will drive long-term sustainable growth and attractive returns.

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Business review

John Crane

John Crane is a leading provider of mission-critical engineered solutions for global energy and process industries. 67% of revenue comes from aftermarket sales; c.56% of revenue is derived from the energy sector (downstream and midstream oil & gas) and c.44% comes from other process industries (including chemical, pharmaceutical, power generation, mining, water treatment, and pulp & paper). John Crane represents 27% of Group revenue.

	FY2018 £m	FY2017 £m	Reported growth	Underlying[1] growth
Revenue	881	885	flat	**5%**
Headline operating profit	202	204	(1)%	**6%**
Headline operating margin	22.9%	23.0%	(10)bps	**10bps**
Statutory operating profit	199	190	5%	
Return on capital employed	22.9%	22.9%	flat	

Performance

John Crane delivered a good performance, returning to growth with revenue up 5% on an underlying[1] basis. Reported revenue was flat, reflecting £(31)m of adverse foreign exchange translation and a £(16)m net impact from the disposals of Artificial Lift and the Bearings business, and the acquisition of Seebach GmbH.

Underlying[1] sales from John Crane's Oil & Gas and Non-Oil & Gas activities were up c.7% and c.3% respectively, reflecting the improving trend in global energy markets and continued growth in John Crane's chemical, pharma, mining and pulp & paper activities. These market conditions were also reflected in improving underlying[1] sales of Original Equipment ('OE'), which were up 1%. Investment in OE projects and the expansion of the installed base continued during the period. Multiple new project agreements were secured, including contracts in Oil & Gas in Asia and the Middle East, as well as marine, chemical and pulp & paper contracts in the USA, Europe and Asia. John Crane's large installed base and leading service offering positioned it well to satisfy pent-up aftermarket demand for repairs, maintenance and upgrades; underlying[1] aftermarket revenue grew 8% during the period.

Revenue from higher-growth regions, which represent 25% of sales, grew 14% on an underlying[1] basis with strong sales growth in China.

Headline operating profit of £202m increased 6% on an underlying[1] basis, driven by improved volumes. Headline operating profit margin was 22.9%, up 10bps on an underlying[1] basis with the positive impact of volume growth partially offset by geographic mix and the costs of restarting capacity. The difference between statutory and headline operating profit primarily reflects movement in the provision for John Crane, Inc. asbestos litigation, offset by gains on disposals.

ROCE was flat at 22.9% driven by the net impact of the two disposals, one acquisition and increased profitability.

John Crane has made further progress on focusing the business on leading positions in attractive markets. In May 2018, John Crane sold its Bearings business for an enterprise value of $35m, and in June 2018 completed the acquisition of Seebach GmbH, a highly engineered filtration solutions business, for an enterprise value of €60m. We continue to look for opportunities to enhance John Crane's technology leadership and service offering.

Cash R&D expenditure during the period increased by 15% to 1.3% of sales (FY2017: 1.1%). Product developments included:

- A new dry gas seal in the Aura™ range which reduces methane emissions
- An advanced seal for crude oil pipeline pumps which supports pump efficiency and tolerance of harsh operating environments
- An innovative filtration design tool to enhance performance
- Continued development of John Crane's Sense™ predictive diagnostics systems

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Smiths Medical

Smiths Medical supplies high-quality, cost effective medical devices and consumables that are vital to patient care globally. Our portfolio incorporates established brands, with strong positions in select segments of the Infusion Systems, Vascular Access, and Vital Care markets. 82% of Smiths Medical's sales are from consumable and disposable products. Smiths Medical represents 28% of Group revenue.

	FY2018 £m	FY2017 £m	Reported growth	Underlying[1] growth
Revenue	885	951	(7)%	**(2)%**
Headline operating profit	156	209	(26)%	**(14)%**
Headline operating margin	17.6%	22.0%	(440)bps	**(250)bps**
Statutory operating profit	152	286	(47)%	
Return on capital employed	13.1%	16.7%	(360)bps	

Performance

Smiths Medical underlying[1] revenue was down (2)%. The division's performance was impacted by the transition to a new Notified Body for European Conformity registration. This led to a short-term suspension of some Smiths Medical products in Europe. This disruption and the loss of two contracts in the US offset good underlying[1] growth that was underpinned by a growing contribution from products launched during the year. Reported revenue fell (7)%, reflecting £(37)m of adverse foreign exchange translation and the £(11)m impact of the divestment of the Wallace product line in November 2016.

Costs associated with the Notified Body transition and implementation of the new EU Medical Device Regulation in 2020 are expected to be £10-15m in each of FY2019 and FY2020.

Underlying[1] revenue was up 4% in Infusion Systems driven by sales of ambulatory infusion disposables, partially offset by the impact of a contract termination. Vascular Access underlying[1] revenue declined by (4)% as a result of lower peripheral intravenous catheter ('PIVC') sales. Underlying[1] revenue from Vital Care and Specialty Products was down (6)%, with growth in tracheostomy and general anaesthesia offset by a contract termination.

Revenue from higher-growth regions, which represents 10% of sales, increased 10% on an underlying[1] basis, driven by growth in China and India.

Headline operating profit declined (14)% on an underlying[1] basis. This included adjustment for £(16)m restructuring costs in the prior year. In addition, there were higher R&D costs associated with new product launches, and costs of transition to a new Notified Body in Europe. As a result, headline operating margin was (250)bps lower than the prior year on an underlying[1] basis at 17.6%. The difference between statutory and headline operating profit included £(3)m of amortisation of acquired intangible assets.

ROCE decreased (360)bps to 13.1%, reflecting the lower profitability.

Post year end, Smiths Medical made further progress on focusing the business on scalable leading positions in its chosen markets, and agreed the sale of its sterile water bottling business to Amsino Healthcare (USA), Inc., for an enterprise value of $40m. The deal is expected to complete in the first half of FY2019.

Cash R&D expenditure was 5.8% of sales (FY2017: 6.4%) with an increase in the P&L R&D costs. Smiths Medical continues to invest in research and development to support long-term, sustainable growth, with the development of innovative, commercially focused products across the portfolio. Over 20 new products were launched during the year. These included:

- CADD™ VIP ambulatory pump for homecare and alternate sites
- Upgrades to the PharmGuard® server platform for connecting CADD Solis™ and Medfusion™ wireless pumps to hospital networks
- EchoGlo™ needle, an ultrasound-guidable needle line for targeted delivery of pain management medications in nerve block procedures
- Sol-M, blood-draw venipuncture safety devices designed to reduce the risk of infection and blood contamination
- A Closed System Catheter for the Chinese market that prevents blood exposure and reduces IV set-up time
- A next generation paediatric tracheostomy tube line that is MRI-safe and DEHP-free

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Smiths Detection

Smiths Detection is a global leader in the detection and identification of security threats and contraband. It produces equipment for customers in the Air Transportation, Ports & Borders, Defence and Urban Security end-use markets. 44% of Smiths Detection's sales are derived from the aftermarket. Smiths Detection represents 25% of Group revenue.

	FY2018 £m	FY2017 £m	Reported growth	Underlying[1] growth
Revenue	793	687	15%	**1%**
Headline operating profit	134	103	30%	**16%**
Headline operating margin	16.9%	15.0%	190bps	**240bps**
Statutory operating profit	93	70	33%	
Return on capital employed	12.1%	12.6%	(50)bps	

Performance

Smiths Detection underlying[1] revenue increased by 1%. Second half underlying[1] growth of 11% reflected continued strong growth in Air Transportation enhanced by the phasing of contract deliveries. Full year growth was partially offset by declines in Ports & Borders and Defence. Overall aftermarket revenue grew by 1% on an underlying[1] basis and now accounts for 44% of total revenue (FY2017: 39%). On a reported basis, revenue increased by 15%; this included £124m of incremental revenue associated with the acquisition of Morpho Detection ('Morpho'), and £(22)m of adverse foreign exchange translation.

Revenue in Air Transportation increased 20% on an underlying[1] basis. Air Transportation is Smiths Detection's largest segment and, following the acquisition of Morpho, now represents 68% of total revenue. During the period there was strong growth in EMEA as a result of deliveries associated with the ECAC Standard 3 Regulation for hold baggage. Major deliveries included projects in the UK, Frankfurt and Amsterdam, as well as in the US and Saudi Arabia. Contract wins included: providing Helsinki Airport with eight XCT units to upgrade its hold baggage system; a $70m contract with the TSA for hold baggage systems across the USA, and a contract to sell 151 trace detection devices across airports in China. Revenue from Ports & Borders fell (43)% on an underlying[1] basis following the completion of key programmes in Italy, Mali and Kuwait last year. Contract wins included an order for CORSYS™ by the Port of Rotterdam. Underlying[1] revenue in Defence decreased by (46)% against last year's strong comparator and reflects the wind down of some major US military programmes. Urban Security revenues increased 3% on an underlying[1] basis, driven by growing sales of hand-held devices to detect and identify nuclear-threats to the US Department for Homeland Security.

Revenue from higher-growth regions represented 19% of sales, broadly in line with the prior year on an underlying[1] basis. Good sales growth in India was offset by the completion of projects in South Korea, Pakistan and Turkey. We continue to experience pricing pressure in some end-use markets, and in unregulated parts of the market from lower-priced competitors.

Headline operating profit increased 16% on an underlying[1] basis, reflecting volume growth and the delivery of cost synergies associated with the Morpho acquisition. Headline reported operating margin increased by 240bps on an underlying[1] basis to 16.9%, reflecting these cost synergies as well as other efficiency savings and the benefit of one-off items associated with long term programmes. The difference between statutory and headline operating profit primarily reflects integration costs associated with the acquisition of Morpho and amortisation of acquired intangibles. The integration of Morpho continues to progress well, with the benefits of the combination supporting new contract wins, including a $50m contract with Airports Authority of India. The $30m of annualised cost synergies are now expected to be delivered in full by the end of FY2019, one year ahead of schedule.

ROCE decreased (50)bps to 12.1% driven by the impact of the Morpho acquisition.

Cash R&D expenditure during the period was 7.4% of sales, or 6.3% excluding customer funded R&D (FY2017: 7.1% and 6.0% respectively). Specific highlights included continued investment in:

- A range of solutions for the Chinese aviation market
- Freight and cargo scanners that can now detect lithium batteries
- Next generation chemical warfare agent detection devices for the defence market
- Digital solutions – including CORAL, our advanced predictive analytics suite for hold baggage detection systems and Checkpoint.evo^{plus}, our integrated checkpoint screening and management platform

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Smiths Interconnect

Smiths Interconnect designs solutions for high-speed, secure connectivity in demanding applications for the defence, semiconductor test, medical, space, commercial aerospace, and rail markets. Smiths Interconnect represents 9% of Group revenue.

	FY2018 £m	FY2017 £m	Reported growth	Underlying[1] growth
Revenue	300	419	(28)%	**(1)%**
Headline operating profit	42	56	(25)%	**(2)%**
Headline operating margin	14.1%	13.4%	70bps	**(10)bps**
Statutory operating profit	37	124	(70)%	
Return on capital employed	11.9%	11.4%	50bps	

Performance

Smiths Interconnect's underlying[1] revenue was down (1)%, reflecting an improved trend in the second half, especially in the Defence, Semiconductor Test and Rail markets. On a reported basis, revenue declined by (28)%, reflecting a £(96)m impact from the divestments of Power and Telecoms businesses in January and May 2017 respectively, and £(19)m of adverse foreign exchange translation.

Underlying[1] revenue in the Defence segment grew by 1%, supported by increased defence spending in the US, Europe and the Middle East, including programmes such as Eurofighter, Joint Strike Fighter, Gripen and various naval programmes. In the Medical segment, underlying[1] revenue grew by 7% driven by strong sales of highly specialist connectors for patient monitoring and imaging systems. In the Space segment, revenue increased 3% driven by higher connectivity product content within satellite programs. The Rail segment increased by 10% driven by power and data connectors. Commercial Aerospace declined by (20)% due to lower sales of antenna systems. Semiconductor Test declined by (9)% primarily due to order timing.

Revenue from higher-growth regions, which represents 16% of sales, decreased by (9)% on an underlying[1] basis as a result of order timing in Semiconductor Test.

Headline operating profit declined (2)% on an underlying[1] basis to £42m, where an improvement in gross margin was offset by investment in sales, marketing and R&D to drive future growth. Headline operating margin was broadly in line with last year at 14.1%, on an underlying[1] basis. The difference between statutory and headline operating profit primarily reflects adjustments for amortisation of acquired intangibles and the loss on disposal of a trade investment.

In April 2018, Smiths Interconnect signed a joint venture agreement with Sichuan Huafeng Enterprise Group Co. Ltd - a major manufacturer of electronic components in China. The combined portfolio of highly specialised electronic components and customer relationships is expected to accelerate penetration and growth in this important market.

ROCE increased 50bps to 11.9% driven by disposal of the Power and Telecoms businesses in FY2017.

Cash R&D expenditure was 7.0% of revenue (FY2017: 6.7%) (6.0% excluding customer funded R&D, FY2017: 5.5%). Product developments included:

- Volta semiconductor solutions for testing integrated chip packages
- SpaceNXT™ HC Series - a range of high reliability microwave components qualified for next-generation commercial space applications
- SpaceNXT™ Q Series - a range of flexible cable assemblies qualified for space applications
- Eclipta ™ connector – a double ended edge card contact technology for disposable medical applications

[1] Underlying modifies headline performance to: adjust prior year to reflect an equivalent period of ownership for divested businesses; include restructuring and pension administration costs as headline for both years; and exclude the effects of foreign exchange, acquisitions and supplemental sales for divested businesses.

Flex-Tek

Flex-Tek provides innovative components to heat and move fluid and gases for the aerospace, medical, industrial, construction and domestic appliance markets. Flex-Tek represents 11% of Group revenue.

	FY2018 £m	FY2017 £m	Reported growth	Underlying[1] growth
Revenue	354	338	4%	**10%**
Headline operating profit	67	65	2%	**10%**
Headline operating margin	18.9%	19.3%	(40)bps	**flat**
Statutory operating profit	68	68	flat	
Return on capital employed	35.0%	35.8%	(80)bps	

Performance

Flex-Tek delivered a strong performance with revenue up 10% on an underlying[1] basis, with growth in all segments. On a reported basis revenue increased 4%, despite a £(17)m adverse foreign exchange translation.

Construction revenue grew 5% on an underlying[1] basis, with both Gastite and Thermaflex benefiting from continued growth in the US housing market. Fluid Management revenue was up 11% on an underlying[1] basis, driven by strong sales of its aerospace solutions across a range of engine and airframe platforms. Heat Solutions revenue increased by 17% on an underlying[1] basis, principally due to growth in its engineered solutions as well as increased sales of clothes dryer elements and heating, ventilation and air conditioning (HVAC) systems. Flexible Solutions underlying[1] revenue growth of 10% was driven by increased demand from the medical sector, partially offset by a decline in the floor care segment.

Revenue from higher-growth regions, which represents 9% of sales, increased 16%, driven by strong sales into China and India.

On an underlying[1] basis headline operating profit increased 10% to £67m and headline operating margin was in line with the prior year at 18.9%. The difference between statutory and headline operating profit is primarily due to a reduction in the provision for Titeflex Corporation for subrogation claims.

In November 2017 the Heat Solutions business completed the acquisition of the heating element division of Osram Sylvania, Inc. The integration of the business is now largely complete and the benefits of broadening its portfolio into faster growing engineered heating solutions are starting to flow through.

ROCE decreased (80)bps to 35.0%, driven by the acquisition of Osram's heating element business.

R&D expenditure remained consistent at 0.6% of sales (FY2017: 0.6%), focused on market-leading innovative solutions to meet specific customer needs. Product developments included:

- Thermaflex floating core HVAC duct
- Gastite's FlashShield II, the next generation of flexible gas piping which is expected to launch in FY2019

[1] Underlying modifies headline performance to: adjust prior year to reflect an equivalent period of ownership for divested businesses; include restructuring and pension administration costs as headline for both years; and exclude the effects of foreign exchange, acquisitions and supplemental sales for divested businesses.

Other financial matters

Statutory operating profit
Operating profit on a statutory basis, after taking account of the items excluded from the headline figures, was £494m (FY2017: £674m) – see note 3 to the accounts for information on the excluded items. Non-headline charges of £(50)m reflect the change in reporting of restructuring costs and pension administration costs as headline items (FY2017: £(33)m restructuring costs and £(7)m operating charge for pension administration were classified as non-headline items) and the £175m profit on disposal of businesses generated in FY2017.

Finance costs
Headline finance costs of £(57)m (FY2017: £(61)m) were £4m lower driven by the repayment of higher coupon debt. Statutory finance costs were £(59)m (FY2017: £(73)m).

Non-headline items relating to continuing activities excluded from headline profit before tax
These items amounted to a charge of £(52)m compared with a credit of £73m in FY2017. The movement is driven by the £175m profit on disposal of businesses in FY2017, as well as the reclassification of costs in FY2018 from non-headline into headline. Please see below a summary of the restructuring and pension admistration costs by divisions for FY2017 as recorded in non-headline. Please refer to note 3 of the accounts for further details.

FY2017	John Crane	Smiths Medical	Smiths Detection	Smiths Interconnect	Flex-Tek	Central costs	**Group**
Restructuring programmes	£(7)m	£(16)m		£(2)m	£(1)m	£(7)m	**£(33)m**
Pension administration costs						£(7)m	**£(7)m**

Total profit and earnings per share
Total statutory profit for the year of £279m and EPS of 70.0p was down 51% on a reported basis, impacted by the non-headline items; but on an underlying[1] basis EPS was up 4%.

Net capex, Depreciation & Amortisation
Net capex at £102m (FY2017: £98m) represented 1.1x depreciation and amortisation, broadly in line with last year (FY2017: 1.0x).

Working Capital
Movement in working capital was an outflow of £(16)m (FY2017: £85m inflow), reflecting higher receivables following strong growth in the latter part of the year as well as higher inventory to support the return to growth. Working capital as a percentage of sales[2] improved to 26% (FY2017: 27%).

Operating cash
Cash conversion was good at 99% (FY2017: 118%) translating into headline operating cash-flow of £538m (FY2017: £695m). Statutory operating cash was £405m (FY2017: £479m). See note 29 to the financial statements for a reconciliation of headline operating cash to statutory cash-flow measures.

Acquisitions and disposals
During the year, the Group acquired two businesses and made one disposal. For more information, please read notes 26, 27 and 28 of the accounts.

- On 1 November 2017, Flex-Tek acquired the heating element division of Osram Sylvania, Inc for a consideration of £15m.
- On 31 May 2018, John Crane disposed of its Bearings business for an enterprise value of $35m.
- On 13 June 2018, John Crane acquired Seebach GmbH, a highly technological filtration business, for an enterprise value of €60m.

Free cash-flow of £302m (FY2017: £370m) decreased by (18)% reflecting £157m decrease in headline operating cash-flow, offset by lower pension contributions and tax payments. See note 29 to the accounts for further details.

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[1] Underlying modifies headline performance to: adjust prior year to reflect an equivalent period of ownership for divested businesses; include restructuring and pension administration costs as headline for both years; and exclude the effects of foreign exchange, acquisitions and supplemental sales for divested businesses.
[2] Working capital as a percentage of sales is calculated as the 12 month rolling average of inventory, trade receivables and associated provisions, unbilled receivables, trade payables and deferred revenue as a percentage of total annual sales

Exchange rates

The results of overseas operations are translated into sterling at average exchange rates. The net assets are translated at period-end rates. The principal exchange rates, expressed in terms of the value of sterling, are shown in the following table.

	31 July 2018	31 July 2017	
Average rates:			
US dollar	1.35	1.27	Dollar weakened 6%
Euro	1.13	1.16	Euro strengthened 3%
Period-end rates:			
US dollar	1.31	1.32	Dollar strengthened 1%
Euro	1.12	1.12	Euro unchanged

Financial information

The financial information in this preliminary announcement which comprises the consolidated income statement, consolidated statement of comprehensive income, consolidated balance sheet, consolidated cash-flow statement, consolidated statement of changes in equity, accounting policies and related notes, does not constitute statutory accounts within the meaning of Section 434 of the Companies Act 2006.

The statutory accounts for the year ended 31 July 2017 have been filed with the Registrar of Companies. The auditors have reported on those accounts and on the statutory accounts for the year ended 31 July 2018, which will be filed with the Registrar of Companies. Both the audit reports were unqualified and did not contain any statement under section 498 of the Companies Act 2006.

CONSOLIDATED INCOME STATEMENT

	1. 2.	Year ended 31 July 2018			Year ended 31 July 2017		
	Notes	Headline £m	Non-headline (note 3) £m	Total £m	Headline £m	Non-headline (note 3) £m	Total £m
CONTINUING OPERATIONS							
Revenue	3. 1	3,213		3,213	3,280		3,280
Cost of sales		(1,749)		(1,749)	(1,755)		(1,755)
Gross profit		1,464		1,464	1,525		1,525
Sales and distribution costs		(435)		(435)	(449)		(449)
Administrative expenses		(485)	(57)	(542)	(487)	(90)	(577)
Profit on business disposal	4. 28		7	7		175	175
OPERATING PROFIT	5. 2	**544**	**(50)**	**494**	**589**	**85**	**674**
Interest receivable		7		7	5		5
Interest payable		(64)		(64)	(66)		(66)
Other financing losses			(9)	(9)		(14)	(14)
Other finance income – retirement benefits	6. 8		7	7		2	2
Finance costs	7. 4	(57)	(2)	(59)	(61)	(12)	(73)
Continuing operations – Profit before taxation		**487**	**(52)**	**435**	**528**	**73**	**601**
Taxation	8. 6	(126)	(30)	(156)	(140)	111	(29)
Continuing operations – Profit for the year		**361**	**(82)**	**279**	**388**	**184**	**572**
Discontinued operations							
Loss on discontinued operations	9. 27					(8)	(8)
PROFIT FOR THE YEAR		**361**	**(82)**	**279**	**388**	**176**	**564**
Profit for the year attributable to:							
Smiths Group shareholders – continuing operations		359	(82)	277	386	184	570
Smiths Group shareholders – discontinued operations						(8)	(8)
Non-controlling interests in respect of continuing operations		2		2	2		2
		361	**(82)**	**279**	**388**	**176**	**564**
EARNINGS PER SHARE	10.5						
Basic				70.0p			142.1p
Basic – continuing				70.0p			144.1p
Diluted				69.1p			140.3p
Diluted – continuing				69.1p			142.3p

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
PROFIT FOR THE YEAR		**279**	**564**
Other comprehensive income:			
Actuarial gains on retirement benefits	11.8	104	55
Taxation recognised on actuarial movements	12.6	(18)	(13)
Other comprehensive income and expenditure which will not be reclassified to the consolidated income statement		86	42
Other comprehensive income which will be reclassified and reclassifications:			
Exchange gains		6	25
Cumulative exchange gains recycled on business disposals		(5)	(41)
Fair value gains/(losses) and reclassification adjustments:			
– deferred on available for sale financial assets		1	1
– deferred in the period on cash-flow and net investment hedges		(6)	(14)
– reclassified to income statement on cash-flow and net investment hedges		(6)	25
Taxation recognised on fair value gains	13.6		(1)
Total other comprehensive income		**76**	**37**
Total comprehensive income		**355**	**601**
Attributable to:			
Smiths Group shareholders		353	600
Non-controlling interests		2	1
		355	**601**

CONSOLIDATED BALANCE SHEET

	Notes	31 July 2018 £m	31 July 2017 £m
NON-CURRENT ASSETS			
Intangible assets	14.10	2,061	2,015
Property, plant and equipment	15.12	320	315
Financial assets – other investments	16.16	18	21
Retirement benefit assets	17.8	526	390
Deferred tax assets	18.6	180	272
Trade and other receivables	19.14	57	57
Financial derivatives	20.19	50	56
		3,212	**3,126**
CURRENT ASSETS			
Inventories	21.13	466	452
Current tax receivable	22.6	38	62
Trade and other receivables	23.14	733	722
Cash and cash equivalents	24.17	717	782
Financial derivatives	25.19	7	13
		1,961	**2,031**
TOTAL ASSETS		**5,173**	**5,157**
NON-CURRENT LIABILITIES			
Financial liabilities			
– borrowings	26.17	(1,407)	(1,598)
– financial derivatives	27.19	(6)	(2)
Provisions for liabilities and charges	28.22	(262)	(283)
Retirement benefit obligations	29.8	(145)	(166)
Deferred tax liabilities	30.6	(77)	(111)
Trade and other payables	31.15	(27)	(26)
		(1,924)	**(2,186)**
CURRENT LIABILITIES			
Financial liabilities			
– borrowings	32.17	(203)	(151)
– financial derivatives	33.19	(4)	(10)
Provisions for liabilities and charges	34.22	(76)	(85)
Trade and other payables	35.15	(606)	(576)
Current tax payable	36.6	(72)	(45)
		(961)	**(867)**
TOTAL LIABILITIES		**(2,885)**	**(3,053)**
NET ASSETS		**2,288**	**2,104**
SHAREHOLDERS' EQUITY			
Share capital	37.23	148	148
Share premium account		358	355
Capital redemption reserve	38.25	6	6
Revaluation reserve	39.25	1	1
Merger reserve	40.25	235	235
Retained earnings		1,826	1,634
Hedge reserve	41.25	(302)	(290)
Total shareholders' equity		**2,272**	**2,089**
Non-controlling interest equity		16	15
TOTAL EQUITY		**2,288**	**2,104**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	Notes	Share capital and share premium £m	Other reserves £m	Retained earnings £m	Hedge reserve £m	Equity shareholders' funds £m	Non-controlling Interest £m	Total equity £m
At 31 July 2017		503	242	1,634	(290)	2,089	15	2,104
Profit for the year				277		277	2	279
Other comprehensive income:								
Actuarial gains on retirement benefits and related tax				86		86		86
Exchange gains				1		1		1
Fair value gains/(losses) and related tax				1	(12)	(11)		(11)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR				**365**	**(12)**	**353**	**2**	**355**
Transactions relating to ownership interests:								
Exercises of share options	42.23	3				3		3
Purchase of own shares	43.25			(15)		(15)		(15)
Dividends:								
– equity shareholders	44.24			(172)		(172)		(172)
– non-controlling interest							(1)	(1)
Share-based payment	45.9			14		14		14
At 31 July 2018		**506**	**242**	**1,826**	**(302)**	**2,272**	**16**	**2,288**

	Notes	Share capital and share premium £m	Other reserves £m	Retained earnings £m	Hedge reserve £m	Equity shareholders' funds £m	Non-controlling Interest £m	Total equity £m
At 31 July 2016		500	242	1,205	(301)	1,646	14	1,660
Profit for the year				562		562	2	564
Other comprehensive income:								
Actuarial gains on retirement benefits and related tax				42		42		42
Exchange losses				(15)		(15)	(1)	(16)
Fair value gains and related tax					11	11		11
TOTAL COMPREHENSIVE INCOME FOR THE YEAR				**589**	**11**	**600**	**1**	**601**
Transactions relating to ownership interests:								
Exercises of share options	46.23	3				3		3
Taxation recognised on share options	47.6			3		3		3
Purchase of own shares	48.25			(10)		(10)		(10)
Dividends:								
– equity shareholders	49.24			(167)		(167)		(167)
Share-based payment	50.9			14		14		14
At 31 July 2017		**503**	**242**	**1,634**	**(290)**	**2,089**	**15**	**2,104**

CONSOLIDATED CASH-FLOW STATEMENT

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Net cash inflow from operating activities	51.29	**405**	**479**
Cash-flows from investing activities			
Expenditure on capitalised development		(26)	(37)
Expenditure on other intangible assets	52.10	(12)	(8)
Purchases of property, plant and equipment	53.12	(68)	(62)
Disposals of property, plant and equipment		4	9
Investment in financial assets	54.16	(1)	(18)
Acquisition of businesses	55.26	(71)	(580)
Disposals of businesses – continuing operations	56.28	29	399
Disposals of businesses – discontinued operations	57.27		63
Net cash-flow used in investing activities		**(145)**	**(234)**
Cash-flows from financing activities			
Proceeds from exercise of share options	58.23	3	3
Purchase of own shares	59.25	(15)	(10)
Settlement of cash settled options		(1)	
Dividends paid to equity shareholders	60.24	(172)	(167)
Cash inflow from matured derivative financial instruments		4	
Increase in new borrowings	61.17		546
Reduction and repayment of borrowings	62.17	(135)	(256)
Net cash-flow used in financing activities		**(316)**	**116**
Net (decrease)/increase in cash and cash equivalents		(56)	**361**
Cash and cash equivalents at beginning of year		781	430
Exchange differences		(8)	(10)
Cash and cash equivalents at end of year	63.17	**717**	**781**
Cash and cash equivalents at end of year comprise:			
– cash at bank and in hand		287	226
– short-term deposits		430	556
– bank overdrafts			(1)
		717	**781**
Included in cash and cash equivalents per the balance sheet		717	782
Included in overdrafts per the balance sheet			(1)
		717	**781**

Reconciliation of net cash-flow to movement in net debt

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Net debt at start of year	64.17	**(967)**	**(978)**
Net (decrease)/increase in cash and cash equivalents		(56)	361
Increase in borrowings			(546)
Reduction and repayment of borrowings		135	256
Movement in net debt resulting from cash-flows		**79**	**71**
Capitalisation, interest accruals and unwind of capitalisation fees		2	(4)
Movement from fair value hedging		1	5
Exchange differences		(8)	(61)
Movement in net debt in the year		**74**	**11**
Net debt at end of year	65.17	**(893)**	**(967)**

ACCOUNTING POLICIES

BASIS OF PREPARATION

The accounts have been prepared in accordance with the Companies Act 2006 applicable to companies reporting under International Financial Reporting Standards (IFRS) and International Financial Reporting Interpretations Committee (IFRS IC) interpretations, as adopted by the European Union, on a going concern basis and under the historical cost convention modified to include revaluation of certain financial instruments, share options and pension assets and liabilities, held at fair value as described below.

The accounting policies adopted are consistent with those of the previous financial year.

SIGNIFICANT JUDGEMENTS, KEY ASSUMPTIONS AND ESTIMATES

The preparation of the accounts in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the accounts and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from these estimates. The key judgements, estimates and assumptions used in these consolidated financial statements are set out below.

Revenue recognition

The timing of revenue recognition on contracts depends on the assessed stage of completion of contract activity at the balance sheet date. This assessment requires the expected total contract revenues and costs to be estimated based on the current progress of the contract. Revenue of £24m (FY2017: £24m) has been recognised in the period in respect of contracts in progress at the period end with a total expected value of £63m (FY2017: £48m) and cumulative revenue recognised to date of £44m (FY2017: £36m). A 5% reduction in the proportion of the contract activity recognised in the current period would have reduced operating profit by less than £1m for both Smiths Detection and Smiths Interconnect (FY2017: less than £1m).

Smiths Detection also has multi-year contractual arrangements for the sale of goods and services. Where these contracts have separately identifiable components with distinct patterns of delivery and customer acceptance, revenue is accounted for separately for each identifiable component. Judgement is applied in the identification of the components of the contract, and the allocation of contract revenue to each component.

Smiths Medical has rebate arrangements in place with some distributors in respect of sales to end customers where sales prices have been negotiated by Smiths Medical. Rebates are estimated based on the level of discount derived from sales data from distributors, the amount of inventory held by distributors and the time lag between the initial sale to the distributor and the rebate being claimed. The rebate accrual at 31 July 2018 was £32m (FY2017: £27m).

Contract profitability

Smiths Detection has multi-year contractual arrangements for the sale of goods and services. Margins achieved on these contracts can reflect the impact of commercial decisions made in different economic circumstances. In addition, contract delivery is subject to commercial and technical risks which can affect the outcome of the contract.

At 31 July 2018 and 2017 no other contracts had been assessed as at significant risk of becoming onerous and no provision was held against onerous contracts.

Taxation

The Group has recognised deferred tax assets of £121m (FY2017: £129m) relating to losses and £67m (FY2017: £112m) relating to the John Crane, Inc. and Titeflex Corporation litigation provisions. The recognition of assets pertaining to these items involves judgement by management as to the likelihood of realisation of these deferred tax assets. This is based on a number of factors, which seek to assess the expectation that the benefit of these assets will be realised, including expected future levels of operating profit, expenditure on litigation, pension contributions and the timing of the unwind of other tax positions. It has been concluded that there are sufficient taxable profits in future periods to support recognition. A 5% reduction in expected future operating profits would reduce the level of deferred tax recognised by £1m (FY2017: £8m), and a 5% increase in expected future operating profits would increase the level of deferred tax recognised by £7m (FY2017: £11m). Further detail on the Group's deferred taxation position is included in note 6.

Retirement benefits

The consolidated financial statements include costs in relation to, and provision for, retirement benefit obligations. The costs and the present value of any related pension assets and liabilities depend on such factors as life expectancy of the members, the returns that plan assets generate and the discount rate used to calculate the present value of the liabilities. The Group uses previous experience and independent actuarial advice to select the values of critical estimates. The estimates, and the effect of variances in key estimates, are disclosed in note 8.

At 31 July 2018 there is a retirement benefit asset of £526m (FY2017: £390m), principally relating to UK schemes, which arises from the rights of the employers to recover the surplus at the end of the life of the scheme. If the pension schemes were wound up while they still had members, the schemes would need to buy out the benefits of all members. The buyouts would cost significantly more than the present value of the scheme liabilities calculated in accordance with IAS 19: Employee benefits.

Receivables provisions

If the carrying value of any receivable is higher than the fair value, the Group makes provisions writing down the balance to its fair value. The fair value of receivables is considered individually for each customer and incorporates past experience and progress with collecting receivables.

At 31 July 2018 the gross value of receivables partly provided for or more than three months overdue was £70m (FY2017: £73m) and there were provisions of £32m (FY2017: £33m) against these receivables. Consequently, these receivables were carried at a net value of £38m (FY2017: £40m). See note 14 for disclosures on credit risk and ageing of trade receivables.

Inventory provisions

The calculation of inventory provisions requires judgement by management of the expected value of future sales. If the carrying value of inventory is higher than the expected recoverable value, the Group makes provisions writing inventory down to its net recoverable value. Inventory is initially assessed for impairment by comparing inventory levels to recent utilisation rates and carrying values to historical selling prices. A detailed review is completed for inventory lines identified in the initial assessment considering sales activity, order flow, customer contracts and current selling prices.

At 31 July 2018, there were provisions of £54m (FY2017: £55m) against gross inventory of £520m (FY2017: £507m). See note 13 for a breakdown of inventory.

A 10% increase in the proportion of raw materials provided for would increase the provision by £17m (FY2017: £17m) and a 10% increase in the proportion of finished goods provided for would increase the provision by £23m (FY2017: £22m).

Capitalisation of development costs

Expenditure incurred in the development of major new products is capitalised as internally generated intangible assets only when strict criteria are met, specifically in relation to the products' technical feasibility and probable future economic benefits. The carrying value of intangible assets are amortised over their expected useful lives, commencing in the year that sales are first made.

The assessment of the future viability and technical feasibility of development projects and the determination of the underlying products' useful economic life and amortisation basis require significant judgement and the use of assumptions and estimates.

Impairment

Goodwill is tested at least annually for impairment and other assets, including capitalised development costs and intangible assets acquired in business combinations, are tested if there are any indications of impairment, in accordance with the accounting policy set out below.

The recoverable amounts of cash generating units and assets are determined based on value in use calculations unless future trading projections cannot be adjusted to eliminate the impact of a major restructuring. The value in use calculations require the use of assumptions and estimates including projected future cash-flows and other future events.

Provisions for liabilities and charges

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain.

Non-headline and legacy provisions

John Crane, Inc. ("JCI"), a subsidiary of the Group, is one of many co-defendants in litigation relating to products previously manufactured which contained asbestos. Provision of £223m (FY2017: £237m) has been made for the future defence costs which the Group is expected to incur and the expected costs of future adverse judgments against JCI. Whilst well-established incidence curves can be used to estimate the likely future pattern of asbestos-related disease, JCI's claims experience is significantly impacted by other factors which influence the US litigation environment. These can include: changing approaches on the part of the plaintiffs' bar; changing attitudes amongst the judiciary at both trial and appellate levels; and legislative and procedural changes in both the state and federal court systems. Therefore, because of the significant uncertainty associated with the future level of asbestos claims and of the costs arising out of the related litigation, there can be no guarantee that the assumptions used to estimate the provision will result in an accurate prediction of the actual costs that may be incurred.

JCI takes account of the advice of an expert in asbestos liability estimation in quantifying the expected costs. The following judgements were made in preparing the provision calculation:

- the period over which the expenditure can be reliably estimated is judged to be ten years, based on past experience regarding significant changes in the litigation environment that have occurred every few years and on the amount of time taken in the past for some of those changes to impact the broader asbestos litigation environment. See note 22 for a sensitivity showing the impact on the provision of reducing or increasing this time horizon;
- the future trend of legal costs; the rate of future claims filed; the rate of successful resolution of claims; and the average amount of judgments awarded have been projected based on the past history of JCI claims and well-established tables of asbestos incidence projections, since this is the best available evidence. Claims history from other defendants is not used to calculate the provision because JCI's defence strategy generates a significantly different pattern of legal costs and settlement expenses. See note 22 for a sensitivity showing the range of expected future spend.

Titeflex Corporation, a subsidiary of the Group in the Flex-Tek division, has received a number of claims from insurance companies seeking recompense on a subrogated basis for the effects of damage allegedly caused by lightning strikes in relation to its flexible gas piping product. It has also received a number of product liability claims regarding this product, some in the form of purported class actions. Titeflex Corporation believes that its products are a safe and effective means of delivering gas when installed in accordance with the manufacturer's instructions and local and national codes; however some claims have been settled on an individual basis without admission of liability. Provision of £78m (FY2017: £84m) has been made for the costs which the Group is expected to incur in respect of these claims. In preparing the provision calculation, judgements were made about the impact of safe installation initiatives on the level of future claims. See note 22 for a sensitivity showing the impact on the provision of reducing or increasing the expected impact. However, because of the significant uncertainty associated with the future level of claims, there can be no guarantee that the assumptions used to estimate the provision will result in an accurate prediction of the actual costs that may be incurred.

Trading provisions

The Group has on occasion been required to take legal action to protect its intellectual property and other rights against infringement. It has also had to defend itself against proceedings brought by other parties, including product liability and insurance subrogation claims. Provision is made for any expected costs and liabilities in relation to these proceedings where appropriate, though there can be no guarantee that such provisions (which may be subject to potentially material revision from time to time) will accurately predict the actual costs and liabilities that may be incurred.

All provisions may be subject to potentially material revisions from time to time if new information becomes available as a result of future events.

Presentation of results

In order to provide users of the accounts with a clear and consistent presentation of the performance of the Group's ongoing trading activity, the income statement is presented in a three column format with 'headline' profits shown separately from non-headline items.

Judgement is required in determining which items should be included as non-headline. The amortisation of acquired intangibles, impairments, legacy liabilities, material one-off items and certain re-measurements are included in a separate column of the income statement. See note 3 for a breakdown of the items excluded from headline operating profit and headline finance costs.

Performance measures for the Group's ongoing trading activity are described as 'headline' and used by management to measure and monitor performance. See note 1 for disclosures of headline operating profit and note 30 for more information about the calculation of return on capital employed and credit metrics.

In addition, the Group reports underlying growth rates for sales and profit measures and determining which items should be adjusted for involves judgement. Underlying growth excludes the impact of acquisitions, divestments, presentational changes and the effects of foreign exchange translation, by making the following adjustments:

Exclude acquisitions from the current period for the first 12 months of ownership;

Exclude the performance of divested businesses after the date of disposal from comparative period;

Include restructuring and pension administration costs as headline items for both the current and comparative periods; and

Retranslate the comparative to current year exchange rates before calculating growth measures.

ACCOUNTING POLICIES

Basis of consolidation

The consolidated accounts incorporate the financial statements of Smiths Group plc (the 'Company') and its subsidiary undertakings, together with the Group's share of the results of its associates.

Subsidiaries are all entities controlled by the Company. Subsidiaries are fully consolidated from the date on which control is obtained by the Company to the date that control ceases.

Associates are entities which the Group has significant influence over but does not control, generally accompanied by a share of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method.

Foreign currencies

The Company's presentational currency is sterling. The financial position of all subsidiaries and associates that have a functional currency different from sterling are translated into sterling at the rate of exchange at the date of that balance sheet, and the income and expenses are translated at average exchange rates for the period. All resulting exchange differences are recognised as a separate component of equity.

On consolidation, exchange differences arising from the translation of the net investment in foreign entities, and of borrowings and other currency instruments designated as hedges of such investments, are taken to shareholders' equity. When a foreign operation is sold, the cumulative amount of such exchange differences is recognised in the income statement as part of the gain or loss on sale.

Exchange differences arising on transactions are recognised in the income statement. Those arising on trading are taken to operating profit; those arising on borrowings are classified as finance income or cost.

Revenue

Revenue is measured at the fair value of the consideration received, net of trade discounts (including distributor rebates) and sales taxes. Revenue is discounted only where the impact of discounting is material.

When the Group enters into complex contracts with multiple, separately identifiable components, the terms of the contract are reviewed to determine whether or not the elements of the contract should be accounted for separately. If a contract is being split into multiple components, the contract revenue is allocated to the different components at the start of the contract. The basis of allocation depends on the substance of the contract. The Group considers relative stand-alone selling prices, contractual prices and relative cost when allocating revenue.

Sale of goods

Revenue from the sale of goods is recognised when the risks and rewards of ownership have been transferred to the customer, the amount of revenue can be measured reliably, and recovery of the consideration is probable. For established products with simple installation requirements, revenue is recognised when the product is delivered to the customer in accordance with the agreed delivery terms. For products which are technically innovative, highly customised or require complex installation, revenue is recognised when the customer has completed its acceptance procedures.

Services

Revenue from services is recognised in accounting periods in which the services are rendered, by reference to completion of the specific transaction, assessed on the basis of the actual service provided as a proportion of the total services to be provided. Depending on the nature of the contract, revenue will be recognised on the basis of the proportion of the contract term completed, the proportion of the contract costs incurred or the specific services provided to date.

Construction contracts

Contracts for the construction of substantial assets are accounted for as construction contracts if the customer specifies major structural elements of the design, including the ability to amend the design during the construction process. These projects normally involve installing customised systems with site-specific integration requirements.

Where the outcome of a construction contract can be estimated reliably, revenue and costs are recognised by reference to the stage of completion of the contract activity at the balance sheet date. The Group uses the 'percentage of completion method' to determine the appropriate amount to recognise in a given period. The assessment of the stage of completion is dependent on the nature of the contract, but will generally be based on the estimated proportion of the total contract costs which have been incurred to date. If a contract is expected to be loss-making, a provision is recognised for the entire loss.

Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases are charged to the income statement on a straight-line basis over the period of the lease.

Taxation

The charge for taxation is based on profits for the year and takes into account taxation deferred because of temporary differences between the treatment of certain items for taxation and accounting purposes.

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to taxation authorities. Tax benefits are not recognised unless it is likely that the tax positions are sustainable. Once considered to be likely, tax benefits are reviewed to assess whether a provision should be made based on prevailing circumstances. Tax provisions are included in current tax liabilities, including any anticipated interest and penalties. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, at the reporting date in the countries where the Group operates and generates taxable income.

Deferred tax is provided in full using the balance sheet liability method. A deferred tax asset is recognised where it is probable that future taxable income will be sufficient to utilise the available relief. Tax is charged or credited to the income statement except when it relates to items charged or credited directly to equity, in which case the tax is also dealt with in equity.

Deferred tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary differences is controlled by the Company and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax liabilities and assets are not discounted.

Employee benefits

Share-based compensation

The fair value of the shares or share options granted is recognised as an expense over the vesting period to reflect the value of the employee services received. The fair value of options granted, excluding the impact of any non-market vesting conditions, is calculated using established option pricing models, principally binomial models. The probability of meeting non-market vesting conditions, which include profitability targets, is used to estimate the number of share options which are likely to vest.

For cash-settled share-based payment, a liability is recognised based on the fair value of the payment earned by the balance sheet date. For equity-settled share-based payment, the corresponding credit is recognised directly in reserves.

Pension obligations and post-retirement benefits

The Group has defined benefit plans, defined contribution plans and post-retirement healthcare schemes.

For defined benefit plans and post-retirement healthcare schemes the liability for each scheme recognised in the balance sheet is the present value of the obligation at the balance sheet date less the fair value of any plan assets. The obligation is calculated annually by independent actuaries using the projected unit credit method. The present value is determined by discounting the estimated future cash outflows using interest rates of AA-rated corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related liability. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are recognised in full in the period in which they occur, outside of the income statement, and are presented in the statement of comprehensive income. Past service costs are recognised immediately in the income statement.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. Contributions are expensed as incurred.

Intangible assets

Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the identifiable net assets of the acquired subsidiary at the date of acquisition.

Goodwill arising from acquisitions of subsidiaries after 1 August 1998 is included in intangible assets, tested annually for impairment and carried at cost less accumulated impairment losses. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold. Goodwill arising from acquisitions of subsidiaries before 1 August 1998 was set against reserves in the year of acquisition.

Goodwill is tested for impairment at least annually. Any impairment is recognised immediately in the income statement. Subsequent reversals of impairment losses for goodwill are not recognised.

Research and development

Expenditure on research and development is charged to the income statement in the year in which it is incurred with the exception of:

amounts recoverable from third parties; and

expenditure incurred in respect of the development of major new products where the outcome of those projects is assessed as being reasonably certain as regards viability and technical feasibility. Such expenditure is capitalised and amortised over the estimated period of sale for each product, commencing in the year that sales of the product are first made. Amortisation is charged straight line or based on the units produced, depending on the nature of the product and the availability of reliable estimates of production volumes.

The cost of development projects which are expected to take a substantial period of time to complete includes attributable borrowing costs.

Intangible assets acquired in business combinations

The identifiable net assets acquired as a result of a business combination may include intangible assets other than goodwill. Any such intangible assets are amortised straight line over their expected useful lives as follows:

Patents, licences and trademarks	up to 20 years
Technology	up to 13 years
Customer relationships	up to 11 years

The assets' useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

Software, patents and intellectual property

The estimated useful lives are as follows:

Software	up to 7 years
Patents and intellectual property	shorter of the economic life and the period the right is legally enforceable

The assets' useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

Property, plant and equipment

Property, plant and equipment is stated at historical cost less accumulated depreciation and any recognised impairment losses.

Land is not depreciated. Depreciation is provided on other assets estimated to write off the depreciable amount of relevant assets by equal annual instalments over their estimated useful lives. In general, the rates used are: Freehold and long leasehold buildings – 2%; Short leasehold property – over the period of the lease; Plant, machinery, etc. – 10% to 20%; Fixtures, fittings, tools and other equipment – 10% to 33%.

The cost of any assets which are expected to take a substantial period of time to complete includes attributable borrowing costs.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out (FIFO) method. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity). The cost of items of inventory which take a substantial period of time to complete includes attributable borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

Trade and other receivables

Trade receivables are initially recognised at fair value and subsequently measured at amortised cost, less any appropriate provision for estimated irrecoverable amounts. A provision is established for irrecoverable amounts when there is objective evidence that amounts due under the original payment terms will not be collected.

Provisions

Provisions for warranties and product liability, disposal indemnities, restructuring costs, vacant leasehold property and legal claims are recognised when: the Company has a legal or constructive obligation as a result of a past event; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Provisions are not recognised for future operating losses.

Provisions are discounted where the time value of money is material.

Where there are a number of similar obligations, for example where a warranty has been given, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Assets and businesses held for sale

Assets and businesses classified as held for sale are measured at the lower of carrying amount and fair value less costs to sell. Impairment losses on initial classification as held for sale and gains or losses on subsequent remeasurements are included in the income statement. No depreciation is charged on assets and businesses classified as held for sale.

Assets and businesses are classified as held for sale if their carrying amount will be recovered or settled principally through a sale transaction rather than through continuing use. The asset or business must be available for immediate sale and the sale must be highly probable within one year.

Discontinued operations

A discontinued operation is either:

a component of the Group's business that represents a separate major line of business or geographical area of operations that has been disposed of, has been abandoned or meets the criteria to be classified as held for sale; or

a business acquired solely for the purpose of selling it.

Discontinued operations are presented on the income statement as a separate line and are shown net of tax.

Cash and cash equivalents

Cash and cash equivalents include cash at bank and in hand and highly liquid interest-bearing securities with maturities of three months or less.

In the cash-flow statement, cash and cash equivalents are shown net of bank overdrafts, which are included as current borrowings in liabilities on the balance sheet.

Financial assets

The classification of financial assets depends on the purpose for which the assets were acquired. Management determines the classification of an asset at initial recognition and re-evaluates the designation at each reporting date. Financial assets are classified as: loans and receivables, available for sale financial assets or financial assets where changes in fair value are charged (or credited) to the income statement.

Financial assets are initially recognised at transaction price when the Group becomes party to contractual obligations. The transaction price used includes transaction costs unless the asset is being fair valued through the income statement.

The subsequent measurement of financial assets depends on their classification. Loans and receivables are measured at amortised cost using the effective interest rate method. Available for sale financial assets are subsequently measured at fair value, with unrealised gains and losses being recognised in other comprehensive income. Financial assets where changes in fair value are charged (or credited) to the income statement are subsequently measured at fair value. Realised and unrealised gains and losses arising from changes in the fair value of the 'financial assets at fair value through the income statement' category are included in the income statement in the period in which they arise.

Financial assets are derecognised when the right to receive cash-flows from the assets has expired, or has been transferred, and the Company has transferred substantially all of the risks and rewards of ownership. When securities classified as available for sale are sold or impaired, the accumulated fair value adjustments previously taken to reserves are included in the income statement.

Financial assets are classified as current if they are expected to be realised within 12 months of the balance sheet date.

Financial liabilities

Borrowings are initially recognised at the fair value of the proceeds, net of related transaction costs. These transaction costs, and any discount or premium on issue, are subsequently amortised under the effective interest rate method through the income statement as interest over the life of the loan, and added to the liability disclosed in the balance sheet. Related accrued interest is included in the borrowings figure.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least one year after the balance sheet date.

Derivative financial instruments and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. The method of recognising any resulting gain or loss depends on whether the derivative is designated as a hedging instrument and, if so, the nature of the item being hedged.

Changes in the fair value of any derivative instruments that do not qualify for hedge accounting are recognised immediately in the income statement.

Fair value hedge

Changes in the fair values of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair values of the hedged assets or liabilities that are attributable to the hedged risk.

Cash-flow hedge

The effective portions of changes in the fair values of derivatives that are designated and qualify as cash-flow hedges are recognised in equity. The gain or loss relating to any ineffective portion is recognised immediately in the income statement.

Amounts accumulated in the hedge reserve are recycled in the income statement in the periods when the hedged items will affect profit or loss (for instance when the forecast sale that is hedged takes place). If a forecast transaction that is hedged results in the recognition of a non-financial asset (for example, inventory) or a liability, the gains and losses previously deferred in the hedge reserve are transferred from the reserve and included in the initial measurement of the cost of the asset or liability.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in the hedge reserve at that time remains in the reserve and is recognised when the forecast transaction is ultimately recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in other comprehensive income is immediately transferred to the income statement.

Net investment hedge

Hedges of net investments in foreign operations are accounted for similarly to cash-flow hedges. Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in other comprehensive income; the gain or loss relating to any ineffective portion is recognised immediately in the income statement.

When a foreign operation is disposed of, gains and losses accumulated in equity related to that operation are included in the income statement.

Fair value of financial assets and liabilities

The fair values of financial assets and financial liabilities are the amounts at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

'IFRS 13: Fair value measurement' requires fair value measurements to be classified according to the following hierarchy:

level 1 – quoted prices in active markets for identical assets or liabilities;

level 2 – valuations in which all inputs are observable either directly (i.e. as prices) or indirectly (i.e. derived from prices); and

level 3 – valuations in which one or more inputs that are significant to the resulting value are not based on observable market data.

See note 20 for information on the methods the Group uses to estimate the fair values of its financial instruments.

Dividends

Dividends are recognised as a liability in the period in which they are authorised. The interim dividend is recognised when it is paid and the final dividend is recognised when it has been approved by shareholders at the Annual General Meeting.

RECENT ACCOUNTING DEVELOPMENTS

A number of new standards and amendments to standards and interpretations have been issued but are not yet effective for the current accounting period. Certain standards which could be expected to have an impact on the consolidated financial statements are discussed in further detail below.

The Group conducted an impact assessment of the new standards which are effective next year based on the Group's current activities and have quantified the impact. The results of the impact assessment confirm that the new standards will lead to limited changes to presentation and disclosure.

IFRS 9: Financial instruments (effective year ending 31 July 2019)

The new standard addresses the classification and measurement of financial assets.

The alignment of the classification and measurement model under IFRS 9 will result in changes in the classification of all financial assets excluding derivatives. These changes will not have a quantitative impact on the financial statements.

IFRS 9 introduces an expected credit loss model, requiring an expected credit loss to be recognised on all financial assets held at amortised cost. The Group has previously provided against bad and doubtful debts within trade and other receivables based on specific risk assessments and reference to past default experience. The resulting reassessment of existing provisions is not expected to have a material impact on the net assets of the Group.

IFRS 9 also introduces changes to the qualifying criteria for hedge accounting and expands the financial and non-financial instruments which may be designated as hedged items and hedging instruments in order to align hedge accounting with business strategy. The changes to hedge accounting under IFRS 9 will result in qualitative enhancements to the interest rate and foreign currency risk management disclosures but will not have a quantitative impact on the consolidated financial statements of the Group.

IFRS 15: Revenue from contracts with customers (effective year ending 31 July 2019)

IFRS 15 replaces IAS 18: Revenue and IAS 11: Construction contracts. The new standard combines a number of previous standards, sets out a five step model for the recognition of revenue and establishes principles for reporting useful information to users of financial statements about the nature, timing and uncertainty of revenue and cash-flows arising from an entity's contracts with customers.

A detailed assessment has been undertaken for the expected impact of IFRS 15 on how the Group currently recognises revenue and a summary of the results of this assessment is shown below. The Group will utilise the full retrospective application with practical expedients option for the adoption of IFRS 15.

The assessment summary represents a reasonable estimate of the expected impact on the reported results for the year ended 31 July 2018 and on the net assets at that date but is subject to revision during the coming half year as the Group completes its analysis, particularly for those contracts on which revenue was recognised in the latter part of the financial year under current IFRS.

The principal areas of impact for the Group's revenue recognition include:

Customer specific products – rephasing of revenue recognition for certain customer specific products that have no alternative use and for which the Group has the right to receive payment;

Customer specific rights – rephasing of revenue recognition for contractual Customer specific rights;

Variable selling costs – certain expenses currently classified as variable selling costs will be reclassified as offsets to revenue. This classification change reduces revenue and cost of sales but has no impact on profit; and

Contract assets and liabilities – certain assets and liabilities current included within trade receivables, accrued income and deferred revenue will be reclassified as contract assets and liabilities.

Revenue

	£m
As reported	3,213
Expected impacts	(16)
IFRS 15 revenue for the year ended 31 July 2018	**3,197**

Headline operating profit

	£m
As reported	544
Expected impacts	nil
IFRS 15 headline operating profit for the year ended 31 July 2018	**544**

Net Assets

	£m
As reported	2,288
Expected impacts	(1)
IFRS 15 net assets as at 31 July 2018	**2,287**

IFRS 16: Leases (effective year ending 31 July 2020)

The standard fundamentally changes the accounting treatment of leased assets, requiring all material lease liabilities and corresponding 'right of use' assets to be recognised on the balance sheet. The operating lease rental expense currently charged to operating profit in the income statement will be replaced by a depreciation charge for the 'right of use' assets recognised in operating profit and an interest charge on the lease liabilities recognised in finance costs.

The Group is mid-way through an IFRS 16 adoption project and the preliminary assessment indicates the impact of adoption will not have a material impact on net assets. The total value of operating lease commitments at 31 July 2018 was £155m (FY2017: £140m).

NOTES TO THE ACCOUNTS

1 SEGMENT INFORMATION

ANALYSIS BY OPERATING SEGMENT

The Group is organised into five divisions: John Crane, Smiths Medical, Smiths Detection, Smiths Interconnect and Flex-Tek. These divisions design, manufacture and support the following products:

John Crane – mechanical seals, seal support systems, power transmission couplings and specialised filtration systems;

Smiths Medical – infusion systems, vascular access products, patient airway and temperature management equipment and specialised devices in areas of diagnostics and emergency patient transport;

Smiths Detection – sensors and systems that detect and identify explosives, narcotics, weapons, chemical agents, biohazards and contraband;

Smiths Interconnect – specialised electronic and radio frequency board-level and waveguide devices, connectors, cables, test sockets and sub-systems used in high-speed, high reliability, secure connectivity applications; and

Flex-Tek – engineered components, flexible hosing and rigid tubing that heat and move fluids and gases.

The position and performance of each division is reported at each Board meeting to the Board of Directors. This information is prepared using the same accounting policies as the consolidated financial information except that the Group uses headline operating profit to monitor divisional results and operating assets to monitor divisional position. See note 3 for an explanation of which items are excluded from headline measures.

Intersegment sales and transfers are charged at arm's length prices.

Segment trading performance

Year ended 31 July 2018

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate costs £m	Total £m
Revenue	881	885	793	300	354		3,213
Divisional headline operating profit	202	156	134	42	67		601
Corporate headline operating costs						(57)	(57)
Headline operating profit/(loss)	**202**	**156**	**134**	**42**	**67**	**(57)**	**544**
Items excluded from headline measures (note 3)	(12)	(4)	(40)	(4)	1	2	(57)
Profit/(loss) on disposal of businesses	9		(1)	(1)			7
Operating profit/(loss)	**199**	**152**	**93**	**37**	**68**	**(55)**	**494**

Year ended 31 July 2017

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate costs £m	Total £m
Revenue	885	951	687	419	338		3,280
Divisional headline operating profit	204	209	103	56	65		637
Corporate headline operating costs						(48)	(48)
Headline operating profit/(loss)	**204**	**209**	**103**	**56**	**65**	**(48)**	**589**
Items excluded from headline measures (note 3)	(17)	(23)	(33)	(4)	3	(16)	(90)
Profit on disposal of businesses	3	100		72			175
Operating profit/(loss)	**190**	**286**	**70**	**124**	**68**	**(64)**	**674**

Divisional headline operating profit is stated after charging the following items:

Year ended 31 July 2018

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Depreciation	13	20	10	7	4	1	55
Amortisation of capitalised development		14	10				24
Amortisation of software, patents and intellectual property	3	4	5	2		4	18
Amortisation of acquired intangibles						29	29
Share-based payment	3	2	1	1	1	6	14

Year ended 31 July 2017

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Depreciation	15	21	8	8	4	1	57
Amortisation of capitalised development		14	13				27
Amortisation of software, patents and intellectual property	2	5	4	2		5	18
Amortisation of acquired intangibles						17	17
Share-based payment	3	2	1	1	1	7	15

Corporate and non-headline items are central costs and charges that are treated as non-headline (see note 3).

Segment assets and liabilities

Segment assets

31 July 2018

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Property, plant, equipment, development projects, other intangibles and investments	94	242	101	35	37	21	530
Inventory, trade and other receivables	361	266	372	120	117	22	1,258
Segment assets	**455**	**508**	**473**	**155**	**154**	**43**	**1,788**

31 July 2017

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Property, plant, equipment, development projects, other intangibles and investments	96	233	107	40	35	20	531
Inventory, trade and other receivables	337	256	389	118	104	27	1,231
Segment assets	**433**	**489**	**496**	**158**	**139**	**47**	**1,762**

Non-headline assets comprise receivables relating to non-headline items, acquisitions and disposals.

Segment liabilities

31 July 2018

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Divisional liabilities	(138)	(116)	(257)	(43)	(46)		(600)
Corporate and non-headline liabilities						(370)	(370)
Segment liabilities	**(138)**	**(116)**	**(257)**	**(43)**	**(46)**	**(370)**	**(970)**

31 July 2017

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Divisional liabilities	(124)	(120)	(246)	(48)	(39)		(577)
Corporate and non-headline liabilities						(393)	(393)
Segment liabilities	**(124)**	**(120)**	**(246)**	**(48)**	**(39)**	**(393)**	**(970)**

Non-headline liabilities comprise provisions and accruals relating to non-headline items, acquisitions and disposals.

Reconciliation of segment assets and liabilities to statutory assets and liabilities

	Assets		Liabilities	
	31 July 2018 £m	31 July 2017 £m	31 July 2018 £m	31 July 2017 £m
Segment assets and liabilities	**1,788**	**1,762**	**(970)**	**(970)**
Goodwill and acquired intangibles	1,867	1,820		
Derivatives	57	69	(11)	(12)
Current and deferred tax	218	334	(149)	(156)
Retirement benefit assets and obligations	526	390	(145)	(166)
Cash and borrowings	717	782	(1,610)	(1,749)
Statutory assets and liabilities	**5,173**	**5,157**	**(2,885)**	**(3,053)**

Segment capital expenditure

The capital expenditure on property, plant and equipment, capitalised development and other intangible assets for each division is:

	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Corporate and non-headline £m	Total £m
Capital expenditure year ended 31 July 2018	17	48	22	10	7	4	**108**
Capital expenditure year ended 31 July 2017	12	58	22	10	6	1	**109**

Corporate and non-headline items include corporate capital expenditure through Smiths Business Information Services on IT equipment and software.

Segment capital employed

Capital employed is a non-statutory measure of invested resources. It comprises statutory net assets adjusted to add goodwill recognised directly in reserves in respect of subsidiaries acquired before 1 August 1998 of £787m (31 July 2017: £787m) and eliminate post-retirement benefit assets and liabilities and litigation provisions relating to non-headline items, both net of related tax, and net debt. See note 30 for a reconciliation of net assets to capital employed.

The 12-month rolling average capital employed by division, which Smiths use to calculate divisional return on capital employed, is:

31 July 2018	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Total £m
Average divisional capital employed	881	1,195	1,108	356	191	3,731
Average corporate capital employed						4
Average total capital employed						**3,735**

67.

31 July 2017	John Crane £m	Smiths Medical £m	Smiths Detection £m	Smiths Interconnect £m	Flex-Tek £m	Total £m
Average divisional capital employed	890	1,257	820	492	182	3,641
Average corporate capital employed						(2)
Average total capital employed						**3,639**

ANALYSIS OF REVENUE

The revenue for the main product and service lines for each division is:

John Crane	Original equipment £m	Aftermarket £m	Total £m
Revenue year ended 31 July 2018	292	589	**881**
Revenue year ended 31 July 2017	314	571	**885**

Smiths Medical	Infusion systems £m	Vascular access £m	Vital care £m	Specialty products £m	Total £m
Revenue year ended 31 July 2018	302	294	248	41	**885**
Revenue year ended 31 July 2017	302	318	273	58	**951**

Smiths Detection	Air transportation £m	Ports and borders £m	Defence £m	Urban security £m	Total £m
Revenue year ended 31 July 2018	540	56	33	164	**793**
Revenue year ended 31 July 2017	355	100	65	167	**687**

Smiths Interconnect	Connectors £m	Microwave £m	Power £m	Total £m
Revenue year ended 31 July 2018	215	85		**300**
Revenue year ended 31 July 2017	177	195	47	**419**

Flex-Tek	Fluid Management £m	Flexible Solutions £m	Heat Solutions £m	Construction Products £m	Total £m
Revenue year ended 31 July 2018	87	66	93	108	**354**
Revenue year ended 31 July 2017	81	64	84	109	**338**

The Group's statutory revenue is analysed as follows:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Sale of goods	2,734	2,865
Services	462	394
Contracts qualifying as construction contracts	17	21
	3,213	**3,280**

Analysis by geographical areas

The Group's revenue by destination and non-current operating assets by location are shown below:

	Revenue		Intangible assets and property plant and equipment	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	31 July 2018 £m	31 July 2017 £m
United Kingdom	142	118	92	92
Germany	170	160	410	363
France	96	96	16	16
Other European	362	355	70	72
Total European	**770**	**729**	**588**	**543**
United States of America	1,414	1,531	1,633	1,627
Canada	132	114	11	13
Other North American	35	33	13	12
Total North American	**1,581**	**1,678**	**1,657**	**1,652**
Japan	122	119	19	19
China (excluding Hong Kong)	122	93	51	49
Rest of the World	618	661	66	67
	3,213	**3,280**	**2,381**	**2,330**

2 OPERATING PROFIT IS STATED AFTER CHARGING

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Research and development expense	107	98
Depreciation of property, plant and equipment	55	57
Amortisation of intangible assets	71	62
Operating leases:		
– land and buildings	33	34
– other	9	8

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Audit services		
Fees payable to the Company's auditors for the audit of the Company's annual financial statements	4	4
Fees payable to the Company's auditors and its associates for other services:		
– the audit of the Company's subsidiaries	2	2
	6	**6**
All other services		1

Other services comprise audit-related assurance services £0.2m (FY2017: £0.2m), other services £0.1m (FY2017: £0.1m), tax advisory services £nil (FY2017: £0.1m) and one-off IT and consulting projects £nil (FY2017: £0.2m). Total fees for non-audit services comprise 5% (FY2017: 8%) of audit fees. Audit-related assurance services include the review of the Interim Report.

3 NON-STATUTORY PROFIT MEASURES

Headline profit measures

The Company seeks to present a measure of performance which is not impacted by material non-recurring items or items considered non-operational in nature. This measure of profit is described as 'headline' and is used by management to measure and monitor performance. See the disclosures on presentation of results in accounting policies for an explanation of the adjustments. The items excluded from 'headline' are referred to as 'non-headline' items.

Non-headline operating profit items

The non-headline items included in statutory operating profit are as follows:

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Morpho Detection – integration and fair value adjustment unwind			
Integration programme costs		(19)	(4)
Unwind of fair value uplift of inventory on the acquisition balance sheet		(2)	(3)
Non-headline litigation provision movements			
Net release of provision held against Titeflex Corporation subrogation claims	68.22	2	4
Provision for John Crane, Inc. asbestos litigation	69.22	(10)	(15)
Cost recovery for John Crane, Inc. asbestos litigation			6
Legacy pension scheme arrangements			
Administration costs for post-retirement benefit schemes	70.8		(7)
Settlement gain/(losses) on post-retirement benefit schemes	71.8	4	(2)
Other items			
Restructuring programmes			(33)
Amortisation of acquisition related intangible assets	72.10	(29)	(17)
Acquisition costs and provision releases		(3)	(19)
Profit on disposal of businesses	73.28	7	175
Non-headline items in operating profit		**(50)**	**85**

Morpho Detection – integration and fair value adjustment unwind

Integration programmes comprise £19m (FY2017: £4m) in respect of the integration of the Morpho Detection acquisition into the existing Smiths Detection business. This item includes site rationalisation costs, IT system harmonisation expenses, organisational change and severance costs. This integration programme has been included as a non-headline item as it is non-operational in nature and non-recurring.

The impact of unwinding the business combination fair value adjustment on the inventory held on Morpho Detection's acquisition balance sheet is included in non-headline items as this charge is a result of acquisition accounting and does not relate to current trading activity.

Non-headline litigation provision movements

The following litigation costs and recoveries have been treated as non-headline items because the provisions were treated as non-headline when originally recognised and the subrogation claims and litigation relate to products that the Group no longer sells in these markets:

A provision release of £2m (FY2017: £4m) has been recognised by Titeflex Corporation in respect of changes to the estimated cost of future claims. The release is principally related to a decrease in the expected number of claims. See note 22 for further details; and

The £10m (FY2017: £15m) charge in respect of John Crane, Inc. asbestos litigation is principally due to an increased provision for legal defence costs. The costs recovered via insurer settlements in the current year were £nil (FY2017: £6m). See note 22 for further details.

Legacy pension scheme arrangement

A £4m settlement gain (FY2017: £2m loss) was recognised in the current year when US funded plan members opted to take lump sums in lieu of annuities. This is included in non-headline as it relates to legacy pension liabilities. See note 8 for further details.

Pension administration costs are included as headline items in the current year. In the prior year £7m of pension administration costs were treated as non-headline.

Other items

In the prior year £33m of costs for the Fuel for Growth restructuring programme were recognised as non-headline items. No costs have been recognised in respect of this programme in the current year.

Acquisition related intangible asset amortisation costs of £29m (FY2017: £17m) were recognised in the current year. This is considered to be a non-headline item on the basis that these charges result from acquisition accounting and do not relate to current trading activity.

Acquisition costs and provision releases comprise £3m (FY2017: £19m) of directly linked incremental transaction costs. These costs do not include the cost of employees working on transactions and are reported as non-headline because they are dependent on the level of acquisition activity in the year.

The profit on disposal of businesses of £7m (FY2017: £175m) principally relates to the sale of John Crane Bearings. See note 28 for further details. It is considered to be a non-headline item since the proceeds and cash impact are material and non-recurring.

Non-headline finance costs items

The non-headline items included in finance costs are as follows:

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Unwind of discount on provisions	74.22	(7)	(6)
Other financing losses		(2)	(8)
Other finance income – retirement benefits	75.8	7	2
Non-headline items in finance costs		**(2)**	**(12)**
Non-headline (loss)/profit before taxation		**(52)**	**73**

The unwind of discount on provisions has been excluded from headline finance costs because these provisions were originally recognised as non-headline and this treatment has been maintained for ongoing costs and credits.

Other financing gains and losses represent the potentially volatile gains and losses on derivatives, loans inside the group and other financial instruments which are not hedge accounted under IAS 39. They have been excluded from headline finance costs because they do not accurately reflect the aggregate risks of the group, since offsetting gains have been recognised in reserves or deferred in assets and liabilities which are not held at fair value.

Other finance income comprises financing credits relating to retirement benefits. These are excluded from headline finance costs because the ongoing costs and credits are a legacy of previous employee pension arrangements.

Non-headline taxation items

A non-headline tax charge of £30m (FY2017: £111m credit) has been taken in the year. See note 6 for further details.

4 NET FINANCE COSTS

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Interest receivable	76.	7	5
Interest payable:	77.		
– bank loans and overdrafts, including associated fees	78.	(8)	(9)
– other loans	79.	(56)	(57)
Interest payable	80.	**(64)**	**(66)**
Other financing gains/(losses):	81.		
– fair value gains on hedged debt	82.	3	6
– losses on fair value hedges	83.	(3)	(6)
– net foreign exchange losses	84.	(3)	(8)
– adjustment to discounted provisions	85.	(6)	(6)
Other financing gains/(losses)	86.	**(9)**	**(14)**
Net interest income on retirement benefit obligations	87.8	**7**	**2**
Net finance costs	88.	**(59)**	**(73)**

£2.8m (FY2017: £2.4m) interest was capitalised as part of the costs of development projects. £0.8m (FY2017: £0.6m) of tax relief has been recognised as current tax relief in the period.

5 EARNINGS PER SHARE

Basic earnings per share are calculated by dividing the profit for the year attributable to equity shareholders of the Parent Company by the average number of ordinary shares in issue during the year.

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Profit attributable to equity shareholders for the year:		
– continuing	277	570
– total	277	562
Average number of shares in issue during the year	395,723,069	395,422,421

Diluted earnings per share are calculated by dividing the profit attributable to ordinary shareholders by 400,999,220 (FY2017: 400,518,049) ordinary shares, being the average number of ordinary shares in issue during the year adjusted by the dilutive effect of employee share schemes. For the year ended 31 July 2018, zero options (FY2017: zero) were excluded from this calculation because their effect was anti-dilutive for continuing operations.

A reconciliation of basic and headline earnings per share – continuing is as follows:

89.	Year ended 31 July 2018		90 Year ended 31 July 2017	
91.	£m	EPS (p)	£m	EPS (p)
Profit attributable to equity shareholders of the Parent Company	277	70.0	570	144.1
Exclude:				
Non-headline items and related tax (note 3)	82	20.7	(184)	(46.5)
Headline profit attributable to equity shareholders for the year	359	90.7	386	97.6
Statutory earnings per share – diluted (p)		69.1		142.3
Headline earnings per share – diluted (p)		89.5		96.3

6 TAXATION

This note only provides information about corporate income taxes under IFRS. Smiths companies operate in over 50 countries across the world. They pay and collect many different taxes in addition to corporate income taxes including: payroll taxes; value added and sales taxes; property taxes; product-specific taxes and environmental taxes. The costs associated with these other taxes are included in profit before tax.

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
The taxation charge in the consolidated income statement for the year comprises:		
Continuing operations		
– current income tax charge	109	58
– current tax adjustments in respect of prior periods	6	3
Current taxation	**115**	**61**
– deferred taxation	41	(32)
Total taxation expense – continuing operations	**156**	**29**
Discontinued operations		
– current income tax credit		(9)
– deferred taxation		6
Total taxation expense in the consolidated income statement	**156**	**26**

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Tax on items charged/(credited) to equity		
Deferred tax charge/(credit):		
– retirement benefit schemes	18	13
– cash-flow hedge accounting	(1)	1
– share options	1	(3)
	18	**11**

Of the £18m charge to equity for retirement benefits, a £17m charge relates to UK retirement schemes and £1m to US pension schemes.

Reconciliation of the tax charge

The tax expense on the profit for the year for continuing operations is different from the standard rate of corporation tax in the UK of 19.0% (FY2017: 19.7%). The difference is reconciled as follows:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Profit before taxation	**435**	**602**
Notional taxation expense at UK rate of 19.0% (FY2017: 19.7%)	83	118
Different tax rates on non-UK profits and losses	33	55
Non-deductible expenses	9	14
Tax credits and non-taxable income	(13)	(15)
Non-headline recognition of UK deferred tax		(69)
Other adjustments to unrecognised deferred tax	(1)	(23)
Non-headline impact of US tax reform – deferred tax revaluation	34	
Non-headline impact of US tax reform – deemed repatriation tax	18	
Current and deferred benefits from closed financing arrangement		(19)
Effect of non-taxable profits on business disposals	(1)	(35)
Prior year true-up	(6)	3
Tax on discontinued activities		(3)
	156	**26**
Comprising:		
– taxation on headline profit	126	140
– tax on non-headline loss	(22)	(27)
– non-headline impact of US tax reform	52	
– change in deferred tax recognition treated as non-headline		(84)
– taxation on discontinued operation		(3)
Taxation expense in the consolidated income statement	**156**	**26**

The head office of Smiths Group is domiciled in the UK so the tax charge has been reconciled to UK tax rates.

US Tax Reform

The Tax Cuts and Jobs Act (the Act) enacted on 22 December 2017 reduced the US Federal tax rate from 35% to 21% from 1 January 2018. This revised rate has been used to revalue net deferred tax assets in the United States, leading to a charge to the income statement of £34m. In addition there is a one-time deemed repatriation tax charge of £18m related to unremitted foreign earnings.

Current taxation

	Current tax £m
At 31 July 2016	(10)
Foreign exchange gains and losses	2
Charge to income statement – continuing	(61)
Credit to income statement – discontinued	9
Business combinations	(1)
Business disposals	(4)
Tax paid	82
At 31 July 2017	**17**
Foreign exchange gains and losses	(1)
Charge to income statement	(115)
Tax paid	65
At 31 July 2018	**(34)**
Current tax receivable	38
Current tax payable	(72)
At 31 July 2018	**(34)**

Provisions included in current tax liabilities are established based on reasonable estimates of the possible consequences of tax authority audits in the various countries in which the Group operates. Management judgement is used to determine the amount of such provisions based on an understanding of the relevant local tax law, taking into account the differences of interpretation that can arise on a wide variety of issues, depending on the prevailing circumstances, including the nature of current tax audits and the experience of previous enquiries.

Deferred taxation

	Property, plant and equipment and intangible assets £m	Employment benefits £m	Losses carried forward £m	Provisions £m	Other £m	Total £m
At 31 July 2016	(145)	8	87	140	61	151
Reallocation				4	(4)	
(Charge)/credit to income statement – continuing	11	(9)	43	(7)	(6)	32
(Charge)/credit to income statement – discontinued	(6)					(6)
Charge to equity		(10)			(1)	(11)
Business combinations	(6)				2	(4)
Business disposals	(3)					(3)
Exchange adjustments	1	1	(1)	1		2
At 31 July 2017	**(148)**	**(10)**	**129**	**138**	**52**	**161**
Deferred tax assets	(4)	(10)	127	133	26	272
Deferred tax liabilities	(144)		2	5	26	(111)
At 31 July 2017	**(148)**	**(10)**	**129**	**138**	**52**	**161**
Reallocation				2	(2)	
(Charge)/credit to income statement – continuing	60	(21)	(7)	(55)	(18)	(41)
(Charge)/credit to income statement – discontinued	2		(1)		(1)	
Charge to equity		(18)				(18)
Business combinations	1					1
Exchange adjustments	1	(1)		(1)	1	
At 31 July 2018	**(84)**	**(50)**	**121**	**84**	**32**	**103**
Deferred tax assets	3	(56)	120	80	33	180
Deferred tax liabilities	(87)	6	1	4	(1)	(77)
At 31 July 2018	**(84)**	**(50)**	**121**	**84**	**32**	**103**

The deferred tax asset relating to losses has been recognised on the basis that evidence demonstrates a consistent pattern of improving results and the Group has implemented plans to support continuing improvements, or the losses relate to specific, identified non-recurring events.

The closing net deferred tax asset balance related to UK activities and included in the balance at 31 July 2018 amounted to £41m.

The net deferred tax asset has reduced significantly from previous year. This is mainly due to the two following items:

US Tax reform, resulting in a £34m reduction in net US deferred tax assets

Increase in the deferred tax liability of £30m related to an increase in the UK retirement benefits surplus

Deferred tax on provisions includes £48m (FY2017:£79m) relating to John Crane Inc litigation provision, and £19m (FY2017: £33m) relating to Titeflex Corporation. See note 22 for additional information on provisions.

Included in other deferred tax balances above are deferred tax assets related to inventory of £8m (FY2017: £14m), deferred revenue of £9m (FY2017: £14m) and rebate reserve of £6m (FY2017: £9m).

Unrecognised Deferred Tax

The Group has unrecognised deferred tax relating to non-UK losses amounting to £73m (FY2017:£67m).

The expiry date of operating losses carried forward is dependent upon the law of the various territories in which the losses arise. A summary of expiry dates for losses in respect of which deferred tax has not been recognised is set out below:

	2018 £m	Expiry of losses	2017 £m	Expiry of losses
Restricted losses – Asia	16	2019-2025	12	2018-2024
Unrestricted losses – operating losses	57	No expiry	55	No expiry
Total losses	**73**		**67**	

Franked Investment Income Group Litigation Order (FII GLO)

Smiths Group is one of the companies enrolled in the FII GLO litigation against HMRC. The court actions first filed in 2003 are nearing an end and some claimants with different fact patterns have received payments. There are further relevant legal actions that could impact Smiths' recoveries that amount to around £22m (computed on a simple interest basis and after deducting 45% withholding tax).

Claims related to the impact of the Foreign Income Dividends (FID) regime are included in the FII GLO litigation claims Smiths issued in 2009. Under the final relevant ECJ decision, FID claims are now conclusively successful and accordingly Smiths Group made its claim in respect of FID's and received £2.1m in August 2017. This amount was calculated using simple interest and has been paid under deduction of withholding tax.

The Group has not recognised any impact to the financial statements in the current period or the prior year, due to the uncertainty of the eventual outcome, except for the amount received in the period in respect of FID.

EU Commission Investigation re Claims for Partial (75%) Exemption for Profits from qualifying loan relationships

The European Commission has opened a state aid investigation into the Group Financing Exemption in the UK controlled foreign company (CFC) rules. The Group Financing Exemption was introduced in legislation by the UK government in 2013. In common with other UK-based international companies whose arrangements were in line with current UK CFC legislation, Smiths Group may be affected by this investigation and is monitoring developments. If the European Commission's investigation is upheld, the estimated maximum potential liability is approximately £14m. Based on our current assessment, no provision is being made in respect of this issue.

7 EMPLOYEES

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Staff costs during the period		
Wages and salaries	839	833
Social security	97	94
Share-based payment (note 9)	16	15
Pension costs (including defined contribution schemes) (note 8)	37	36
	989	**978**

The average number of persons employed, rounded to the nearest 50 employees, was:

	Year ended 31 July 2018	Year ended 31 July 2017
John Crane	6,100	6,050
Smiths Medical	8,050	7,700
Smiths Detection	2,750	2,450
Smiths Interconnect	2,300	3,250
Flex-Tek	2,150	2,100
Corporate	350	350
	21,700	**21,900**

Key management

The key management of the Group comprises Smiths Group plc Board Directors and Executive Committee members. Their aggregate compensation is shown below. Details of Directors' remuneration are contained in the report of the Remuneration Committee within the Annual Report 2018.

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Key management compensation		
Salaries and short-term employee benefits	11.4	13.2
Cost of post-retirement benefits	0.1	0.1
Cost of share-based incentive plans	5.4	5.3

No member of key management had any material interest during the period in a contract of significance (other than a service contract or a qualifying third-party indemnity provision) with the Company or any of its subsidiaries. Options and awards held at the end of the period by key management in respect of the Company's share-based incentive plans were:

	Year ended 31 July 2018		Year ended 31 July 2017	
	Number of instruments '000	Weighted average exercise price	Number of instruments '000	Weighted average exercise price
CIP / SMP	88		204	
SEP	309		134	
LTIP	1,455		1,041	
Restricted stock	296		254	
SAYE	9	£10.48	7	£10.87

Related party transactions

The only related party transactions in the year ended 31 July 2018 were key management compensation (31 July 2017: key management compensation).

8 POST-RETIREMENT BENEFITS

Smiths provides post-retirement benefits to employees in a number of countries. This includes defined benefit and defined contribution plans and, mainly in the United Kingdom (UK) and United States of America (US), post-retirement healthcare.

Defined contribution plans

The Group operates a number of defined contribution plans across many countries. In the UK a defined contribution plan has been offered since the closure of the UK defined benefit pension plans. In the US a 401(k) defined contribution plan operates. The total expense recognised in the consolidated income statement in respect of all these plans was £34m (FY2017: £33m).

Defined benefit and post-retirement healthcare plans

The principal defined benefit pension plans are in the UK and in the US and these have been closed so that no future benefits are accrued.

For all schemes, pension costs are assessed in accordance with the advice of independent, professionally qualified actuaries. These valuations have been updated by independent qualified actuaries in order to assess the liabilities of the schemes as at 31 July 2018. Scheme assets are stated at their market values. Contributions to the schemes are made on the advice of the actuaries, in accordance with local funding requirements.

The changes in the present value of the net pension asset in the period were:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
At beginning of period	224	80
Exchange adjustment		(6)
Current service cost	(3)	(4)
Scheme administration costs	(5)	(7)
Past service cost, curtailments, settlements	5	(1)
Finance income – retirement benefits	7	2
Contributions by employer	49	105
Actuarial gain	104	55
Net retirement benefit asset	**381**	**224**

UK pension schemes

Smiths funded UK pension schemes are subject to a statutory funding objective, as set out in UK pension legislation. Scheme trustees need to obtain regular actuarial valuations to assess the scheme against this funding objective. The trustees and sponsoring companies need to agree funding plans to improve the position of a scheme when it is below the acceptable funding level.

The UK Pensions Regulator has extensive powers to protect the benefits of members, promote good administration and reduce the risk of situations arising which may require compensation to be paid from the Pension Protection Fund. These include imposing a schedule of contributions or the calculation of the technical provisions, where a trustee and company fail to agree appropriate calculations.

Smiths Industries Pension Scheme ("SIPS")

This scheme was closed to future accrual effective 1 November 2009. SIPS provides index-linked pension benefits based on final earnings at date of closure. SIPS is governed by a corporate trustee (SI Pension Trustees Limited, a wholly owned subsidiary of Smiths Group plc). The board of trustee directors currently comprises four company-nominated trustees and four member-nominated trustees, with an independent chairman selected by Smiths Group plc. Trustee Directors are responsible for the management, administration, funding and investment strategy of the scheme.

The most recent actuarial valuation of this scheme has been performed using the Projected Unit Method as at 31 March 2017, and experience gains and losses identified during this valuation have been incorporated into the IAS 19 valuation. Under the funding plan for SIPS agreed in

UK pension schemes continued

June 2018 Smiths pays cash contributions of £1m a month until the Scheme reaches full funding on a 'gilts + 0%' basis. Under the governing documentation of the SIPS, any future surplus would be returnable to Smiths Group plc by refund, assuming gradual settlement of the liabilities over the lifetime of the scheme.

Subject to clarification of the legal position, SIPS expects to implement Guaranteed Minimum Pensions equalisation in respect of members contracted out of the State Earnings Related Pensions Scheme prior to 6 April 1997, once the government has completed its consultations and confirmed an approach. It is not yet possible to reliably quantify the impact of this adjustment.

The duration of SIPS liabilities is around 23 years (FY2017: 23 years) for active deferred members, 22 years (FY2017: 22 years) for deferred members and 11 years (FY2017: 11 years) for pensioners and dependants.

On 31 August 2017, SIPS bought in a tranche of the scheme's pension population with Canada Life for a premium of £207m. An actuarial loss of £26m was recognised as a result of this buy-in agreement.

TI Group Pension Scheme ("TIGPS")

This scheme was closed to future accrual effective 1 November 2009. TIGPS provides index-linked pension benefits based on final earnings at the date of closure. TIGPS is governed by a corporate trustee (TI Pension Trustee Limited, an independent company). The board of trustee directors comprises four company-nominated trustees and four member-nominated trustees, with an independent trustee director selected by the Trustee. The Trustee is responsible for the management, administration, funding and investment strategy of the scheme.

The most recent actuarial valuation of this scheme has been performed using the Projected Unit Method as at 5 April 2017. Under the funding plan for TIGPS agreed in June 2018, Smiths pays cash contributions of £1m a month until the Scheme is fully funded on a solvency basis. Under the governing documentation of the TIGPS, any future surplus would be returnable to Smiths Group plc by refund, assuming gradual settlement of the liabilities over the lifetime of the scheme.

Subject to clarification of the legal position, TIGPS will implement Guaranteed Minimum Pensions equalisation in respect of members contracted out of the State Earnings Related Pensions Scheme prior to 6 April 1997, once the government has completed its consultations and confirmed an approach. It is not yet possible to reliably quantify the impact of this adjustment.

The duration of the TIGPS liabilities is around 24 years (FY2017: 24 years) for active deferred members, 22 years (FY2017: 22 years) for deferred members and ten years (FY2017: 11 years) for pensioners and dependants.

US pension plans

The valuations of the principal US pension and post-retirement healthcare plans were performed using census data at 1 January 2018.

The pension plans were closed with effect from 30 April 2009 and benefits were calculated as at that date and are not revalued. Governance of the US pension plans is managed by a Settlor Committee appointed by Smiths Group Services Corp, a wholly-owned subsidiary.

The duration of the liabilities for the largest US plan is around 19 years (FY2017: 19 years) for active deferred members, 19 years (FY2017: 19 years) for deferred members and 12 years (FY2017: 12 years) for pensioners and dependants.

On 26 December 2017, the US funded plans paid $36m to members who opted to take lump sums in lieu of annuities. A settlement gain of £4m was recognised on this transaction (see note 3).

Risk management

The pensions schemes are exposed to risks that:

investment returns are below expectations, leaving the scheme with insufficient assets in future to pay all its pension obligations;

members and dependants live longer than expected, increasing the value of the pensions the scheme has to pay;

inflation rates are higher than expected, causing amounts payable under index-linked pensions to be higher than expected; and

increased contributions may be required to meet regulatory funding targets if lower interest rates increase the current value of liabilities.

These risks are managed separately for each pension scheme. However Smiths has adopted a common approach of closing defined benefit schemes to cap members' entitlements and supporting trustees in adopting investment strategies which aim to match assets to future obligations, after allowing for the funding position of the scheme.

TI Group Pension Scheme ("TIGPS")

TIGPS with a mature member profile, and a strong funding position, has been able to progress its matching strategy to the point where roughly 50% of liabilities are covered by matching annuities, eliminating investment return, longevity, inflation and funding risks.

Smiths Industries Pension Scheme ("SIPS")

The trustees of SIPS have adopted a leveraged liability matching strategy. The scheme uses repurchase arrangements, total return swaps, inflation swaps and interest rate swaps to hedge the interest and inflation risks of the scheme liabilities. Repurchase agreements exchange government bonds held by the scheme for cash with an obligation to buy back the asset at a fixed future date and price. The cash is invested in liability matching assets, reducing funding risk. A total return swap exchanges the return on a specified asset (for example an index-linked bond) and an interest payment (fixed or floating). Contracts are spread across a panel of banks. To minimise the risk that counterparties fail to settle obligations, positions are collateralised.

At 31 July 2018, SIPS assets were net of £866m (FY2017: £773m) repurchase obligations, and included £12m gains (FY2017: £4m gains) on interest rate swaps, £3m gains (FY2017: £8m gains) on inflation swaps and £2m gain (FY2017: £1m gain) on total return assets. The scheme was holding £67m (FY2017: £1m) in liquidity funds to meet potential future obligations to collateralise repurchase arrangements or swap agreements.

The principal assumptions used in updating the valuations are set out below:

	2018 UK	2018 US	2018 Other	2017 UK	2017 US	2017 Other
Rate of increase in salaries	n/a	n/a	3.1%	n/a	n/a	2.8%
Rate of increase for active deferred members	4.1%	n/a	n/a	4.1%	n/a	n/a
Rate of increase in pensions in payment	3.2%	n/a	2.5%	3.2%	n/a	1.5%
Rate of increase in deferred pensions	3.2%	n/a	n/a	3.2%	n/a	0.1%
Discount rate	2.8%	4.15%	3.4%	2.6%	3.85%	2.6%
Inflation rate	3.2%	n/a	3.3%	3.2%	n/a	2.2%
Healthcare cost increases	4.7%	n/a	n/a	4.2%	n/a	1.8%

The assumptions used in calculating the costs and obligations of the Group's defined benefit pension plans are set by Smiths after consultation with independent professionally qualified actuaries. The assumptions used are estimates chosen from a range of possible actuarial assumptions which, due to the timescale covered, may not necessarily occur in practice. For countries outside the UK and USA assumptions are disclosed as a weighted average.

Discount rate assumptions

The UK schemes use a discount rate based on the yield on the iBOXX over 15-year AA-rated corporate bond index, adjusted if necessary to better reflect the shape of the yield curve considering the Aon Hewitt GBP Select AA curve. For the USA, the discount rate is based on the Towers Watson cash-flow matching models and set with reference to Moody's Aa annualised yield, the Citigroup High Grade Index and the Merrill Lynch 15+ years High Quality Index.

Mortality assumptions

The mortality assumptions used in the principal UK schemes are based on the "SAPS S2" All Birth year tables with relevant scaling factors based on the recent experience of the schemes. The assumption allows for future improvements in life expectancy in line with the 2017 CMI projections, with a smoothing factor of 7.5, blended to a long-term rate of 1.25%. The mortality assumptions used in the principal US schemes are based on the RP-2014 table adjusted backward to 2006 with MP-2014 and projected forward using MP-2017 as of 31 July 2017. The table selected allows for future mortality improvements and applies an adjustment for job classification (blue collar versus white collar).

	UK schemes				US schemes			
Expected further years of life	Male 31 July 2018	Female 31 July 2018	Male 31 July 2017	Female 31 July 2017	Male 31 July 2018	Female 31 July 2018	Male 31 July 2017	Female 31 July 2017
Member who retires next year at age 65	22	24	23	24	21	23	21	23
Member, currently 45, when they retire in 20 years' time	24	25	24	25	22	24	23	24

Sensitivity

Sensitivities in respect of the key assumptions used to measure the principal pension schemes as at 31 July 2018 are set out below. These sensitivities show the hypothetical impact of a change in each of the listed assumptions in isolation, with the exception of the sensitivity to inflation which incorporates the impact of certain correlating assumptions. In practice, such assumptions rarely change in isolation.

	Profit before tax for year ended 31 July 2018 £m	Increase/ (decrease) in scheme assets 31 July 2018 £m	(Increase)/ decrease in scheme liabilities 31 July 2018 £m	Profit before tax for year ended 31 July 2017 £m	Increase/ (decrease) in scheme assets 31 July 2017 £m	(Increase)/ decrease in scheme liabilities 31 July 2017 £m
Rate of mortality – 1 year increase in life expectancy	(3)	70	(166)	(3)	67	(177)
Rate of mortality – 1 year decrease in life expectancy	3	(71)	166	3	(66)	177
Rate of inflation – 0.25% increase	(2)	22	(94)	(2)	20	(97)
Discount rate – 0.25% increase	5	(28)	135	4	(27)	151
Market value of scheme assets – 2.5% increase	2	74		2	79	

The effect on profit before tax reflects the impact of current service cost and net interest cost. The value of the scheme assets is affected by changes in mortality rates, inflation and discounting because they affect the carrying value of the insurance assets.

Asset valuation

Liquidity funds, equities and bonds are valued using quoted market prices in active markets. Exchange traded equity index futures are valued at market prices.

Total return, interest and inflation swaps are bilateral agreements between counterparties and do not have observable market prices. These derivative contracts are valued using observable market inputs.

Insured liabilities comprise annuity policies matching the scheme obligation to identified groups of pensioners. These assets are valued at the actuarial valuation of the corresponding liability, reflecting this matching relationship. Property is valued by specialists applying recognised property valuation methods incorporating current market data on rental yields and transaction prices.

Retirement-benefit plan assets

	31 July 2018 £m				31 July 2017 £m			
	UK schemes	**US schemes**	**Other countries**	**Total**	UK schemes	US schemes	Other countries	Total
Cash and cash equivalents:								
– cash	26	1	1	28	33	1	1	35
– liquidity funds	32			32	271			271
– cash collateral and liquidity funds held to support exchange traded futures					4			4
Equities:								
– UK funds	1		1	2	1		3	4
– North American funds								
– other regions and global funds	79		3	82	94		1	95
Government bonds:								
– index-linked bonds	1,679	72	4	1,755	1,298			1,298
– fixed-interest bonds					393	81	3	477
Corporate bonds	1,097	166		1,263	1,048	184		1,232
Insured liabilities	1,154		1	1,155	1,050		1	1,051
Property	121			121	133		1	134
Other:								
– diversified growth funds and scheme receivables	544		23	567	407		24	431
– repurchase obligations	(866)			(866)	(773)			(773)
Total market value	**3,867**	**239**	**33**	**4,139**	**3,959**	**266**	**34**	**4,259**

UK other investments at 31 July 2018 included £192m (FY2017: £184m) of investments in leveraged index linked UK government bond funds held by TIGPS and £19m (FY2017: £12m) of interest and inflation swaps held by SIPS. At 31 July 2017 SIPS also held £70m of investments in diversified growth funds.

The scheme assets do not include any property occupied by, or other assets used by, the Group. Equities include investments in broad-based equity indices, some of which hold ordinary equity shares in Smiths Group plc.

Present value of funded scheme liabilities and assets for the main UK and US schemes

	31 July 2018 £m			31 July 2017 £m		
	SIPS	**TIGPS**	**US schemes**	SIPS	TIGPS	US schemes
Present value of funded scheme liabilities:						
– Active deferred members	(57)	(56)	(88)	(81)	(92)	(101)
– Deferred members	(784)	(550)	(115)	(891)	(625)	(160)
– Pensioners	(1,070)	(804)	(47)	(1,053)	(809)	(31)
Present value of funded scheme liabilities	**(1,911)**	**(1,410)**	**(250)**	**(2,025)**	**(1,526)**	**(292)**
Market value of scheme assets	2,214	1,633	239	2,238	1,703	266
Surplus/(deficit)	**303**	**223**	**(11)**	**213**	**177**	**(26)**

Net retirement benefit obligations

	31 July 2018 £m				31 July 2017 £m			
	UK schemes	**US schemes**	**Other countries**	**Total**	UK schemes	US schemes	Other countries	Total
Market value of scheme assets	3,867	239	33	4,139	3,959	266	34	4,259
Present value of funded scheme liabilities	(3,342)	(250)	(41)	(3,633)	(3,571)	(292)	(42)	(3,905)
Surplus/(deficit)	**525**	**(11)**	**(8)**	**506**	**388**	**(26)**	**(8)**	**354**
Unfunded pension plans	(53)	(7)	(49)	(109)	(55)	(8)	(48)	(111)
Post-retirement healthcare	(5)	(9)	(2)	(16)	(6)	(11)	(2)	(19)
Present value of unfunded obligations	**(58)**	**(16)**	**(51)**	**(125)**	**(61)**	**(19)**	**(50)**	**(130)**
Unrecognised asset due to surplus restriction								
Net pension asset/(liability)	**467**	**(27)**	**(59)**	**381**	**327**	**(45)**	**(58)**	**224**
Post-retirement assets	526			526	390			390
Post-retirement liabilities	(59)	(27)	(59)	(145)	(63)	(45)	(58)	(166)
Net pension asset/(liability)	**467**	**(27)**	**(59)**	**381**	**327**	**(45)**	**(58)**	**224**

Where any individual scheme shows a recoverable surplus under IAS 19, this is disclosed on the balance sheet as a retirement benefit asset. The IAS 19 surplus of any one scheme is not available to fund the IAS 19 deficit of another scheme. The retirement benefit asset disclosed arises from the rights of the employers to recover the surplus at the end of the life of the scheme.

Amounts recognised in the consolidated income statement

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Amounts charged to operating profit		
Current service cost	3	4
Settlement (gain)/loss	(4)	1
Scheme administration costs	5	7
	4	**12**
The operating cost is charged as follows:		
Cost of sales	1	1
Sales and distribution costs	1	1
Headline administrative expenses	6	2
Non-headline settlement gains	(4)	1
Non-headline administrative expenses		7
	4	**12**
Amounts credited to finance costs		
Net interest income	**(7)**	**(2)**

Amounts recognised directly in the consolidated statement of comprehensive income

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Actuarial gains/(losses)		
Difference between interest credit and return on assets	(18)	(31)
Experience (losses)/gains on scheme liabilities	(10)	22
Actuarial gains arising from changes in demographic assumptions	5	69
Actuarial gains/(losses) arising from changes in financial assumptions	127	(6)
Movements in surplus restriction		1
	104	**55**

Changes in present value of funded scheme assets

	31 July 2018 £m				31 July 2017 £m			
	UK schemes	US schemes	Other countries	Total	UK schemes	US schemes	Other countries	Total
At beginning of period	3,959	266	34	4,259	4,034	216	62	4,312
Interest on assets	101	9	1	111	91	9	2	102
Actuarial movement on scheme assets	(6)	(12)	(1)	(19)	(15)	(14)	(2)	(31)
Employer contributions	28	12	1	41	27	67	5	99
Assets distributed on settlement		(27)		(27)			(32)	(32)
Scheme administration costs	(3)	(1)		(4)	(5)	(2)		(7)
Exchange adjustments		1		1		(1)	2	1
Benefits paid	(212)	(9)	(2)	(223)	(173)	(9)	(3)	(185)
At end of period	**3,867**	**239**	**33**	**4,139**	**3,959**	**266**	**34**	**4,259**

Changes in present value of funded defined benefit obligations

	31 July 2018 £m				31 July 2017 £m			
	UK schemes	US schemes	Other countries	Total	UK schemes	US schemes	Other countries	Total
At beginning of period	(3,571)	(292)	(42)	(3,905)	(3,709)	(315)	(70)	(4,094)
Current service cost			(1)	(1)			(2)	(2)
Interest on obligations	(90)	(10)	(2)	(102)	(83)	(11)	(3)	(97)
Actuarial movement on liabilities	107	13	1	121	48	27	1	76
Liabilities extinguished on settlement		31		31			31	31
Exchange adjustments						(2)	(2)	(4)
Benefits paid	212	9	2	223	173	9	3	185
At end of period	**(3,342)**	**(249)**	**(42)**	**(3,633)**	**(3,571)**	**(292)**	**(42)**	**(3,905)**

Changes in present value of unfunded defined benefit pensions and post-retirement healthcare plans

	Assets		Obligations	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	**Year ended 31 July 2018 £m**	Year ended 31 July 2017 £m
At beginning of period			(130)	(137)
Reclassification of small unfunded obligations				
Liabilities transferred on disposals			1	
Current service cost			(2)	(2)
Interest on obligations			(3)	(3)
Actuarial movement			2	9
Employer contributions	7	6		
Exchange adjustments				(3)
Benefits paid	(7)	(6)	7	6
At end of period			**(125)**	**(130)**

Cash contributions

Company contributions to the defined benefit pension plans and post-retirement healthcare plans for 2018 totalled £49m (FY2017: £105m). This comprised regular contributions to funded schemes of £24m (FY2017: £24m) to SIPS, £5m (FY2017: £3m) to TIGPS, a one-off £12m contribution (FY2017: £67m) to funded US Schemes and contributions to other schemes of £2m (FY2017: £5m, of which £3m of additional contributions were made to fund the closure of a scheme in Canada). In addition, £7m (FY2017: £6m) was spent on providing benefits under unfunded defined benefit pension and post-retirement healthcare plans.

In 2019 the cash contributions to the Group's schemes are expected to total about £45m, including £12m to SIPS and £12m to TIGPS, with the balance relating mainly to the US scheme. Group contributions in respect of the unfunded schemes and post-retirement healthcare are expected to be in line with 2018.

9 EMPLOYEE SHARE SCHEMES

The Group operates share schemes and plans for the benefit of employees. The nature of the principal schemes and plans, including general conditions, is set out below:

Long-Term Incentive Plan (LTIP)

The LTIP is a share plan under which an award over a capped number of shares will vest after the end of the three-year performance period if performance conditions are met. LTIP awards are made to selected senior executives, including the executive directors. Awards made prior to 2016 were made with different targets for corporate executives and divisional executives. Since 2016 all LTIP awards have had one set of targets.

LTIP performance conditions

Each performance condition has a threshold below which no shares vest and a maximum performance target at or above which the award vests in full. For performance between 'threshold' and 'maximum', awards vest on a straight-line sliding scale. The performance conditions are assessed separately so performance on one condition does not affect the vesting of the other elements of the award. To the extent that the performance targets are not met over the three-year performance period, awards will lapse. There is no re-testing of the performance conditions.

Both Group and Divisional LTIP awards have performance conditions relating to underlying revenue growth, growth in headline EPS adjusted to exclude tax, ROCE and cash conversion.

Smiths Share Matching Plan (SMP)

Under the scheme participants are required to invest between 25% and 50% of their post-tax bonus purchasing the Company's shares at the prevailing market price. At the end of a three-year period, if the executive is still in office and provided the performance test is passed, matching shares will be awarded in respect of any invested shares retained for that period. The number of matching shares to be awarded is determined by the Remuneration Committee at the end of the year in which the bonus is earned by reference to annual bonus, and other corporate financial criteria. The maximum award will not exceed the value, before tax, of the bonus or salary invested in shares by the executive.

Vesting of matching shares will occur, and the matching shares will be released, at the end of the three-year period depending on the performance of the Group LTIP issued for the same performance period. The first matching share is awarded if the Group LTIP vests under any performance condition.

No future awards will be made under the SMP.

Smiths Excellence Plan (SEP)

In September 2016 the Smiths Excellence plan (SEP) was introduced. The SEP is designed to reinforce value creation over the medium term by focusing on specific objectives in key areas of operational performance. Awards vest after two years, depending on performance on the operational objectives during the first year and continued employment with the Group. There is no retesting of performance. However the Remuneration Committee has discretion to adjust vesting rates if material misstatements in reported performance are subsequently identified and awards are subject to clawback provisions in the event of misconduct.

Directors are not eligible to participate in the SEP.

Restricted stock

The restricted stock is used by the Remuneration Committee, as a part of the recruitment strategy, to make awards in recognition of incentive arrangements forfeited on leaving a previous employer. If an award is considered appropriate, the award will take account of relevant factors including the fair value of awards forfeited, any performance conditions attached, the likelihood of those conditions being met and the proportion of the vesting period remaining.

	SEP	SMP	Long-term incentive plans	Restricted stock	Other share schemes	Total	Weighted average exercise price £
Ordinary shares under option ('000)							
31 July 2016		1,439	3,354	273	1,221	6,287	£1.83
Granted	817		1,581	58	218	2,674	£1.06
Exercised		(339)	(198)	(119)	(259)	(915)	£2.77
Lapsed	(69)	(174)	(939)	(7)	(70)	(1,259)	£0.51
31 July 2017	748	926	3,798	205	1,110	6,787	£1.64
Granted	857		1,600	283	268	3,008	£1.07
Exercised	(55)	(424)	(444)	(178)	(298)	(1,399)	£2.12
Lapsed	(191)	(89)	(1,043)	(6)	(118)	(1,447)	£0.86
31 July 2018	**1,359**	**413**	**3,911**	**304**	**962**	**6,949**	**£1.46**

Options were exercised on an irregular basis during the period. The average closing share price over the financial year was 1,589.60p (FY2017: 1,499.95p). There has been no change to the effective option price of any of the outstanding options during the period.

Range of exercise prices	**Total shares under option at 31 July 2018 ('000)**	**Weighted average remaining contractual life at 31 July 2018 (months)**	Total shares under option at 31 July 2017 ('000)	Weighted average remaining contractual life at 31 July 2017 (months)	**Options exercisable at 31 July 2018 ('000)**	**Exercisable weighted average exercise price for options exercisable at 31 July 2018**	Options exercisable at 31 July 2017 ('000)	Exercisable weighted average exercise price for options exercisable at 31 July 2017
£0.00 – £2.00	5,986	13	5,677	17				
£2.01 – £6.00								
£6.01 – £10.00	504	17	791	24			42	£9.20
£10.01 – £14.00	459	40	319	32			90	£10.96

For the purposes of valuing options to arrive at the share-based payment charge, the Binomial option-pricing model has been used. The key assumptions used in the models for 2018 and 2017 are volatility of 25% to 20% (FY2017: 25% to 20%) and dividend yield of 3% (FY2017: 3.50%), based on historical data, for the period corresponding with the vesting period of the option. These generated a weighted average fair value for SEP of £14.87 (FY2017: £12.86), LTIP of £13.48 (FY2017: £12.68), and restricted stock of £12.73 (FY2017: £12.59).

Included within staff costs is an expense arising from share-based payment transactions of £16m (FY2017: £15m), of which £14m (FY2017: £14m) relates to equity-settled share-based payment.

10 INTANGIBLE ASSETS

	Goodwill £m	Development costs £m	Acquired intangibles (see table below) £m	Software, patents and intellectual property £m	Total £m
Cost					
At 31 July 2016	1,679	302	477	199	2,657
Exchange adjustments	23	4	(2)	1	26
Business combinations	210		240	6	456
Additions		39		8	47
Disposals		(15)		(5)	(20)
Business disposals	(254)		(141)	(3)	(398)
At 31 July 2017	**1,658**	**330**	**574**	**206**	**2,768**
Exchange adjustments	1	1	1	1	4
Business combinations (note 26)	46		29	1	76
Additions		29		11	40
Disposals				(11)	(11)
Business disposals (note 28)	(1)		(22)	(1)	(24)
At 31 July 2018	**1,704**	**360**	**582**	**207**	**2,853**
Amortisation					
At 31 July 2016	162	166	438	149	915
Exchange adjustments	5	2	9	1	17
Charge for the year		27	17	18	62
Disposals		(15)		(5)	(20)
Business disposals	(79)		(140)	(2)	(221)
At 31 July 2017	**88**	**180**	**324**	**161**	**753**
Exchange adjustments		1		1	2
Charge for the year		24	29	18	71
Disposals				(11)	(11)
Business disposals (note 28)			(22)	(1)	(23)
At 31 July 2018	**88**	**205**	**331**	**168**	**792**
Net book value at 31 July 2018	**1,616**	**155**	**251**	**39**	**2,061**
Net book value at 31 July 2017	1,570	150	250	45	2,015
Net book value at 31 July 2016	1,517	136	39	50	1,742

In addition to goodwill, the acquired intangible assets comprise:

	Patents, licences and trademarks £m	Technology £m	Customer relationships £m	Total acquired intangibles £m
Cost				
At 31 July 2016	85	160	232	477
Exchange adjustments	2	(3)	(1)	(2)
Business combinations		103	137	240
Business disposals	(30)	(49)	(62)	(141)
At 31 July 2017	**57**	**211**	**306**	**574**
Exchange adjustments		1		1
Business combinations (note 26)		2	27	29
Business disposals (note 28)			(22)	(22)
At 31 July 2018	**57**	**214**	**311**	**582**
Amortisation				
At 31 July 2016	61	149	228	438
Exchange adjustments	1	2	6	9
Charge for the year	3	8	6	17
Business disposals	(29)	(49)	(62)	(140)
At 31 July 2017	**36**	**110**	**178**	**324**
Charge for the year	3	11	15	29
Business disposals (note 28)			(22)	(22)
At 31 July 2018	**39**	**121**	**171**	**331**
Net book value at 31 July 2018	**18**	**93**	**140**	**251**
Net book value at 31 July 2017	21	101	128	250
Net book value at 31 July 2016	24	11	4	39

11 IMPAIRMENT TESTING

Goodwill

Goodwill is tested for impairment at least annually or when there is an indication that the carrying value may not be recoverable.

Recoverable amount is determined by value in use or fair value less cost to sell calculations for each group of cash generating units (CGU) that goodwill is allocated to.

Value in use is calculated as the net present value of the projected risk-adjusted cash-flows of the CGU. These forecast cash-flows are based on the 2018 budget, the five-year strategic plan approved by the Board and detailed divisional strategic projections, where these have been prepared and approved by the Board.

Fair value less cost to sell is calculated using available information on past and expected future profitability, valuation multiples for comparable quoted companies and similar transactions (adjusted as required for significant differences) and information on costs of similar transactions. Fair value less costs to sell models are used when trading projections in the strategic plan cannot be adjusted to eliminate the impact of a major restructuring.

Goodwill is allocated by division as follows:

	2018 £m	**2018 Number of CGUs**	2017 £m	2017 Number of CGUs
John Crane	133	1	111	1
Smiths Medical	563	1	561	1
Smiths Detection	642	1	629	2
Smiths Interconnect	243	2	242	2
Flex-Tek	35	2	27	2
	1,616	**7**	**1,570**	**8**

Smiths Detections acquired Morpho Detection in April 2017 and a single management team was in place covering Smiths Detection and Morpho Detection. As discussed and anticipated in the 2017 Annual Report, the integration of the two businesses during the current year has been such that they are now considered to be a single CGU for impairment testing.

Goodwill continued

Impairment testing assumptions

John Crane and Smiths Medical have strong aftermarket and consumables businesses, with consistent sales trends. Smiths Detection and Smiths Interconnect have greater sales and margin volatility due to lower levels of recurring revenue and involvement in government-funded programmes, particularly defence, and customer-led technology innovation. The key assumptions used in value in use calculations are:

Sales: projected sales are built up with reference to markets and product categories. They incorporate past performance, historical growth rates and projections of developments in key markets;

Margins: projected margins reflect historical performance and the impact of all completed projects to improve operational efficiency and leverage scale. The projections do not include the impact of future restructuring projects to which the Group is not yet committed;

Discount rate: the discount rates have been calculated based on the Group's weighted average cost of capital and risks specific to the CGU being tested. The discount rates disclosed incorporate risk adjustments where the projected sales and margins are affected by significant delivery risks. Pre-tax rates of 12.0% to 14.9% (FY2017: 12.2% to 16.9%) have been used for the impairment testing; and

Long-term growth rates: as required by IAS 36, growth rates for the period after the detailed forecasts are based on the long-term GDP projections of the primary market for the CGU. The average growth rate used in the testing was 2.0% (FY2017: 2.1%). These rates do not reflect the long-term assumptions used by the Group for investment planning.

The assumptions used in the impairment testing of CGUs with significant goodwill balances are as follows:

	Year ended 31 July 2018				
	John Crane	**Smiths Medical**	**Smiths Detection**	**Smiths Interconnect**	
				Microwave Subsystems	**Connectors and Components**
Net book value of goodwill (£m)	133	563	642	75	168
Basis of valuation	**Value in use**	**Value in use**	**Value in use**	**Value in use**	**Value in use**
Discount rate	14.0%	12.0%	13.5%	12.4%	14.9%
Period covered by management projections	5 years	5 years	5 years	5 years	5 years
Long-term growth rates	2.2%	1.9%	1.8%	2.0%	2.0%

The discount rate for Smiths Interconnect Connectors and Components includes a risk adjustment. The remaining balance of the goodwill represents smaller individual amounts which have been allocated to smaller CGUs.

	Year ended 31 July 2017					
	John Crane	Smith Medical	Smiths Detection		Smiths Interconnect	
			Original Smiths Detection	Morpho Detection	Microwave Subsystems	Connectors and Components
Net book value of goodwill (£m)	111	561	429	200	75	167
Basis of valuation	Value in use	Value in use	Value in use	Fair value less costs to sell	Value in use	Value in use
Discount rate	14.9%	12.2%	14.1%	n/a	12.2%	16.9%
Period covered by management projections	5 years	5 years	5 years	1 year	5 years	5 years
Long-term growth rates	2.2%	2.1%	2.0%	n/a	2.2%	2.1%

Sensitivity analysis

Smiths Interconnect – Microwave Subsystems business

Microwave Subsystems' value in use exceeds its carrying value by £11m. Sensitivity analysis performed around the base case assumptions has indicated that for Microwave Subsystems, the following changes in assumptions (in isolation), would cause the value in use to fall below the carrying value:

	Year ended 31 July 2018 Change required to trigger impairment	Year ended 31 July 2017 Change required to trigger impairment
Forecast earnings before interest, tax, depreciation and amortisation	-11.3%	-33.3%
Discount rate	+8.2%	+26.5%

Forecast earnings before interest, tax, depreciation and amortisation have been projected using:

expected future sales based on the strategic plan, which was constructed at a market level with input from key account managers, product line managers, business development and sales teams. An assessment of the market and existing contracts / programmes was made to produce the sales forecast; and

current cost structure and production capacity. The projections do not include the impact of future restructuring projects to which the Group is not yet committed.

Other CGUs

For the other CGUs, sensitivity analysis performed around the base case assumptions has indicated that no reasonable changes in key assumptions would cause the carrying amount of any of the CGUs to exceed their respective recoverable amounts.

Goodwill impairment

No impairment charges have been incurred (FY2017: £nil).

Revised CGU structure for year ended 31 July 2019 – Impairment testing

Following a re-organisation and rationalisation of management and reporting structures within the Interconnect and Flex-Tek divisions, the CGU structures used for the testing of goodwill has been reassessed. Given the commonality of reporting, policies, leadership and intra-divisional trading relationships, it is considered that the Interconnect and Flex-Tek divisions are now single CGUs for impairment testing.

Impairment testing and sensitivity analysis has been undertaken for the revised Interconnect CGU and Flex-Tek CGU structures, which have indicated that no reasonable change in key assumptions would cause an impairment of goodwill in either CGU. The assumptions used in this impairment testing were as follows:

Interconnect: Discount rate: 14.9%; Period covered by management projections 5 years; Long-term growth rates 2.0%

Flex-Tek: Discount rate: 12.1%; Period covered by management projections 5 years; Long-term growth rates 2.2%

Other intangible assets

The Group has no indefinite life intangible assets other than goodwill. During the year impairment tests were carried out for development projects which have not yet started to be amortised and acquired intangibles where there were indications of impairment. Value in use calculations were used to determine the recoverable values of these assets.

No impairment charges have been incurred (FY2017: £nil).

12 PROPERTY, PLANT AND EQUIPMENT

	Land and buildings £m	Plant and machinery £m	Fixtures, fittings, tools and equipment £m	Total £m
Cost or valuation				
At 31 July 2016	223	631	220	1,074
Exchange adjustments	5	10	5	20
Business combinations		7	1	8
Additions	6	44	12	62
Disposals	(24)	(42)	(24)	(90)
Business disposals	(6)	(15)	(5)	(26)
At 31 July 2017	**204**	**635**	**209**	**1,048**
Exchange adjustments		1	(1)	
Business combinations (note 26)	2	1		3
Additions	8	47	13	68
Disposals	(6)	(28)	(24)	(58)
Business disposals (note 28)	(1)	(19)	(3)	(23)
At 31 July 2018	**207**	**637**	**194**	**1,038**
Depreciation				
At 31 July 2016	119	466	174	759
Exchange adjustments	2	8	4	14
Charge for the year	9	34	14	57
Disposals	(18)	(36)	(23)	(77)
Business disposals	(5)	(11)	(4)	(20)
At 31 July 2017	**107**	**461**	**165**	**733**
Exchange adjustments		1	(1)	
Charge for the year	7	35	13	55
Disposals	(6)	(24)	(23)	(53)
Business disposals (note 28)	(1)	(14)	(2)	(17)
At 31 July 2018	**107**	**459**	**152**	**718**
Net book value at 31 July 2018	**100**	**178**	**42**	**320**
Net book value at 31 July 2017	97	174	44	315
Net book value at 31 July 2016	104	165	46	315

13 INVENTORIES

	31 July 2018 £m	31 July 2017 £m
Inventories comprise		
Raw materials and consumables	149	148
Work in progress	94	86
Finished goods	223	218
	466	**452**

The Group consumed £1,424m (FY2017: £1,470m) of inventories during the period. In the year to 31 July 2018, £13m (FY2017: £17m) was charged for the write-down of inventory and £7m (FY2017: £6m) was released from inventory provisions no longer required.

Inventory provisioning

	31 July 2018 £m	31 July 2017 £m
Gross inventory carried at full value	**391**	**414**
Gross value of inventory partly or fully provided for	129	93
	520	**507**
Inventory provision	(54)	(55)
Inventory after provisions	**466**	**452**

14 TRADE AND OTHER RECEIVABLES

	31 July 2018 £m	31 July 2017 £m
Non-current		
Trade receivables	45	41
Accrued income	1	2
Other receivables	11	14
	57	**57**
Current		
Trade receivables	656	642
Accrued income	11	11
Prepayments	31	28
Other receivables	35	41
	733	**722**

Trade receivables include balances not yet due of £84m (FY2017: £75m) relating to multi-year Smiths Detection contracts, where revenue recognition does not align with the agreed payment schedule. The Group also has cash received of £87m (FY2017: £78m) deferred in trade and other payables relating to Smiths Detection contracts.

Trade receivables do not carry interest. Management considers that the carrying value of trade and other receivables approximates to the fair value. Trade and other receivables, including prepayments, accrued income and other receivables qualifying as financial instruments are classified as 'loans and receivables'. The maximum credit exposure arising from these financial assets is £688m (FY2017: £720m).

Trade receivables are disclosed net of provisions for bad and doubtful debts. The provisions for bad and doubtful debts are based on specific risk assessment and reference to past default experience.

Credit risk is managed separately for each customer and, where appropriate, a credit limit is set for the customer based on previous experience of the customer and third party credit ratings. The Group has no significant concentration of credit risk, with exposure spread over a large number of customers. The largest single customer is the US Federal Government, representing less than 5% (FY2017: less than 5%) of Group revenue.

Ageing of trade receivables

	31 July 2018 £m	31 July 2017 £m
Trade receivables which are not impaired and not yet due	566	539
Trade receivables which are not impaired and less than three months overdue	97	104
Trade receivables which are not impaired and more than three months overdue	27	30
Gross value of partially and fully provided receivables	43	43
	733	**716**
Provision for bad and doubtful debts	(32)	(33)
Trade receivables	**701**	**683**

15 TRADE AND OTHER PAYABLES

	31 July 2018 £m	31 July 2017 £m
Non-current		
Other payables	**27**	**26**
Current		
Trade payables	244	202
Other payables	23	17
Other taxation and social security costs	22	27
Accruals	225	247
Deferred income	92	83
	606	**576**

Trade and other payables, including accrued expenses and other payables qualifying as financial instruments, are accounted for at amortised cost and are categorised as other financial liabilities.

16 FINANCIAL ASSETS

At 31 July 2018 £13m (FY2017: £11m) was held on deposit with banks as security for liabilities or letters of credit.

The remaining balance of financial assets relate to the Group's investments in early stage businesses that are developing or commercialising related technology.

17 BORROWINGS AND NET DEBT

This note sets out the calculation of net debt, an important measure in explaining our financing position. The net debt figure includes accrued interest and the fair value adjustments relating to hedge accounting.

	31 July 2018 £m	31 July 2017 £m
Cash and cash equivalents		
Net cash and deposits	**717**	**782**
Short-term borrowings		
Bank overdrafts		(1)
$175m 7.37% US$ Private placement 2018		(133)
$250m 7.20% US$ Guaranteed notes 2019	(190)	
Bank and other loans	(1)	(1)
Interest accrual	(12)	(16)
	(203)	**(151)**
Long-term borrowings		
$250m 7.20% US$ Guaranteed notes 2019		(189)
$400m 3.625% US$ Guaranteed notes 2022	(298)	(301)
€600m 1.25% Eurobond 2023	(533)	(533)
€650m 2.00% Eurobond 2027	(575)	(574)
Bank and other loans	(1)	(1)
	(1,407)	**(1,598)**
Borrowings	**(1,610)**	**(1,749)**
Net debt	**(893)**	**(967)**

Cash and cash equivalents include highly liquid investments with maturities of three months or less.

Borrowings are accounted for at amortised cost and are categorised as other financial liabilities. See note 18 for a maturity analysis of borrowings.

Interest of £42m (FY2017: £45m) was charged to the consolidated income statement in this period in respect of public bonds.

Secured loans

Loans amounting to £2m (FY2017: £2m) were secured on plant and equipment with a book value of £3m (FY2017: £3m).

Net cash and cash equivalents

	31 July 2018 £m	31 July 2017 £m
Cash at bank and in hand	287	226
Short-term deposits	430	556
Cash and cash equivalents	**717**	**782**
Bank overdrafts		(1)
Net cash and cash equivalents	**717**	**781**

Netting

Cash and overdraft balances in interest compensation cash pooling systems are reported gross on the balance sheet. The cash pooling agreements incorporate a legally enforceable right of net settlement. However, as there is no intention to settle the balances net, these arrangements do not qualify for net presentation. At 31 July 2018 the total value of overdrafts on accounts in interest compensation cash pooling systems was £nil (FY2017: £nil). The balances held in zero balancing cash pooling arrangements have daily settlement of balances, therefore netting is not relevant.

Movements in net debt

	Net cash and cash equivalents £m	Other short-term borrowings £m	Long-term borrowings £m	Net debt £m
At 31 July 2017	781	(150)	(1,598)	(967)
Foreign exchange gains and losses	(8)	(2)	3	(7)
Net cash outflow	(56)		(1)	(57)
Repayment of borrowings		135		135
Capitalisation, interest accruals and unwind of capitalised fees		4	(2)	2
Fair value movement from interest rate hedging			1	1
Change in maturity analysis		(190)	190	
At 31 July 2018	**717**	**(203)**	**(1,407)**	**(893)**

Change of control

The Company has in place credit facility agreements under which a change in control would trigger prepayment clauses. The Company also has bonds in issue, the terms of which would allow bondholders to exercise put options and require the Company to buy back the bonds at their principal amount plus interest if a rating downgrade occurs at the same time as a change of control takes effect.

18 FINANCIAL RISK MANAGEMENT

The Group's international operations and debt financing expose it to financial risks which include the effects of changes in foreign exchange rates, changes in debt market prices, interest rates, credit risks and liquidity risks. The management of operational credit risk is discussed in note 14.

Treasury Risk Management Policy

The Board maintains a Treasury Risk Management Policy, which governs the treasury operations of the Group and its subsidiary companies and the consolidated financial risk profile to be maintained. A report on treasury activities, financial metrics and compliance with the Policy is prepared monthly. This is circulated to the Chief Financial Officer each month and to the Audit Committee on a semi-annual basis.

The Policy maintains a treasury control framework within which counterparty risk, financing and debt strategy, cash and liquidity, interest rate risk and currency translation management are reserved for Group Treasury, while currency transaction management is devolved to operating divisions.

Centrally directed cash management systems exist globally to manage overall liquid resources efficiently across the divisions. The Group uses financial instruments to raise financing for its global operations, to manage related interest rate and currency financial risk and to hedge transaction risk within subsidiary companies.

The Group does not speculate in financial instruments. All financial instruments hedge existing business exposures and all are recognised on the balance sheet.

The Policy defines four treasury risk components and for each component a set of financial metrics to be measured and reported monthly compared against pre-agreed objectives.

Credit quality

The Group's strategy is to maintain a solid investment-grade rating to ensure access to the widest possible sources of financing at the right time and to minimise the resulting cost of debt capital. The credit ratings at the end of July 2018 were BBB+ / Baa2 (both stable) from Standard & Poor's and Moody's respectively. An essential element of an investment-grade rating is consistent and robust cash-flow metrics. The Group's objective is to maintain a net debt/headline EBITDA ratio at two times or lower over the medium term. Capital management is discussed in more detail in note 25.

Debt and interest rate

The Group's risk management objectives are to ensure that over time funding drawn from the bank market is less than 30% of net debt, the average maturity profile of gross debt is at or greater than four years and over 55% of gross debt is at fixed rates. At 31 July 2018, these measures were 0.1% (FY2017: 0%); 5.5 years (FY2017: 5.9 years) and 55% (FY2017: 57%).

The Group remains in full compliance with all covenants within its external debt agreements. Interest rate risk management is discussed in note 18(b).

Liquidity management

The Group's objective is to ensure that at any time undrawn committed facilities, net of short-term overdraft financing, are greater than £200m and that committed facilities have at least 18 months to run until maturity. At 31 July 2018, these measures were £609m (FY2017: £607m) and 51 months (FY2017: 43 months). At 31 July 2018, cash resources were £717m (FY2017: £782m). Liquidity risk management is discussed in note 18(d).

The Group aims to ensure that cash resources are placed on deposit with highly-rated relationship bank counterparties at short-notice availability. Financial credit risk management is discussed in note 18(c).

Currency management

The Group is an international business with the majority of its net assets denominated in foreign currency. We protect our balance sheet and reserves from adverse foreign exchange movements by financing our foreign currency assets where appropriate in the same currency and targets that, where the value of net asset exposure is over £30m equivalent, over 50% of those assets are matched with the same currency liability. The Group's objective for managing transaction currency exposure is to reduce medium-term volatility to cash-flow, margins and earnings. Foreign exchange risk management is discussed in note 18(a) below.

(a) Foreign exchange risk

Transactional currency exposure

The Group is exposed to foreign currency risks arising from sales or purchases by businesses in currencies other than their functional currency. It is Group policy that, when the net foreign exchange exposure to known future sales and purchases is material, this exposure is hedged using forward foreign exchange contracts. The net exposure is calculated by adjusting the expected cash-flow for payments or receipts in the same currency linked to the sale or purchase. This policy minimises the risk that the profits generated from the transaction will be affected by foreign exchange movements which occur after the price has been determined. Hedge accounting documentation and effectiveness testing are only undertaken if it is cost effective.

The following table shows the currency of financial instruments. It excludes loans and derivatives designated as net investment hedges.

At 31 July 2018	Sterling £m	US$ £m	Euro £m	Other £m	Total £m
Financial assets and liabilities					
Financial instruments included in trade and other receivables	42	375	106	165	688
Financial instruments included in trade and other payables	(49)	(237)	(77)	(78)	(441)
Cash and cash equivalents	53	444	58	162	717
Cross currency swaps (not hedge accounted)		(242)	267		25
Borrowings not designated as net investment hedges	(1)	(2)	(271)	(2)	(276)
	45	338	83	247	713
Exclude balances held in operations with the same functional currency	(40)	(195)	(63)	(227)	(525)
Exposure arising from intra-group loans		(307)	(65)	(38)	(410)
Forward foreign exchange contracts	(100)	(6)	41	65	
	(95)	**(170)**	**(4)**	**47**	**(222)**

At 31 July 2017	Sterling £m	US$ £m	Euro £m	Other £m	Total £m
Financial assets and liabilities					
Financial instruments included in trade and other receivables	55	351	143	171	720
Financial instruments included in trade and other payables	(57)	(214)	(69)	(72)	(412)
Cash and cash equivalents	5	512	80	184	781
Borrowings not designated as net investment hedges	1	(12)	(275)	(2)	(288)
	4	637	(121)	281	801
Exclude balances held in operations with the same functional currency	(5)	(220)	(102)	(195)	(522)
Exposure arising from intra-group loans		(352)	(85)	(83)	(520)
Impact of fair value hedging of exchange exposure	(269)		269		
Forward foreign exchange contracts	(88)	19	50	19	
	(358)	**84**	**11**	**22**	**(241)**

Financial instruments included in trade and other receivables comprise trade receivables, accrued income and other receivables which qualify as financial instruments. Similarly, financial instruments included in trade and other payables comprise trade payables, accrued expenses and other payables that qualify as financial instruments.

Based on the assets and liabilities held at the year-end, if the specified currencies were to strengthen 10% while all other market rates remained constant, the change in the fair value of financial instruments not designated as net investment hedges would have the following effect:

	Impact on profit for the year 31 July 2018 £m	Gain/(loss) recognised in reserves 31 July 2018 £m	Impact on profit for the year 31 July 2017 £m	Gain/(loss) recognised in reserves 31 July 2017 £m
US dollar	19	(4)	(5)	(5)
Euro	(1)	2	(3)	2
Sterling	(32)	(6)	1	(1)

These sensitivities were calculated before adjusting for tax and exclude the effect of quasi-equity intra-group loans. During the current year cross-currency swaps related to the 2027 Eurobond were de-designated from net investment hedge relationships, increasing the notional US Dollar exposure at 31 July 2018 by $318m. This additional notional US Dollar exposure is the driver of £24m of the US dollar and Sterling profit sensitivity in the table above. These swaps have since been re-designated as net investment hedges.

Cash-flow hedging

The Group uses foreign currency contracts to hedge future foreign currency sales and purchases. At 31 July 2018 contracts with a nominal value of £385m (FY2017: £407m) were designated as hedging instruments. In addition, the Group had outstanding foreign currency contracts with a nominal value of £275m (FY2017: £243m) which were being used to manage transactional foreign exchange exposures, but were not accounted for as cash-flow hedges. The fair value of the contracts is disclosed in note 19.

The majority of hedged transactions will be recognised in the consolidated income statement in the same period that the cash flows are expected to occur, with the only differences arising because of normal commercial credit terms on sales and purchases. Of the foreign exchange contracts designated as hedging instruments 81% are for periods of 12 months or less (FY2017: 86%).

The movements in the cash-flow hedge reserve during the period are summarised in the table below:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Brought forward cash-flow hedge reserve at start of year	1	(7)
Gains on effective cash-flow hedges recognised in equity	2	3
Amounts removed from the hedge reserve and recognised in the following lines on the income statement:		
– revenue	1	9
– cost of sales	(2)	(4)
Carried forward cash-flow hedge reserve at end of year	**2**	**1**

Translational currency exposure

The Group has significant investments in overseas operations, particularly in the United States and Europe. As a result, the sterling value of the Group's balance sheet can be significantly affected by movements in exchange rates. The Group seeks to mitigate the effect of these translational currency exposures by matching the net investment in overseas operations with borrowings denominated in their functional currencies, except where significant adverse interest differentials or other factors would render the cost of such hedging activity uneconomic. This is achieved by borrowing primarily in the relevant currency or in some cases indirectly using forward foreign exchange contracts and cross-currency swaps.

Net investment hedges

The table below sets out the currency of loans and swap contracts designated as net investment hedges:

At 31 July 2018	Sterling £m	US$ £m	Euro £m	Other £m	Total £m
Loans designated as net investment hedges		(491)	(836)		(1,327)
Cross-currency swap contracts		(329)	357		28
Currency swap contracts	110			(110)	
	110	**(820)**	**(479)**	**(110)**	**(1,299)**

At 31 July 2017	Sterling £m	US$ £m	Euro £m	Other £m	Total £m
Loans designated as net investment hedges		(621)	(840)		(1,461)
Cross-currency swap contracts	254	(568)	359		45
Currency swap contracts	109			(109)	
	363	**(1,189)**	**(481)**	**(109)**	**(1,416)**

At 31 July 2018 swap contracts hedged the Group's exposure to Canadian dollars, Japanese yen and Chinese renminbi (31 July 2017: Canadian dollars, Japanese yen and Chinese renminbi). All the currency swap contracts designated as net investment hedges are current (FY2017: current). The cross-currency swap contracts are non-current.

Swaps generating £329m of the US dollar exposure (FY2017: £327m) will mature in April 2023 and swaps generating £241m of the US dollar exposure during 2017, maturing in February 2027, have been de-designated during the current year.

The gains and losses that have been deferred in the net investment hedge reserve, and recycled in the period, are shown in the table below:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Brought forward net investment hedge reserve at start of year	(291)	(294)
Amounts removed from the hedge reserve and recognised in the income statement	(5)	20
Amounts deferred in the period on effective net investment hedges	(8)	(17)
Carried forward net investment hedge reserve at end of year	**(304)**	**(291)**

The fair values of these net investment hedges are subject to exchange rate movements. Based on the hedging instruments in place at the year-end, if the specified currencies were to strengthen 10% while all other market rates remained constant, it would have the following effect:

	Loss recognised in hedge reserve 31 July 2018 £m	Loss recognised in hedge reserve 31 July 2017 £m
US dollar	91	132
Euro	53	53

These movements would be fully offset by an opposite movement on the retranslation of the net assets of the overseas subsidiaries. These sensitivities were calculated before adjusting for tax.

(b) Interest rate risk

The Group operates an interest rate policy designed to optimise interest cost and reduce volatility in reported earnings. The Group's current policy is to require interest rates to be fixed for greater than 55% of the level of gross debt. This is achieved through fixed rate borrowings and interest rate swaps. At 31 July 2018 55% (FY2017: 57%) of the Group's gross borrowings were at fixed interest rates, after adjusting for interest rate swaps and the impact of short maturity derivatives designated as net investment hedges. The Group monitors its fixed rate risk profile against both gross and net debt. For medium-term planning, it now focuses on gross debt to eliminate the fluctuations of variable cash levels over the cycle.

The weighted average interest rate on borrowings and cross-currency swaps at 31 July 2018, after interest rate swaps, is 3.69% (FY2017: 3.52%).

Interest rate profile of financial assets and liabilities and the fair value of borrowings

The following table shows the interest rate risk exposure of investments, cash and borrowings, with the borrowings adjusted for the impact of interest rate hedging. The other financial assets and liabilities do not earn or bear interest and for all financial instruments except for borrowings the carrying value is not materially different from their fair value.

	Available for sale investments 31 July 2018 £m	Cash and cash equivalents 31 July 2018 £m	Borrowings 31 July 2018 £m	Fair value of borrowings 31 July 2018 £m	Available for sale investments 31 July 2017 £m	Cash and cash equivalents 31 July 2017 £m	Borrowings 31 July 2017 £m	Fair value of borrowings 31 July 2017 £m
Fixed interest								
Less than one year			(190)	(196)			(134)	(140)
Between one and five years			(365)	(368)			(190)	(206)
Greater than five years			(307)	(314)			(672)	(693)
Total fixed interest financial liabilities			**(862)**	**(878)**			**(996)**	**(1,039)**
Floating rate interest financial assets/(liabilities)	4	657	(748)	(758)	6	711	(753)	(753)
Total interest-bearing financial assets/(liabilities)	**4**	**657**	**(1,610)**	**(1,636)**	**6**	**711**	**(1,749)**	**(1,792)**
Non-interest-bearing assets in the same category	14	60			15	71		
Total	**18**	**717**	**(1,610)**	**(1,636)**	**21**	**782**	**(1,749)**	**(1,792)**

Interest rate hedging

At 31 July 2018 and 31 July 2017 the Group had designated the following hedges against variability in the fair value of borrowings arising from fluctuations in base rates:

US$150m interest rate swap which matures on 12 October 2022 partially hedging the US$ 2022 Guaranteed notes; and

the fixed/floating element of €400m of €/US$ interest rate swaps which mature on 28 April 2023 partially hedging the € 2023 Eurobond.

At 31 July 2017 the Group had designated the following hedge against variability in the fair value of borrowings arising from fluctuations in base rates and exchange rates:

the fixed/floating and € exchange exposure of €300m of €/US$ interest rate swaps which mature on 23 February 2027 partially hedging the € 2027 Eurobond.

The above hedge was de-designated in the year to 31 July 2018.

The fair values of the hedging instruments are disclosed in note 19. The effect of the swaps is to convert £471m (FY2017: £741m) debt from fixed rate to floating rate.

Sensitivity of interest charges to interest rate movements

The Group has exposure to sterling, US dollar and euro interest rates. However the Group does not have a significant exposure to interest rate movements for any individual currency. Based on the composition of net debt and investments at 31 July 2018, and taking into consideration all fixed rate borrowings and interest rate swaps in place, a one percentage point (100 basis points) change in average floating interest rates for all three currencies would have less than £3m impact (FY2017: £1m impact) on the Group's profit before tax.

(c) Financial credit risk

The Group is exposed to credit-related losses in the event of non-performance by counterparties to financial instruments, but does not currently expect any counterparties to fail to meet their obligations. Credit risk is mitigated by the Board-approved policy of only placing cash deposits with highly rated relationship bank counterparties within counterparty limits established by reference to their Standard & Poor's long-term debt rating. In the normal course of business, the Group operates cash pooling systems, where a legal right of set-off applies.

The maximum credit risk exposure in the event of other parties failing to perform their obligations under financial assets, excluding trade and other receivables and derivatives, totals £735m at 31 July 2018 (FY2017: £803m).

	31 July 2018 £m	31 July 2017 £m
Cash in AAA liquidity funds	200	376
Cash at banks with at least a AA- credit rating	306	226
Cash at banks with a A+ credit rating	74	98
Cash at other banks	137	82
Investments in bank deposits	13	11
Other investments	5	10
	735	**803**

At 31 July 2018 the maximum exposure with a single bank for deposits and cash is £127m (FY2017: £126m), whilst the maximum mark to market exposure with a single bank for derivatives is £17m (FY2017: £20m). Both these banks have AA- credit ratings (FY2017: Both AA-).

(d) Liquidity risk

Borrowing facilities

The Board policy specifies the maintenance of unused committed credit facilities of at least £200m at all times to ensure it has sufficient available funds for operations and planned development, which is provided by a multi-currency revolving credit facility.

Smiths has a $800m Revolving Credit Facility that matures on 1 November 2022. At the balance sheet date, the Group had the following undrawn credit facilities:

	31 July 2018 £m	31 July 2017 £m
Expiring within one year		
Expiring between one and two years		
Expiring after more than two years	609	607
	609	**607**

Cash deposits

As at 31 July 2018, £430m (FY2017: £556m) of cash and cash equivalents was on deposit with various banks of which £71m (FY2017: £83m) was on deposit with UK banks, £200m (FY2017: £375m) was in liquidity funds and £13m (FY2017: £11m) of investments comprised bank deposits held to secure liabilities and letters of credit.

Gross contractual cash-flows for borrowings

	Borrowings (Note 17) 31 July 2018 £m	**Fair value adjustments 31 July 2018 £m**	**Contractual interest payments 31 July 2018 £m**	**Total contractual cash-flows 31 July 2018 £m**	Borrowings (Note 17) 31 July 2017 £m	Fair value adjustments 31 July 2017 £m	Contractual interest payments 31 July 2017 £m	Total contractual cash-flows 31 July 2017 £m
Less than one year	(203)		(43)	(246)	(151)	1	(38)	(188)
Between one and two years			(29)	(29)	(190)		(43)	(233)
Between two and three years			(29)	(29)			(29)	(29)
Between three and four years			(29)	(29)			(29)	(29)
Between four and five years	(832)	(5)	(24)	(861)			(29)	(29)
Greater than five years	(575)		(46)	(621)	(1,408)	(1)	(71)	(1,480)
Total	**(1,610)**	**(5)**	**(200)**	**(1,815)**	**(1,749)**		**(239)**	**(1,988)**

The figures presented in the borrowings column include the non-cash adjustments which are highlighted in the adjacent column. The contractual interest reported for borrowings is before the effect of interest rate swaps.

Gross contractual cash-flows for derivative financial instruments

	Receipts 31 July 2018 £m	**Payments 31 July 2018 £m**	**Net cash-flow 31 July 2018 £m**	Receipts 31 July 2017 £m	Payments 31 July 2017 £m	Net cash-flow 31 July 2017 £m
Assets						
Less than one year	379	(386)	(7)	315	(310)	5
Greater than one year	726	(657)	69	710	(642)	68
Liabilities						
Less than one year	319	(324)	(5)	279	(287)	(8)
Greater than one year	36	(42)	(6)	51	(54)	(3)
Total	**1,460**	**(1,409)**	**51**	**1,355**	**(1,293)**	**62**

This table presents the undiscounted future contractual cash-flows for all derivative financial instruments. For this disclosure, cash-flows in foreign currencies are translated using the spot rates at the balance sheet date. The fair values of these financial instruments are presented in note 20.

Gross contractual cash-flows for other financial liabilities

The contractual cash-flows for financial liabilities included in trade and other payables are: £432m (FY2017: £400m) due in less than one year, £6m (FY2017: £8m) due between one and five years and £3m (FY2017: £4m) due after more than five years.

19 DERIVATIVE FINANCIAL INSTRUMENTS

The tables below set out the nominal amount and fair value of derivative contracts held by the Group, identifying the derivative contracts which qualify for hedge accounting treatment:

	At 31 July 2018			
		Fair value		
	Contract or underlying nominal amount £m	Assets £m	Liabilities £m	Net £m
Foreign exchange contracts (cash-flow hedges)	385	6	(4)	2
Foreign exchange contracts (not hedge accounted)	275	2		2
Total foreign exchange contracts	**660**	**8**	**(4)**	**4**
Currency swaps (net investment hedges)	**110**			
Cross currency swaps (fair value and net investment hedges)	328	28		28
Cross currency swaps (not hedge accounted)	242	21		21
Interest rate swaps (fair value hedges)	114		(6)	(6)
Total financial derivatives	**1,454**	**57**	**(10)**	**47**
Balance sheet entries				
Non-current	760	50	(6)	44
Current	694	7	(4)	3
Total financial derivatives	**1,454**	**57**	**(10)**	**47**

	At 31 July 2017			
		Fair value		
	Contract or underlying nominal amount £m	Assets £m	Liabilities £m	Net £m
Foreign exchange contracts (cash-flow hedges)	407	11	(10)	1
Foreign exchange contracts (not hedge accounted)	243	2	(1)	1
Total foreign exchange contracts	**650**	**13**	**(11)**	**2**
Currency swaps (net investment hedges)	**109**			
Cross currency swaps (fair value and net investment hedges)	569	56		56
Interest rate swaps (fair value hedges)	113		(1)	(1)
Total financial derivatives	**1,441**	**69**	**(12)**	**57**
Balance sheet entries				
Non-current	745	56	(2)	54
Current	696	13	(10)	3
Total financial derivatives	**1,441**	**69**	**(12)**	**57**

Currency swaps not hedge accounted

These contracts comprise derivatives which were previously part of the net investment hedging programme and matching contracts to eliminate this exposure. There is no further net exposure arising from these contracts.

Accounting for other derivative contracts

Any foreign exchange contracts which are not formally designated as hedges and tested are classified as 'held for trading' and not hedge accounted.

Netting

International Swaps and Derivatives Association (ISDA) master netting agreements are in place with derivative counterparties except for contracts traded on a dedicated international electronic trading platform used for operational foreign exchange hedging. Under these agreements if a credit event occurs, all outstanding transactions under the ISDA are terminated and only a single net amount per counterparty is payable in settlement of all transactions. The ISDA agreements do not meet the criteria for offsetting, since the offsetting is enforceable only if specific events occur in the future, and there is no intention to settle the contracts on a net basis.

	Assets 31 July 2018 £m	Liabilities 31 July 2018 £m	Assets 31 July 2017 £m	Liabilities 31 July 2017 £m
Gross value of assets and liabilities	57	(10)	69	(12)
Related assets and liabilities subject to master netting agreements	(1)		(1)	1
Net exposure	**56**	**(10)**	**68**	**(11)**

20 FAIR VALUE OF FINANCIAL INSTRUMENTS

	Notes	Carrying value 31 July 2018 £m	Fair value 31 July 2018 £m	Carrying value 31 July 2017 £m	Fair value 31 July 2017 £m
Level 2 valuations					
Financial assets – other investments	16	13	13	11	11
Financial derivatives – assets	19	57	57	69	69
Borrowings	17	(1,610)	(1,636)	(1,749)	(1,792)
Financial derivatives – liabilities	19	(10)	(10)	(12)	(12)
Level 3 valuations					
Financial assets – other investments	16	4	4	10	10

Investments in bank deposits are valued at the bank balance, adjusted for accrued interest.

Derivatives, including forward exchange contracts, currency swaps, interest rate instruments, and embedded derivatives, are valued at the net present value of the future cash-flows calculated using market data at the balance sheet date (principally exchange rates and yield curves).

Borrowings are valued at the net present value of the future cash-flows using credit spreads and yield curves derived from market data. Borrowings are carried on the balance sheet at amortised cost adjusted for fair value interest rate hedging. The fair value of fixed rate borrowings is only used for supplementary disclosures.

Cash, trade receivables and trade payables are excluded from this table because carrying value is a reasonable approximation to fair value for all these assets and liabilities.

21 COMMITMENTS

Operating lease commitments – minimum lease payments

The minimum uncancellable lease payments which the Group is committed to make are:

	31 July 2018		31 July 2017	
	Land and buildings £m	Other £m	Land and buildings £m	Other £m
Payments due:				
– not later than one year	34	7	34	7
– later than one year and not later than five years	83	8	68	7
– later than five years	23		24	
	140	**15**	**126**	**14**

Other commitments

At 31 July 2018, commitments, comprising bonds and guarantees arising in the normal course of business, amounted to £184m (FY2017: £186m), including pension commitments of £54m (FY2017: £54m).

22 PROVISIONS AND CONTINGENT LIABILITIES

	Trading	Non-headline and legacy			Total
	£m	John Crane, Inc. litigation £m	Titeflex Corporation litigation £m	Other £m	£m
Current liabilities	25	30	21	9	85
Non-current liabilities	6	207	63	7	283
At 31 July 2017	**31**	**237**	**84**	**16**	**368**
Exchange adjustments	(1)	1			
Provision charged	19	7	6	9	41
Provision released	(11)		(8)	(3)	(22)
Unwind of provision discount		5	2		7
Utilisation	(15)	(27)	(6)	(8)	(56)
At 31 July 2018	**23**	**223**	**78**	**14**	**338**
Current liabilities	21	29	20	6	76
Non-current liabilities	2	194	58	8	262
At 31 July 2018	**23**	**223**	**78**	**14**	**338**

The John Crane, Inc. and Titeflex Corporation litigation provisions are the only provisions that are discounted.

Trading

Warranty provision and product liability

At 31 July 2018 there are warranty and product liability provisions of £22m (FY2017: £28m). Warranties over the Group's products typically cover periods of between one and three years. Provision is made for the likely cost of after-sales support based on the recent past experience of individual businesses.

Commercial disputes and litigation in respect of ongoing business activities

The Group has on occasion been required to take legal action to protect its intellectual property and other rights against infringement. It has also had to defend itself against proceedings brought by other parties, including product liability and insurance subrogation claims. Provision is made for any expected costs and liabilities in relation to these proceedings where appropriate, though there can be no guarantee that such

provisions (which may be subject to potentially material revision from time to time) will accurately predict the actual costs and liabilities that may be incurred.

Contingent liabilities

In the ordinary course of its business, the Group is subject to commercial disputes and litigation such as government price audits, product liability claims, employee disputes and other kinds of lawsuits, and faces different types of legal issues in different jurisdictions. The high level of activity in the US, for example, exposes the Group to the likelihood of various types of litigation commonplace in that country, such as 'mass tort' and 'class action' litigation, legal challenges to the scope and validity of patents, and product liability and insurance subrogation claims. These types of proceedings (or the threat of them) are also used to create pressure to encourage negotiated settlement of disputes. Any claim brought against the Group (with or without merit), could be costly to defend. These matters are inherently difficult to quantify. In appropriate cases a provision is recognised based on best estimates and management judgement but there can be no guarantee that these provisions (which may be subject to potentially material revision from time to time) will result in an accurate prediction of the actual costs and liabilities that may be incurred. There are also contingent liabilities in respect of litigation for which no provisions are made.

The Group operates in some markets where the risk of unethical or corrupt behaviour is material and has procedures, including an employee 'Ethics Alertline', to help it identify potential issues. Such procedures will, from time to time, give rise to internal investigations, sometimes conducted with external support, to ensure that Smiths Group properly understands risks and concerns and can take steps both to manage immediate issues and to improve its practices and procedures for the future. The Group also co-operates with relevant authorities in investigating business conduct issues whenever requested to. The Group is not aware of any issues which are expected to generate material financial exposures.

Non-headline and legacy

John Crane, Inc.

John Crane, Inc. ("JCI") is one of many co-defendants in numerous lawsuits pending in the United States in which plaintiffs are claiming damages arising from alleged exposure to, or use of, products previously manufactured which contained asbestos. Until 2006, the awards, the related interest and all material defence costs were met directly by insurers. In 2007, JCI secured the commutation of certain insurance policies in respect of product liability. Provision is made in respect of the expected costs of defending known and predicted future claims and of adverse judgments in relation thereto, to the extent that such costs can be reliably estimated.

The JCI products generally referred to in these cases consist of industrial sealing product, primarily packing and gaskets. The asbestos was encapsulated within these products in such a manner that causes JCI to believe, based on tests conducted on its behalf, that the products were safe. JCI ceased manufacturing products containing asbestos in 1985.

JCI continues to actively monitor the conduct and effect of its current and expected asbestos litigation, including the most efficacious presentation of its 'safe product' defence, and intends to continue to resist these asbestos claims based upon this defence. The table below summarises the JCI claims experience over the last 39 years since the start of this litigation:

	Year ended 31 July 2018	Year ended 31 July 2017	Year ended 31 July 2016	Year ended 31 July 2015	Year ended 31 July 2014
JCI claims experience					
Claims against JCI that have been dismissed	277,000	273,000	247,000	242,000	235,000
Claims JCI is currently a defendant in	43,000	50,000	74,000	76,000	80,000
Cumulative final judgments, after appeals, against JCI since 1979	140	138	137	133	131
Cumulative value of awards ($'m) since 1979	164	160	158	153	149

The number of claims outstanding at 31 July 2018 reflects the benefit of 4,000 claims being dismissed in the year.

JCI has also incurred significant additional defence costs. The litigation involves claims for a number of allegedly asbestos related diseases, with awards, when made, for mesothelioma tending to be larger than those for the other diseases. JCI's ability to defend mesothelioma cases successfully is, therefore, likely to have a significant impact on its annual aggregate adverse judgment and defence costs.

John Crane, Inc. litigation provision

The provision is based on past history of JCI claims and well-established tables of asbestos-related disease incidence projections. The provision is determined using advice from asbestos valuation experts, Bates White LLC. The assumptions made in assessing the appropriate level of provision include: the period over which the expenditure can be reliably estimated; the future trend of legal costs; the rate of future claims filed; the rate of successful resolution of claims; and the average amount of judgments awarded.

Established incidence curves can be used to estimate the likely future pattern of asbestos related disease. However, JCI's claims experience is also significantly impacted by other factors which influence the US litigation environment. These can include: changing approaches on the part of the plaintiffs' bar; changing attitudes amongst the judiciary at both trial and appellate levels in specific jurisdictions which move the balance of risk and opportunity for claimants; and legislative and procedural changes in both the state and federal court systems. The build-up of assets in trusts established by asbestos defendants in Chapter 11 restructuring ("524(g) trusts") will increase the influence of these trusts on the behaviour of claimants. Developments in the Garlock Sealing Technologies LLC Chapter 11 proceedings have provided additional data on plaintiff claims to 524 (g) trusts. Given the evidence that emerged of inconsistent duplicate claims, there is a significant likelihood that this will lead to changes in the pattern of claims made in the future, and the costs arising from claims.

The projections use a limited time horizon on the basis that Bates White LLC consider that there is substantial uncertainty in the asbestos litigation environment so probable expenditures are not reasonably estimable beyond this time horizon. Asbestos is the longest running mass tort litigation in American history which is constantly evolving in ways that cannot be anticipated. JCIs defence strategy also generates a significantly different pattern of legal costs and settlement expenses from other defendants, thus JCI is in an extremely rare position, and evidence from other litigation cannot be used to improve the reliability of the projections. A ten year (FY2017: ten year) time horizon has been used based on past experience regarding significant changes in the litigation environment that have occurred every few years and on the amount of time taken in the past for some of those changes to impact the broader asbestos litigation environment, and recent events, like the Garlock Sealing Technologies LLC Chapter 11 proceedings, which may lead to further major changes.

The rate of future claims filed has been estimated using well-established tables of asbestos incidence projections to determine the likely population of potential claimants, and JCI's past experience to determine what proportion of this population will make a claim against JCI. The

JCI products generally referred to in claims had industrial and marine applications. As a result, the incidence curve used for JCI projections excludes construction workers, and is a composite of the curves that predict asbestos exposure-related disease from shipyards and other occupations. This is consistent with JCI's litigation history.

The rate of successful resolution of claims and the average amount of any judgments awarded are projected based on the past history of JCI claims, since this is the best available evidence, given JCI's unusual strategy of defending all claims.

The future trend of legal costs is estimated based on JCI's past experience, adjusted to reflect the assumed levels of claims and trial activity, since the number of trials is a key driver of legal costs.

John Crane, Inc. litigation insurance recoveries

While JCI has excess liability insurance, the availability of such insurance and scope of the cover are currently the subject of litigation in the United States. Pending the outcome of that litigation, JCI has met defence costs directly. The calculation of the provision does not take account of any potential recoveries from insurers.

John Crane, Inc. litigation provision history

The JCI asbestos litigation provision has developed over the last five years as follows:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2016 £m	Year ended 31 July 2015 £m	Year ended 31 July 2014 £m
John Crane, Inc. litigation provision					
Gross provision	251	260	267	236	227
Discount	(28)	(23)	(15)	(20)	(23)
Discounted provision	**223**	**237**	**252**	**216**	**204**
Operating profit charge/(credit)					
Increased provisions for adverse judgments and legal defence costs	13	17	8	14	49
Change in US risk free rates	(6)	(13)	7	1	(2)
Litigation management, legal fees in connection with litigation against insurers and defence strategy	3	11	8	4	1
Recoveries from insurers		(6)	(16)		
Operating profit charge	10	9	7	19	48
Cash-flow					
Provision utilisation	(27)	(24)	(22)	(24)	(36)
John Crane, Inc. litigation spend	30	32	32	27	25

The reduction in 2018 is due to increasing US dollar discount rates, with no material movement in the gross provision.

The operating charge for John Crane, Inc. litigation comprises:

a charge of £13m (FY2017: £17m) in respect of the net increased provision for adverse judgments and legal defence costs;

a credit of £6m arising from an increase in US risk free rates (FY2017: credit of £13m); and

£3m (FY2017: £11m) costs for litigation management, defence strategy and legal fees in connection with litigation against insurers.

In the year ended 31 July 2017 JCI recognised the recovery of £6m through a settlement with an insurer. This agreement does not provide any cover for future costs so there is no material impact on the closing litigation provision.

John Crane, Inc. litigation provision sensitivities

The provision may be subject to potentially material revision from time to time if new information becomes available as a result of future events. There can be no guarantee that the assumptions used to estimate the provision will result in an accurate prediction of the actual costs that may be incurred because of the significant uncertainty associated with the future level of asbestos claims and of the costs arising out of related litigation.

Statistical reliability of projections over the ten year time horizon

In order to evaluate the statistical reliability of the projections, a population of outcomes is modelled using randomised verdict outcomes. This generated a distribution of outcomes with future spend at the 5th percentile of £230m and future spend at the 95th percentile of £290m (FY2017: £231m and £304m, respectively). Statistical analysis of the distribution of these outcomes indicates that there is a 50% probability that the total future spend will fall between £238m and £263m (FY2017: between £243m and £272m), compared to the gross provision value of £251m (FY2017: £260m).

Sensitivity of the projections to changes in the time horizon used

If the asbestos litigation environment becomes more volatile and uncertain, for example if defendants are successful in legal cases against plaintiff law firms and this impacts the nature of claims filed, the time horizon over which the provision can be calculated may reduce. Conversely, if the environment became more stable, or JCI changed approach and committed to long term settlement arrangements, the time period covered by the provision might be extended.

The projections use a 10 year time horizon. Reducing the time horizon by one year would reduce the provision by £15m (FY2017: £17m) and reducing it by five years would reduce the provision by £91m (FY2017: £98m).

We consider, after obtaining advice from Bates White LLC, that to forecast beyond ten years requires that the litigation environment remains largely unchanged with respect to the historical experience used for estimating future asbestos expenditures. Historically, the asbestos litigation environment has undergone significant changes more often than every ten years. If one assumed that the asbestos litigation environment would remain unchanged for longer and extended the time horizon by one year it would increase the provision by £13m (FY2017: £14m) and extending it by five years would increase the provision by £52m (FY2017: £58m). However, there are also reasonable scenarios that, given certain recent events in the US asbestos litigation environment, would result in no additional asbestos litigation for JCI beyond ten years. At this time, how the asbestos litigation environment may evolve beyond 10 years is not reasonably estimable.

John Crane, Inc. contingent liabilities

Provision has been made for future defence costs and the cost of adverse judgments expected to occur. JCI's claims experience is significantly impacted by other factors which influence the US litigation environment. These can include: changing approaches on the part of the plaintiffs' bar; changing attitudes amongst the judiciary at both trial and appellate levels; and legislative and procedural changes in both the state and federal court systems. As a result, whilst the Group anticipates that asbestos litigation will continue beyond the period covered by the provision, the uncertainty surrounding the US litigation environment beyond this point is such that the costs cannot be reliably estimated.

Although the methodology used to calculate the JCI litigation provision can in theory be applied to show claims and costs for longer periods, the Directors consider, based on advice from Bates White LLC, that the level of uncertainty regarding the factors used in estimating future costs is too great to provide for reasonable estimation of the numbers of future claims, the nature of such claims or the cost to resolve them for years beyond the 10 year time horizon.

Titeflex Corporation

Titeflex Corporation, a subsidiary of the Group in the Flex-Tek division, has received a number of claims from insurance companies seeking recompense on a subrogated basis for the effects of damage allegedly caused by lightning strikes in relation to its flexible gas piping product. It has also received a number of product liability claims regarding this product, some in the form of purported class actions. Titeflex Corporation believes that its products are a safe and effective means of delivering gas when installed in accordance with the manufacturer's instructions and local and national codes; however some claims have been settled on an individual basis without admission of liability. Equivalent third-party products in the US marketplace face similar challenges.

Titeflex Corporation litigation provision

The continuing progress of claims and the pattern of settlement, together with the recent market place activity, provide sufficient evidence to recognise a liability in the accounts. Therefore provision has been made for the costs which the Group is expected to incur in respect of future claims to the extent that such costs can be reliably estimated. Titeflex Corporation sells flexible gas piping with extensive installation and safety guidance (revised in 2008) designed to assure the safety of the product and minimise the risk of damage associated with lightning strikes.

The assumptions made in assessing the appropriate level of provision, which are based on past experience, include: the period over which expenditure can be reliably estimated; the number of future settlements; the average amount of settlements; and the impact of statutes of repose and safe installation initiatives on the expected number of future claims.

The provision of £78m (FY2017: £84m) is a discounted pre-tax provision using discount rates, being the risk-free rate on US debt instruments for the appropriate period. The deferred tax asset related to this provision is shown within the deferred tax balance (note 6).

	31 July 2018 £m	31 July 2017 £m
Gross provision	129	136
Discount	(51)	(52)
Discounted pre-tax provision	**78**	**84**
Deferred tax	(19)	(33)
Discounted post-tax provision	**59**	**51**

Titeflex Corporation litigation provision history

An additional provision of £6m (FY2017: £8m) has been recognised by Titeflex Corporation in respect of changes to the estimated cost of future claims from insurance companies seeking recompense for damage allegedly caused by lightning strikes. An offsetting provision release of £8m is principally driven by a reduction in subrogation payments.

Titeflex Corporation litigation provision sensitivities

The significant uncertainty associated with the future level of claims and of the costs arising out of related litigation means that there can be no guarantee that the assumptions used to estimate the provision will result in an accurate prediction of the actual costs that may be incurred. Therefore the provision may be subject to potentially material revision from time to time, if new information becomes available as a result of future events.

The projections incorporate a long-term assumption regarding the impact of safe installation initiatives on the level of future claims. If the assumed annual benefit of bonding and grounding initiatives were 0.5% higher, the provision would be £4m (FY2017: £5m) lower, and if the benefit were 0.5% lower, the provision would increase by £5m (FY2017: £5m).

Other non-headline and legacy

Legacy provisions comprise provisions relating to former business activities and properties no longer used by Smiths. Non-headline provisions comprise all provisions that were disclosed as non-headline items when they were charged to the consolidated income statement.

These provisions cover non-headline reorganisation, vacant properties, disposal indemnities and litigation in respect of old products and discontinued business activities.

Reorganisation and property

At 31 July 2018 there were reorganisation provisions of £7m relating to the integration of the Morpho business into the Detection division (FY2017: £8m related to Fuel for Growth), £2m (FY2017: £3m) related to onerous leases and dilapidations provisions, and £2m (FY2017: £2m) related to actual and potential environmental issues for sites which were no longer occupied by Smiths operations. The Morpho integration provision is expected to be utilised in the next 1 – 2 years.

Disposal

Other provisions include disposal provisions of £3m (FY2017: £3m) relating to warranties and other obligations in respect of the disposal of the Marine Systems and Aerospace businesses. Most of the balance is expected to be utilised within the next five years.

23 SHARE CAPITAL

	Number of shares	Issued capital £m	Consideration £m
Ordinary shares of 37.5p each			
Total share capital at 31 July 2016	395,223,072	148	
Exercise of share options	253,590		3
Total share capital at 31 July 2017	**395,476,662**	**148**	
Exercise of share options	284,565		3
Total share capital at 31 July 2018	**395,761,227**	**148**	

Share capital structure

As at 31 July 2018 the Company's issued share capital was 395,761,227 ordinary shares with a nominal value of 37.5p per share, all of the issued share capital was in free issue and all issued shares are fully paid.

The Company's ordinary shares are listed and admitted to trading on the Main Market of the London Stock Exchange. The Company has an American Depositary Receipt (ADR) programme and one ADR equates to one ordinary share. As at 31 July 2018, 10,125,054 ordinary shares were held by the nominee of the programme in respect of the same number of ADRs in issue.

The holders of ordinary shares are entitled to receive the Company's Reports and Accounts, to attend and speak at general meetings of the Company, to appoint proxies and to exercise voting rights. None of the ordinary shares carry any special rights with regards to control of the Company.

There are no known agreements relating to, or restrictions on, voting rights attached to the ordinary shares (other than the 48 hour cut-off for casting proxy votes prior to a general meeting). There are no restrictions on the transfer of shares, and there is no requirement to obtain approval for a share transfer. There are no known arrangements under which financial rights are held by a person other than the holder of the ordinary shares. There are no known limitations on the holding of shares.

Powers of Directors

The Directors are authorised to issue and allot shares and to buy back shares subject to annual shareholder approval at the AGM. Such authorities were granted by shareholders at the 2017 AGM, and at the 2018 AGM it will be proposed that the Directors be granted new authorities to allot and buy back shares.

Repurchase of shares

The Company did not purchase any of its own shares during the financial year ended 31 July 2018. As at 14 September 2018 (the latest practicable date for inclusion in this report) the Company had an unexpired authority to repurchase ordinary shares up to a maximum of £40m ordinary shares. As at 14 September 2018, the Company did not hold any shares in treasury. Any ordinary shares purchased may be cancelled or held in treasury.

Employment share schemes

Shares acquired through Company share schemes and plans rank pari passu with the shares in issue and have no special rights. The Company operates an Employee Benefit Trust, with an independent trustee, to hold shares pending employees becoming entitled to them under the Company's share schemes and plans. On 31 July 2018 the trust held 766 ordinary shares in the Company. The trust waived its dividend entitlement on its holding during the year, and the trust abstains from voting the shares at general meetings.

24 DIVIDENDS

The following dividends were declared and paid in the period:

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Ordinary final dividend of 29.70p for FY2017 (FY2016: 28.75p) paid 17 November 2017	117	114
Ordinary interim dividend of 13.80p for FY2018 (FY2017: 13.55p) paid 23 April 2018	55	53
	172	**167**

The final dividend for the year ended 31 July 2018 of 30.75p per share was recommended by the Board on 20 September 2018 and will be paid to shareholders on 16 November 2018, subject to approval by the shareholders. This dividend has not been included as a liability in these accounts and is payable to all shareholders on the register of Members at close of business on 19 October 2018.

Waiver of dividends

The following waived all dividends payable in the year, and all future dividends, on their shareholdings in the Company:

Wealth Nominees Limited (Smiths Industries Employee Share Trust)

Reuter File Limited

25 RESERVES

Retained earnings include the value of Smiths Group plc shares held by the Smiths Industries Employee Benefit Trust. In the year the Company issued nil (FY2017: nil) shares to the Trust, and the Trust purchased 952,111 shares (FY2017: 658,217 shares) in the market for a consideration of £15m (FY2017: £10m). At 31 July 2018 the Trust held 766 (FY2017: 766) ordinary shares.

The capital redemption reserve, revaluation reserve and merger reserve arose from: share repurchases; revaluations of property, plant and equipment; and merger accounting for business combinations before the adoption of IFRS, respectively.

Capital management

Capital employed comprises total equity adjusted for goodwill recognised directly in reserves, net post-retirement benefit related assets and liabilities, net litigation provisions relating to non-headline items and net debt. The efficiency of the allocation of the capital to the divisions is monitored through the return on capital employed (ROCE). This ratio is calculated over a rolling 12-month period and is the percentage that headline operating profit comprises of monthly average capital employed. The ROCE was 14.6% (FY2017: 16.2%), see note 30.

The capital structure is based on the directors' judgement of the balance required to maintain flexibility while achieving an efficient cost of capital.

The ratio of net debt to headline EBITDA of 1.4 (FY2017: 1.4) is within the Group's stated policy of 2.0 or less over the medium term. The Group's robust balance sheet and record of strong cash generation is more than able to fund the immediate investment needs and other legacy obligations. See note 30 for the definition of headline EBITDA and the calculation of this ratio.

As part of its capital management the Group strategy is to maintain a solid investment grade credit rating to ensure access to the widest possible sources of financing and to minimise the resulting cost of capital. At 31 July 2018 the Group had a credit rating of BBB+/Baa2 (FY2017: BBB+/Baa2) with Standard & Poor's and Moody's respectively.

The Board has a progressive dividend policy for future payouts, with the aim of increasing dividends in line with the long-term underlying growth in earnings. In setting the level of dividend payments, the Board will take into account prevailing economic conditions and future investment plans, along with the objective to maintain minimum dividend cover of around 2.0.

Hedge reserve

	31 July 2018 £m	31 July 2017 £m
The hedge reserve on the balance sheet comprises:		
– cash-flow hedge reserve	2	1
– net investment hedge reserve	(304)	(291)
	(302)	**(290)**

See transactional currency exposure risk management disclosures in note 18 for additional details of cash-flow hedges, and translational currency exposure risk management disclosure also in note 18 for additional details of net investment hedges.

26 ACQUISITIONS

On 1 November 2017, Tutco LLC, part of the Group's Flex-Tek Heat Solutions business, completed the acquisition of the heating element division of Osram Sylvania Inc. This acquisition has been rebranded as Tutco Sureheat. The intangible assets recognised on this acquisition comprise technology and customer relationships. Goodwill represents synergies and the value of the expertise in the assembled workforce. The goodwill recognised is expected to be deductible for tax purposes.

From the date of acquisition to 31 July 2018, Tutco Sureheat contributed £4m to revenue and £1m to profit before taxation. If the Group had acquired this business at the beginning of the financial year, the acquisition would have contributed £6m to revenue and £2m to profit before taxation.

On 13 June 2018, the Group's John Crane division completed the acquisition of Seebach GmbH, a provider of highly-engineered filtration solutions, from Avedon Capital Partners. The intangible assets recognised on this acquisition comprise technology, customer relationships and branding. Goodwill represents the expected synergies from the strategic fit of the acquisition and the value of the expertise in the assembled workforce. The goodwill recognised is expected to be deductible for tax purposes.

From the date of acquisition to 31 July 2018, Seebach GmbH contributed £2m to revenue and less than £1m to profit before taxation. If the Group had acquired this business at the beginning of the financial year, the acquisition would have contributed £17m to revenue and £2m to profit before taxation.

The provisional balance sheets at the date of acquisition are:

	Tutco Sureheat £m	Seebach GmbH £m	Total £m
Non-current assets			
– acquired intangible assets	6	23	29
– land and buildings		2	2
– plant and equipment		1	1
- deferred tax asset		1	1
Current assets			
– inventory	1	6	7
– trade and other receivables	1	4	5
Current liabilities			
– net debt		(1)	(1)
– trade and other payables		(4)	(4)
Net assets acquired	**8**	32	**40**
Goodwill on current year acquisitions	7	24	31
Total consideration – cash paid during the year	**15**	56	**71**

Acquisitions in previous years

The Group acquired the Morpho Detection business from Safran S.A. in the prior year. Since the acquisition the Group has undertaken a thorough review of the business and has adjusted the fair value of assets and liabilities on the acquisition balance sheet, resulting in a £15m increase in the Goodwill associated to this acquisition in the current year.

27 DISCONTINUED OPERATIONS

There were no discontinued operations in the current year. In the prior year, the Group acquired the Morpho Detection explosive trace detection business after making commitments to the European Commission and the US Department of Justice to sell this business to an approved purchaser. The Group began marketing this business for sale once the terms of the competition clearance were known.

The sale was completed on 7 July 2017 for a cash consideration of £63m. In the year ended 31 July 2017 a loss after tax of £8m was generated by discontinued operations, giving a loss per share from discontinued operations, basic and diluted, of 2.0p.

28 DISPOSALS

During the year the Group received £29m consideration for business disposals, including the sale of the John Crane Bearings business for an enterprise value of $35m, the John Crane Bearings sale completed on 31 May 2018.

John Crane Bearings	111.	112.	113.	114.	115.	Total £m
Consideration						26
Less: transaction costs						(1)
Net consideration received						25
Net assets disposed of:						
– Intangible assets						1
– Non-current tangible assets						6
– Inventories						9
– Trade and other receivables						7
– Trade and other payables						(2)
Net assets						21
Recycling of foreign exchange						5
Profit on John Crane Bearings disposals						**9**
Loss on other disposals						(2)
Total						**7**

29 CASH-FLOW

Cash-flow from operating activities

	Year ended 31 July 2018			Year ended 31 July 2017		
	Headline £m	Non-headline £m	Total £m	Headline £m	Non-headline £m	Total £m
Operating profit	544	(50)	494	589	85	674
Amortisation of intangible assets	39	32	71	44	18	62
Depreciation of property, plant and equipment	55		55	57		57
(Profit)/loss on disposal of property, plant and equipment	(1)		(1)	4		4
Profit on disposal of business		(7)	(7)		(175)	(175)
Share-based payment expense	14	2	16	13	1	14
Retirement benefits	5	(49)	(44)	1	(94)	(93)
Decrease/(increase) in inventories	(19)	2	(17)	52		52
Decrease/(increase) in trade and other receivables	(17)		(17)	31	8	39
Increase/(decrease) in trade and other payables	26	(5)	21	8	8	16
Decrease in provisions	(6)	(30)	(36)	(6)	(34)	(40)
Cash generated from operations	**640**	**(105)**	**535**	**793**	**(183)**	**610**
Interest paid	(71)	(1)	(72)	(65)		(65)
Interest received	7		7	5	11	16
Tax paid	(65)		(65)	(82)		(82)
Net cash inflow from operating activities	**511**	**(106)**	**405**	**651**	**(172)**	**479**

Interest paid includes £1m of cash outflows from foreign exchange hedging of intra-group loan exposures (FY2017: interest received included £6m cash inflows from hedging of intra-group loans exposures and £5m exchange gains realised on internal interest).

The split of tax payments between headline and non-headline only considers the nature of payments made. No adjustment has been made for reductions in tax payments due to tax relief received on non-headline items.

Headline cash measures

The Group measure of headline operating cash includes capital expenditure supporting organic growth and excludes interest and tax.

	Year ended 31 July 2018			Year ended 31 July 2017		
	Headline £m	Non-headline £m	Total £m	Headline £m	Non-headline £m	Total £m
Net cash inflow from operating activities	511	(106)	405	651	(172)	479
Include:						
Expenditure on capitalised development, other intangible assets and property, plant and equipment	(106)		(106)	(107)		(107)
Disposals of property, plant and equipment	4		4	9		9
Investment in financial assets relating to operating activities and pensions financing	(1)		(1)	(5)	(6)	(11)
Free cash-flow			302			370
Exclude:						
Investment in financial assets relating to operating activities and pensions financing outstanding at the balance sheet	1		1	5	6	11
Interest paid	71	1	72	65		65
Interest received	(7)		(7)	(5)	(11)	(16)
Tax paid	65		65	82		82
Headline operating cash-flow	538	(105)	433	695	(183)	512

Reconciliation of headline free cash-flow to total movement in cash and cash-equivalents

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Free cash-flow	**302**	**370**
Investment in other financial assets		(7)
Acquisition of businesses	(71)	(580)
Disposal of businesses and discontinued operations	29	462
Net cash-flow used in financing activities	(316)	116
Net (decrease)/increase cash and cash equivalents	**(56)**	**361**

30 NON-STATUTORY CAPITAL AND CREDIT METRICS

In addition to the non-statutory profit measures explained in note 3, the Group calculates credit metrics and return on capital employed incorporating the same adjustments. See the disclosures on presentation of results in accounting policies for an explanation of the excluded items.

Return on capital employed (ROCE)

Smiths ROCE is calculated over a rolling 12-month period and is the percentage that headline operating profit comprises of monthly average capital employed.

See note 1 for the divisional headline operating profit and average divisional capital employed used to calculate divisional ROCE.

Capital employed

Capital employed is a non-statutory measure of invested resources. It comprises statutory net assets adjusted to add goodwill recognised directly in reserves in respect of subsidiaries acquired before 1 August 1998 of £787m (31 July 2017: £787m) and eliminate post-retirement benefit assets and liabilities and litigation provisions relating to non-headline items, both net of related tax, and net debt.

	Notes	31 July 2018 £m	31 July 2017 £m
Net assets		**2,288**	**2,104**
Adjust for:			
Goodwill recognised directly in reserves		787	787
Post-retirement benefit assets and liabilities	8	(381)	(224)
Tax related to post retirement benefit assets and liabilities		62	22
John Crane, Inc. litigation provisions and related tax	22	175	158
Titeflex Corporation litigation provisions and related tax	22	59	51
Net debt	17	893	967
Capital employed		**3,883**	**3,865**

Return on capital employed

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Headline operating profit for previous twelve months		544	589
Average capital employed	1	3,735	3,639
ROCE		**14.6%**	**16.2%**

Credit metrics

Smiths Group monitors the ratio of net debt to Headline EBITDA as part of its management of credit ratings, see note 25 for details. This ratio is calculated as follows.

Headline earnings before interest, tax, depreciation and amortisation (Headline EBITDA)

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Headline operating profit		**544**	**589**
Exclude:			
– depreciation	12	55	57
– amortisation of development costs	10	24	27
– amortisation of software, patents and intellectual property	10	18	17
Headline EBITDA		**641**	**690**

£1m of software amortisation was charged to restructuring projects and treated as a non-headline cost.

Ratio of net debt to headline EBITDA

	Notes	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Headline EBITDA		641	690
Net debt	17	893	967
Ratio of net debt to headline EBITDA		**1.4**	**1.4**