gsk
do more
feel better
live longer

Annual Report 2018

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Cautionary statement

See the inside back cover of this document for the cautionary statement regarding forward-looking statements.

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The following aligns to the non-financial reporting requirements contained in sections 414CA and 414CB of the Companies Act 2006.

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All of our public policies, codes and standards are available on gsk.com

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We use a number of adjusted, non-IFRS, measures to report the performance of our business. Total reported results represent the Group's overall performance under IFRS. Adjusted results and other non-IFRS measures may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS. Adjusted results and other non-IFRS measures are defined on pages 40 to 42 and reconciliations to the nearest IFRS measures are on pages 51 and 56.

We believe that Adjusted results, when considered together with Total results, provide investors, analysts and other stakeholders with helpful complementary information to understand better the financial performance and position of the Group from period to period, and allow the Group's performance to be more easily compared against the majority of its peer companies. These measures are also used by management for planning and reporting purposes. They may not be directly comparable with similarly described measures used by other companies.

GSK at a glance

We are a science-led global healthcare company. Our purpose is to help people do more, feel better, live longer.

We have three global businesses that discover, develop and manufacture innovative pharmaceutical medicines, vaccines and consumer healthcare products. Every day, millions of patients and consumers across the world use our products. In 2018, we delivered around 2.3 billion packs of medicine, 770 million vaccine doses and 3.8 billion consumer healthcare products.

In 2018, our turnover was £30.8 billion, up 2% at actual exchange rates (AER), 5% at constant exchange rates (CER). The US is our largest single commercial market, representing 39% of revenue, followed by International at 35% and Europe at 26%.

Our 95,490 employees across the world are driven by our purpose and our goal to become one of the world's most innovative, best-performing and trusted healthcare companies.

Our strategy is to bring differentiated, high-quality and needed healthcare products to as many people as possible, with our three global businesses, scientific and technical know-how and talented people.

We are a science-led healthcare company. In 2018, we invested £3.9 billion in R&D and announced a new approach to our R&D focusing on science related to the immune system, human genetics and advanced technologies.

Our three long-term priorities of Innovation, Performance and Trust are designed to create long-term value for patients, consumers and shareholders. Our values – patient focus, transparency, respect and integrity – and our expectations – courage, accountability, development and teamwork – define our culture.

Pharmaceuticals

Our Pharmaceuticals business has a broad portfolio of innovative and established medicines, with leadership positions in respiratory and HIV. We are strengthening our pipeline through a focus on immunology, human genetics and advanced technologies to help us identify the most promising new medicines.

Read more on page 13

Turnover	£m
Respiratory	6,928
HIV	4,722
Immuno-inflammation	472
Established Pharmaceuticals	5,147
Total	17,269

Vaccines

We are the leading Vaccines company in the world, delivering over 2 million vaccine doses every day to people living in 158 countries. Our portfolio and pipeline help protect individuals throughout their lives. We have recently introduced breakthrough vaccines *Shingrix* for shingles and *Bexsero*, the first vaccine for meningitis B.

Read more on page 18

Turnover	£m
Meningitis	881
Shingles	784
Influenza	523
Established Vaccines	3,706
Total	5,894

Consumer Healthcare

Our Consumer Healthcare business develops and markets a portfolio of globally recognised consumer-preferred and expert-recommended brands in the oral health, pain relief, respiratory, skin health, nutrition and digestive health categories. These category-leading brands include *Sensodyne*, *parodontax*, *Poligrip*, *Voltaren*, *Panadol*, *Otrivin* and *Theraflu*.

Read more on page 21

Turnover	£m
Wellness	3,940
Oral health	2,496
Nutrition	643
Skin health	579
Total	7,658

Chairman's statement

I am pleased to report that 2018 was a year of good financial performance for GSK with improvements in sales, earnings and, particularly, cash flow generation. The delivery against operating targets was excellent, with notably successful launches of new products. It was also a year in which the strategic shape of GSK in the coming years has been redefined.

Research & development

Success in R&D will always be fundamental to shareholder returns. A renewed focus on R&D was set out by Emma Walmsley when she became CEO in 2017, and a new plan to improve the pipeline of new medicines has now been launched by Dr Hal Barron, our new Chief Scientific Officer.

Progress is most evident in oncology, with some promising assets in our own laboratories. We have also acquired Tesaro, an oncology focused biotechnology company based in Boston, which has a marketed oncology product and several pipeline assets with development potential. Even more recently, we have proposed an alliance with Merck KGaA, Darmstadt, Germany to develop a promising new oncology medicine.

Through the Board Science Committee, the Directors continue to engage closely with the executives on the actions being taken to improve scientific innovation. A focus on world-class innovation is essential to drive long-term value for investors.

Future direction

In addition to increasing investment in Pharmaceuticals, we also took steps to strengthen the Consumer Healthcare business in 2018. The first step was the buyout of the put option held by Novartis in respect of their minority stake in GSK Consumer Healthcare, which was completed in June. The second step was the announcement in December to create a new Consumer Healthcare Joint Venture with Pfizer.

This latter transaction offers the opportunity to create substantial value for shareholders through a new world-leading Consumer Healthcare business and has a significant bearing on the future shape of the Group. This transaction would transform the scale of GSK's Consumer Healthcare business and therefore the Board has stated that GSK intends to separate the Joint Venture within three years of the completion of the transaction. This sets out a path for GSK to create two focused new companies, with separate listings and appropriate capital structures. Each business will be well positioned to deliver attractive returns to shareholders and benefits to patients and consumers.

The Board fully supports the proposed transaction with Pfizer and is seeking approval from shareholders at a General Meeting which will be held immediately after this coming Annual General Meeting. A separate Circular recommending the transaction will be made available to shareholders prior to the Annual General Meeting.

Capital allocation

Improving GSK's pipeline of new medicines remains the first priority for investment. We also continue to invest behind key products, including increasing the manufacturing capacity of *Shingrix*, GSK's very successful new vaccine to help prevent shingles.

Dividend payments form part of the Group's capital allocation framework and the Board recognises the importance of dividends to shareholders. Total dividends of 80p per share were paid in 2018 and for the first time in several years the cash flow has covered the dividend payments. The same level of dividend is expected in 2019.

Cash generation should remain a key focus given the marked increase in net debt, most of which arose from taking full control of the Consumer Healthcare business.

Financial reporting

I have noted before that commercial structures and reporting requirements sometimes lead to more complexity in reporting than we would like. We continue to evolve our financial reporting and over the course of 2018 we made further changes to give greater prominence to Total results, which represent the Group's overall performance experienced by shareholders. The company is committed to continuous improvement in this area in line with evolving regulatory requirements and best practice.

Succession

In 2018, we announced that Simon Dingemans would step down as Chief Financial Officer at this coming AGM after more than eight years with GSK. I would like to thank him for his service to GSK. Succeeding Simon, is Iain Mackay, formerly Group Finance Director for HSBC, who we welcomed to the Board in January 2019.

This will be my last Annual Report as Chairman, following my decision at the start of the year to step down from the Board. GSK is one of the world's great businesses and it has been an enormous privilege to serve as its Chairman.

Under Emma's leadership, GSK has made very good progress. With the announcement of the intended separation in a few years' time, I believe this is the right moment to step down and allow a new Chair to oversee this process through to its conclusion. Our Senior Independent Director, Vindi Banga, is leading the search to appoint my successor.

I would like to thank all of GSK's employees and partners for their hard work throughout 2018, and our shareholders and customers for their continued support.

Philip Hampton
Chairman

CEO's statement

In 2018, GSK made significant progress against our long-term priorities of Innovation, Performance and Trust, underpinned by a continuing shift in culture.

We delivered improved operating performance, started to strengthen our Pharmaceuticals pipeline, particularly in oncology, and undertook several significant transactions to support our strategy and reshape the Group's portfolio. Our focus for 2019 will be sustained delivery of this progress and, in particular, continued development of the pipeline.

2018 performance

Group sales were £30.8 billion, up 2% at actual exchange rates (AER) and up 5% at constant exchange rates (CER). Sales growth was driven by new products. The standout continues to be *Shingrix*, our vaccine for shingles, which had sales of £784 million – a remarkable launch year for the vaccine. Our HIV medicines also continued to grow with sales of £4.4 billion for our dolutegravir-based products. And in respiratory we continued to build our new portfolio with sales of £2.6 billion, including good performances from *Trelegy Ellipta* – our new three-in-one medicine for chronic obstructive pulmonary disease (COPD) – and *Nucala*, our biologic medicine for severe asthma.

Total Group operating margin was 17.8%, up 4.3 percentage points AER and 5.0 percentage points CER. Adjusted Group operating margin was 28.4%, flat AER and up 0.5 percentage points CER. Total earnings per share more than doubled to 73.7p AER and CER, and Adjusted earnings per share were up 7% AER, 12% CER at 119.4p.

We remain focused on controlling costs and cash generation and I was very pleased that free cash flow was significantly improved at £5.7 billion, up 63% in actual terms compared with 2017. We delivered on our expectation of paying an 80p per share dividend in 2018 and expect to pay 80p per share in 2019.

Strengthening the pipeline

I have consistently said our key priority is to strengthen the Pharmaceuticals pipeline to develop the next generation of medicines for patients, and 2018 demonstrated good progress against this objective, particularly in oncology. By advancing key internal assets as well as targeted business development, we will have 16[1] oncology assets in clinical development – double the number we had at the start of 2018. Our acquisition of Tesaro added a major new product to our portfolio, *Zejula*, which is approved for use in ovarian cancer and we see strong development prospects for this product and the other assets acquired in this transaction. We are pleased that we will be adding to our portfolio with our proposed global alliance with Merck KGaA, Darmstadt, Germany to co-develop and co-commercialise a novel immunotherapy asset.

In 2019, we expect major data readouts and other significant newsflow on several new medicines. We expect pivotal data from three oncology assets which all have potential to be launched in the next two years. We also expect an approval decision from the US Food & Drug Administration (FDA) for dolutegravir + lamivudine and FDA filings for two other new medicines in HIV, a phase III start for a new treatment for rheumatoid arthritis, and results of a pivotal respiratory study to support filing of *Trelegy Ellipta* for use in asthma.

Accelerating our strategy and reshaping our business

In line with our capital allocation priorities, through 2018 we undertook a series of transactions to accelerate our strategy and reshape our business. In June, we acquired full ownership of our Consumer Healthcare business by buying out Novartis' minority stake, and in December we reached agreement with Unilever to divest *Horlicks* and other consumer nutrition products. Expected proceeds from the disposal will be used to reduce debt and increase our investment flexibility.

In December, we also announced the formation of a Consumer Healthcare JV with Pfizer. When completed, this would create a new global leader in Consumer Healthcare. The proposed transaction also supports our key priority to strengthen the Pharmaceuticals business by increasing cash flows. And with our intention to separate we have set a clear direction for the Group with the ultimate aim of creating two exceptional UK-based, global companies. One, a Pharmaceuticals/Vaccines company, with an R&D approach focused on science related to the immune system, human genetics and advanced technologies. The other, a new world-leading Consumer Healthcare company.

Building Trust

Trust is the third long-term priority I set out alongside Innovation and Performance and is vitally important to me and all employees at GSK. In 2018, we set out new commitments to build Trust with a strong focus on three principal areas: using our science and technology to address health needs, making our products more affordable and available, and being a modern employer.

We are committed to providing access to our medicines and vaccines across the world, and I was pleased that we once again topped the Access to Medicines Index. I was also delighted to see the approval of tafenoquine for *P. vivax* malaria and the encouraging data we published on our potential vaccine for tuberculosis (TB), which remains the leading cause of death through infectious disease worldwide.

We also continue to drive a necessary shift in culture towards one that is focused on performance and based on living our values (patient focus, transparency, respect and integrity) and expectations (courage, accountability, development and teamwork). Employee engagement is key to the progress we are making here, and our people are encouraged to share their views and ideas on key topics through regular conversations hosted by our leaders, including myself and my executive team.

2019 will be an important year for GSK as we continue to strengthen our Pharmaceuticals pipeline, execute on our announced transactions, and sustain improved operating performance, particularly as we navigate the introduction of generic *Advair* in the US, for which we have anticipated and prepared. We will remain vigilant in what is a dynamic operating environment and continue to invest in our long-term priorities, so that we can bring benefits to the patients and consumers that we serve.

Finally, I want to sincerely thank all of our customers, suppliers, investors and employees for their support and hard work in 2018 and I look forward to our continued partnership for an exciting year ahead.

Emma Walmsley
Chief Executive Officer

1 Includes M7824, the subject of the proposed alliance with Merck KGaA, Darmstadt, Germany, expected to close in Q1 2019.

Financial performance

Total results

	2018		2017		Growth	
	£m	% of turnover	£m	% of turnover	£%	CER%
Turnover	**30,821**	**100**	30,186	100	2	5
Cost of sales	**(10,241)**	**(33.2)**	(10,342)	(34.3)	(1)	–
Gross profit	**20,580**	**66.8**	19,844	65.7	4	7
Selling, general and administration	**(9,915)**	**(32.2)**	(9,672)	(32.0)	3	5
Research and development	**(3,893)**	**(12.6)**	(4,476)	(14.8)	(13)	(12)
Royalty income	**299**	**1.0**	356	1.1	(16)	(17)
Other operating income/(expense)	**(1,588)**	**(5.2)**	(1,965)	(6.5)		
Operating profit	**5,483**	**17.8**	4,087	13.5	34	43
Net finance costs	**(717)**		(669)			
Profit on disposal of interest in associates	**3**		94			
Share of after tax profits of associates and joint ventures	**31**		13			
Profit before taxation	**4,800**		3,525		36	46
Taxation	**(754)**		(1,356)			
Tax rate	***15.7%***		*38.5%*			
Profit after taxation	**4,046**		2,169		87	100
Profit attributable to non-controlling interests	**423**		637			
Profit attributable to shareholders	**3,623**		1,532			
Earnings per share	**73.7p**		31.4p		>100	>100

How we performed

Cost of sales

Cost of sales as a percentage of turnover was 33.2%, down 1.0 percentage points AER and 1.4 percentage points CER. This primarily reflected a favourable comparison with the write-downs of assets in 2017 related to the decision to withdraw *Tanzeum*, together with a more favourable product mix in Vaccines and Consumer Healthcare.

Selling, general and administration

SG&A costs as a percentage of turnover were 32.2%, up 0.1 percentage points at both AER and CER. The increase primarily reflected higher restructuring costs and investment in promotional product support, particularly for new launches in Respiratory, HIV and Vaccines.

Research and development

R&D expenditure was £3,893 million. (12.6% of turnover), 13% AER, 12% CER lower than in 2017. The reduction reflected lower restructuring costs primarily due to the comparison with the provision for obligations in 2017 as a result of the decision to withdraw *Tanzeum*. In addition, there were lower intangible asset impairments and a favourable comparison with the impact of the Priority Review Voucher purchased and utilised in 2017.

Other operating income/(expense)

Other operating expense primarily reflected accounting charges arising from the remeasurements of the contingent consideration liability related to the acquisition of the former Shionogi-ViiV Healthcare joint venture and the Consumer Healthcare Joint Venture put option previously held by Novartis, partly offset by the profit on a number of asset disposals.

Operating profit

Total operating profit was £5,483 million in 2018 compared with £4,087 million in 2017. The increase primarily reflected a favourable comparison with charges in 2017 arising from the impact of US tax reform on the valuations of the Consumer Healthcare and HIV businesses and reduced asset impairments and restructuring costs in cost of sales and R&D.

Tax

The charge of £754 million represented an effective tax rate on Total results of 15.7% (2017 – 38.5%) and reflected the different tax effects of the various Adjusting items. The reduction in the effective tax rate was driven primarily by a favourable comparison with the impact of US tax reform, which resulted in a number of charges in 2017.

Non-controlling interests

The allocation of earnings to non-controlling interests amounted to £423 million (2017 – £637 million). The reduction was primarily due to the lower allocation of Consumer Healthcare profits following the buyout of Novartis' interest.

Earnings per share

Total earnings per share was 73.7p, compared with 31.4p in 2017.

Total and Adjusted results

Total reported results represent the Group's overall performance.

GSK uses a number of Adjusted, non-IFRS, measures to report the performance of its business. Adjusted results and other non-IFRS measures may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS. See page 40 for a fuller definition.

GSK believes that Adjusted results, when considered together with Total results, provide investors, analysts and other stakeholders with helpful complementary information to understand better the financial performance and position of the Group from period to period, and allow the Group's performance to be more easily compared against the majority of its peer companies. These measures are also used by management for planning and reporting purposes. They may not be directly comparable with similarly described measures used by other companies.

GSK encourages investors and analysts not to rely on any single financial measure but to review GSK's Annual Reports, including the financial statements and notes, in their entirety.

GSK has undertaken a number of Major restructuring programmes in recent years in response to significant changes in the Group's trading environment or overall strategy, or following material acquisitions, including the Novartis transaction in 2015. Costs, both cash and non-cash, of these programmes are provided for as individual elements are approved and meet the accounting recognition criteria. As a result, charges may be incurred over a number of years following the initiation of a Major restructuring programme.

GSK is committed to continuously improving its financial reporting, in line with evolving regulatory requirements and best practice and has made a number of changes in recent years. In line with this practice, GSK expects in 2019 to continue to review its reporting framework (including, where relevant, the use of alternative performance measures).

Adjusting items	Total results £m	Intangible asset amortisation £m	Intangible asset impairment £m	Major restructuring £m	Transaction -related £m	Divestments, significant legal and other items £m	Adjusted results £m
Turnover	30,821						30,821
Cost of sales	(10,241)	536	69	443	15	–	(9,178)
Gross profit	20,580	536	69	443	15	–	21,643
Selling, general and administration	(9,915)		2	315	98	38	(9,462)
Research and development	(3,893)	44	45	49		20	(3,735)
Royalty income	299						299
Other operating income/(expense)	(1,588)			2	1,864	(278)	–
Operating profit	5,483	580	116	809	1,977	(220)	8,745
Net finance costs	(717)			4	(3)	18	(698)
Profit on disposal of associates	3					(3)	–
Share of after tax profits of associates and joint ventures	31						31
Profit before taxation	4,800	580	116	813	1,974	(205)	8,078
Taxation	(754)	(109)	(19)	(170)	(239)	(244)	(1,535)
Tax rate	*15.7%*						*19.0%*
Profit after taxation	4,046	471	97	643	1,735	(449)	6,543
Profit attributable to non-controlling interests	423				251		674
Profit attributable to shareholders	3,623	471	97	643	1,484	(449)	5,869
Earnings per share	73.7p	9.6p	2.0p	13.1p	30.2p	(9.2)p	119.4p

Adjusting items

Intangible asset amortisation and impairment

Amortisation and impairment of intangible assets excludes computer software and goodwill.

Major restructuring

Major restructuring costs, which include impairments of tangible assets and computer software (under specific Board-approved programmes that are structural, of a significant scale and where the costs of individual or related projects exceed £25 million), including integration costs following material acquisitions.

Transaction-related

Transaction-related accounting or other adjustments related to significant acquisitions.

Divestments, significant legal and other items

Proceeds and costs of disposals of associates, products and businesses; significant legal charges (net of insurance recoveries) and expenses on the settlement of litigation and government investigations; other operating income other than royalty income, and other items.

Financial performance continued

Adjusted results

	2018		2017		Growth	
	£m	% of turnover	£m	% of turnover	£%	CER%
Turnover	**30,821**	**100**	30,186	100	2	5
Cost of sales	**(9,178)**	**(29.8)**	(8,771)	(29.1)	5	6
Gross profit	**21,643**	**70.2**	21,415	70.9	1	4
Selling, general and administration	**(9,462)**	**(30.7)**	(9,341)	(30.9)	1	4
Research and development	**(3,735)**	**(12.1)**	(3,862)	(12.8)	(3)	(2)
Royalty income	**299**	**1.0**	356	1.2	(16)	(17)
Operating profit	**8,745**	**28.4**	8,568	28.4	2	6
Net finance costs	**(698)**		(657)			
Share of after tax profits of associates and joint ventures	**31**		13			
Profit before taxation	**8,078**		7,924		2	6
Taxation	**(1,535)**		(1,667)			
Tax rate	***19.0%***		*21.0%*			
Profit after taxation	**6,543**		6,257		5	9
Profit attributable to non-controlling interests	**674**		793			
Profit attributable to shareholders	**5,869**		5,464			
Earnings per share	**119.4p**		111.8p		7	12

How we performed

Cost of sales

Cost of sales as a percentage of turnover was 29.8%, up 0.7 percentage points at AER, 0.4 percentage points at CER. The increase primarily reflected continued adverse pricing pressure in Pharmaceuticals and Established Vaccines as well as increased input costs.

Selling, general and administration

SG&A costs as a percentage of turnover were 30.7%, down 0.2 percentage points at AER, 0.3 percentage points at CER. This decrease reflected the impact of sales growth partly offset by a cost increase of 1% AER, 4% CER, primarily resulting from increased investment in promotional product support, particularly for new launches in Respiratory, HIV and Vaccines.

Research and development

R&D expenditure was £3,735 million (12.1% of turnover), down 3% AER, 2% CER. This primarily reflected the favourable comparison with the impact of the Priority Review Voucher purchased and utilised in 2017 and the benefit of the prioritisation initiatives started in the second half of 2018.

Operating profit

Adjusted operating profit was £8,745 million, up 2% AER, 6% CER on a turnover increase of 5%. The Adjusted operating margin of 28.4% was flat at AER but up 0.5 percentage points at CER. This reflected the benefit from sales growth at CER in all three businesses, a more favourable mix, primarily in Vaccines and Consumer Healthcare, and reduced R&D expenditure.

Tax

Tax on Adjusted profit was £1,535 million representing an effective Adjusted tax rate of 19.0% (2017 – 21.0%). The reduction in the effective rate was primarily driven by the reduction in the US federal tax rate.

Non-controlling interests

The allocation of Adjusted earnings to non-controlling interests amounted to £674 million (2017 – £793 million). The reduction was primarily due to the lower allocation of Consumer Healthcare profits following the buyout of Novartis' interest.

Earnings per share

Adjusted EPS of 119.4p was up 7% AER, 12% CER, compared with a 6% CER increase in Adjusted operating profit, primarily as a result of a reduced non-controlling interest allocation of Consumer Healthcare profits and a lower Adjusted tax rate.

Our long-term priorities

We deliver our long-term priorities through each of our three businesses. They are designed to create long-term value for patients, consumers and shareholders, and are underpinned by our ambition to build a culture with a greater performance focus, aligned to our values and expectations.

This page sets out our 2018 objectives, highlights progress in 2018 and our key objectives for 2019, with more detail provided in the relevant business sections.

Our long-term priorities apply to our three businesses

Innovation

We invest in scientific and technical excellence to develop and launch a pipeline of new products that meet the needs of patients, payers and consumers.

2018 objectives

- Excellent execution of key launches: *Trelegy Ellipta*, *Juluca*, and *Shingrix*
- Strengthen Pharmaceutical pipeline through greater focus, improved medicines development and business development

2018 progress

- Delivered industry-leading launches of *Shingrix* and *Trelegy Ellipta*, with strong start to sales of *Juluca*
- New R&D approach to focus on science of the immune system, human genetics and advanced technologies
- Strengthened pipeline through strategic business development with 23andMe and Tesaro and terminated or divested around 80 programmes to focus investment on most promising assets
- Significant progress in reshaping Pharmaceuticals R&D portfolio, with 33[1] of 46 new medicines targeting modulation of the immune system

2019 objectives

- Deliver continued strong sales of *Trelegy Ellipta*, *Nucala*, HIV two-drug regimen and *Shingrix*
- Continue to strengthen pipeline through execution of new R&D approach, accelerating priority assets and optimising recent strategic business development transactions

Performance

We deliver growth based performance by investing effectively in our business, developing our people and executing competitively.

2018 objectives

- Grow sales in priority therapy areas, categories and markets
- Increase operating margins and deliver improved cash flow
- Strengthen top talent profile in key roles

2018 progress

- Group sales £30.8 billion, up 2% AER, 5% CER, with growth in new respiratory product sales and HIV
- Total Group operating margin 17.8%, up 4.3 percentage points AER, up 5.0 percentage points CER. Adjusted Group operating margin 28.4%, flat AER, up 0.5 percentage points CER
- Net cash flow from operations £8.4 billion, up from £6.9 billion. Free cash flow £5.7 billion, up from £3.5 billion
- Announced transaction to create a world-leading Consumer Healthcare Joint Venture with Pfizer and bought out Novartis' stake in GSK Consumer Healthcare
- Key leadership appointments in place with 69% of top 125 leaders new in role

2019 objectives

- Continue to drive sales growth and operational performance
- Successful integration of Tesaro
- Deliver restructuring benefits and plan for the integration of Pfizer's consumer healthcare business
- Accelerate capability build in priority areas including digital data and analytics

Trust

We are a responsible company and commit to use our science and technology to address health needs, make our products affordable and available and to be a modern employer.

2018 objectives

- Focus on supply service levels
- Define new global health approach
- Competitive employee engagement

2018 progress

- Established new set of priorities and public commitments to build trust
- Continued to simplify supply chain and improve supply performance
- Received approval for tafenoquine, the first new treatment for *P. vivax* malaria in 60 years
- Candidate TB vaccine showed positive results in phase IIb trial
- Competitive employee engagement through focus on modern employer
- All employees globally to have access to a preventive healthcare package

2019 objectives

- Focus on supply service levels, execute portfolio and network simplification
- Deliver progress on Trust commitments
- Progress global health research in TB and HIV
- Deliver modern employer programmes to empower employees to be themselves, feel good and keep growing at GSK

Culture

We are committed to building a new culture at GSK to accelerate delivery of our long-term priorities. In 2018, our focus was to establish a new set of expectations – courage, accountability, development and teamwork – alongside our values – patient focus, transparency, respect and integrity – and introduce a new approach to performance and reward. In 2019, we aim to continue to embed organisational understanding of how our values and expectations will support a change in culture, leading to improved culture scores, and further embed our new performance system.

Principal risks

Our Principal risks are patient safety: product quality; financial controls and reporting; anti-bribery and corruption; commercial practices; privacy; research practices; third party oversight; environment, health and safety, and sustainability; information security; and supply continuity. Our risk management framework is designed to support our long-term priorities. More detailed information can be found on pages 34 to 36 and 241 to 250.

1 Includes M7824, the subject of the proposed alliance with Merck KGaA, Darmstadt, Germany, expected to close in Q1 2019.

Key performance indicators

Our 10 operating key performance indicators (KPIs) track progress against our long-term priorities. They measure how we are performing at an overall Group level and across our three businesses. They are reviewed regularly by our Corporate Executive Team and the Board, and employees are updated on progress every quarter. In 2018, we launched a new performance system to align employees' bonuses to a relevant subset of our ten KPIs. The remuneration policy used to reward the performance of our executives includes measures linked to our KPIs (see pages 97, 101 and 103).

On this page we provide performance data for the operating KPIs we are reporting externally. Due to commercial sensitivities we are not planning to publish data for all operating KPIs.

We use a number of adjusted, non-IFRS, measures to report the performance of our business, as described on pages 40 to 42, including Adjusted results, free cash flow and CER growth rates. Non-IFRS measures may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS.

Innovation

	2018 £bn	2018 growth £%	2018 growth CER%	2017 £bn	2016 £bn
Innovation sales (R)					
Sales of Pharmaceuticals and Vaccines products launched in the last five years	**5.7**	43	46	4.0[a]	2.6[a]

For internal purposes we also measure pipeline value and progress.

Performance

	2018 £bn	2018 growth £%	2018 growth CER%	2017 £bn	2016 £bn
Group turnover (R)	**30.8**	2	5	30.2	27.9
Operating profit and margin (R)					
Total operating profit	**5.5**	34	43	4.1	2.6
Adjusted operating profit	**8.7**	2	6	8.6	7.7
Total margin	**17.8%**			13.5%	9.3%
Adjusted margin	**28.4%**			28.4%	27.5%
Free cash flow (R)	**5.7**	63		3.5[b]	3.3[b]

For internal purposes we also measure market share, and top talent in key roles.

Trust

	2018	2017	2016
Employee engagement			
Employee engagement scores from our global employee survey	**78%**	79%	

For internal purposes we also measure supply service levels and corporate reputation.

(R) Linked to Executive LTI awards and bonus, see pages 97, 101 and 103.

a Comparative information reflects sales of those products that meet the definition for 2018.

b Revised to include proceeds from the sale of intangible assets.

Industry trends

The healthcare industry is changing rapidly and has strong growth potential. Our strategy and long-term priorities, underpinned by our culture, are designed to put us in the best position to be able to respond to the opportunities and challenges that this presents.

Global economic growth remained steady in 2018, with a projected annual growth rate of 3.7%[1]. This was despite concerns over international trade, the weaker economic performance in some countries, notably Europe and Asia, and geopolitical friction. In Europe, a lack of clarity about the nature of the UK's future relationship with the EU caused some political and economic uncertainty (see page 36).

The global healthcare market continues to grow, despite signs of economic slowdown in some countries. Worldwide pharmaceutical sales totalled £731 billion[2] from September 2017–2018, up 5%. North America remains the largest pharmaceutical market with a 47% share of global sales, with Europe representing 16%[3]. China is the second largest individual country for pharmaceutical sales, representing 8% of global sales[3]. Global vaccine sales rose to approximately £20.6 billion in 2018, up 7.3% from 2017[4]. Global consumer healthcare sales are estimated to be approximately £135 billion[4].

Global trends: opportunities and challenges

Positive demographics

Demographic change is driving demand for both preventive and therapeutic healthcare products. People are living longer, with the number of over 65-year-olds due to double between 2017 and 2050, and the global population is expanding, with the worldwide headcount due to grow by more than 1 billion between 2015 and 2030, to 8.5 billion. Increasing affluence, changing diets and lifestyles and longer lifespans are all contributing to rising demand for healthcare, especially in areas such as cancer and respiratory disease.

Advances in science and technology

Rapid advances in science and technology are transforming healthcare and increasing the probability of success in R&D. Better understanding of human biology and genetics is enabling scientists to identify and develop novel, targeted treatments and vaccines. Advances in digital technology, data and analytics meanwhile allow researchers to explore and interpret a greater volume of data much faster than before. The insights gained are accelerating and improving the development of preventive and therapeutic medicines and vaccines, and enabling manufacturers and purchasers of healthcare products to better measure their effectiveness. Technology is also now central to the way people discover, assess and buy healthcare products, with 2018 US research suggesting that 75% of consumers surveyed consider that technology plays an important part in managing their own health.

Pricing and access

The pricing of healthcare products continues to attract significant attention from governments and the public, with calls for better transparency on how prices are set and a greater emphasis on health outcome-based pricing. Specialty medicines continue to receive particular attention; their pricing reflects the therapeutic benefits and small number of patients covered by targeted treatments.

Government and payer budgets remain subject to increasing reviews as demand for healthcare grows, due to demographic change, the push for universal health coverage and advances in preventive care and treatment. Despite this, innovative medicines that are clearly differentiated in areas of unmet medical need will continue to attract strong coverage and funding in developed markets.

In the US, there is variability in how drugs are funded and reimbursed across insurance programmes. The current administration is undergoing a comprehensive review of drug pricing. During 2018, it published the drug pricing Blue Print in an effort to lower prices of pharmaceutical medicines for patients across the US. The Blue Print focuses on improved competition, better government negotiation, incentives for lower list prices and lowering out-of-pocket costs for patients. The administration aims to achieve this through a number of mechanisms, such as limiting rebates, introducing international reference pricing to compare domestic drug prices with other countries, value-based pricing pilots and reform of Medicare.

In Europe and emerging markets, international reference pricing continues to gain traction, with over 70 markets now involved globally, although many countries continue to negotiate confidential contracts with manufacturers. Increasingly, countries are also cooperating on pricing, procurement and health technology assessments (HTAs), which assess the clinical and cost-effectiveness and broader impacts of healthcare treatments. A new HTA regulation has been proposed in Europe that would centralise the clinical assessments of new medicines and medical devices. This is now going through the legislative process.

In China, the authorities accelerated progress towards bringing innovative treatments to market. This included increasing the pace and frequency of reimbursement coverage, especially for oncology drugs.

In Japan, the government continues to seek to expedite and expand drug development. However, in 2018 a significant reduction in the price maintenance premium, which exempts certain innovative medicines from annual price reductions, eroded price stability and plans to introduce a new HTA system have created further uncertainty.

1 IMF World Economic Outlook Update, January 2019.

2 The volatility of the 2018 sterling exchange rate, and revised data collection methods at research provider IQVIA, mean that this year's global figure is not entirely comparable with 2017 (£738 billion).

3 IQVIA data.

4 Internal data.

Industry trends continued

Regulatory environment

Healthcare is a highly regulated industry, reflecting public expectations that products comply to stringent levels of quality, safety and efficacy. Governments are increasingly extending the regulatory remit to support accelerated development and the introduction of new medicines with, for example, China, Japan and the US recently introducing regulatory approaches to encourage pharmaceutical innovation. Meanwhile, work on cross-border harmonisation of pharmaceutical regulation is increasing through supra-national bodies such as the International Conference of Drug Regulatory Authorities and the International Council for Harmonisation. In this context, the healthcare industry supports close cooperation on medicine regulation systems and processes between the UK and EU after Brexit.

Competition

The healthcare sector remains intensely competitive, with companies increasingly pursuing acquisitions and collaborations to strengthen their pipelines and portfolios. In 2018, notable M&A activity included Takeda's $59 billion acquisition of Shire Pharmaceuticals. This momentum continued in early 2019, with Bristol-Myers Squibb announcing its intention to buy Celgene for $74 billion.

Intellectual property (IP) protection is important to continue to incentivise innovation. This helps research-based healthcare companies ensure a reasonable return on their investments and allows them to continue to conduct research, and develop new and innovative medicines. Once IP protection expires, or if challenges to a patent are upheld, generic competitors can rapidly capture a large share of the market.

Vaccines and other biologics do not face such exposure to generic competition through these 'patent cliffs'. They are complex and more dependent on technical manufacturing processes.

In consumer healthcare, the over-the-counter (OTC) sector has seen the greatest consolidation while, in fast moving consumer goods (FMCG), lower barriers to entry and fewer regulatory hurdles have seen the rise of niche and e-commerce based companies focusing successfully on fast-adapting consumer trends.

Societal expectations

Public trust in all large institutions – including media, governments, NGOs and businesses – remains low, by historical standards, particularly in developed markets, making it an important issue for businesses as they face growing public scrutiny. Society increasingly expects companies to earn their trust by demonstrating integrity, fairness and transparency, and by making a positive contribution to the wider community. The pharmaceutical sector still suffers from a trust deficit as a result of past challenges in relation to sales and marketing practices and ethics and compliance issues.

Concern is also rising about the safeguarding of personal data. In Europe, new legislation has tightened regulations on how companies can use personal information. Loss or inappropriate use of data could have major consequences for both individuals and businesses.

There is a continuing focus on issues such as diversity, ranging from equal pay to representation at senior management. The environment, particularly climate change, ocean protection and plastic waste, are issues where there is increased public concern and pressure for action. Companies are also under increasing scrutiny on their tax affairs, including their contribution and transparency. To be successful companies must operate in a way that meets the expectations of, and creates long-term value for, their wide range of stakeholders, including shareholders, employees, customers and suppliers.

Our strategic response

Our strategy – to bring differentiated, high-quality and needed healthcare products to as many people as possible, with our three global businesses, scientific and technical know-how and talented people – is designed to respond to these trends. Our long-term priorities, underpinned by our culture, will help us deliver our strategy:

Innovation: we invest in scientific and technical excellence to develop and launch a pipeline of new products that meet the needs of patients, payers and consumers.

Performance: we deliver growth based performance by investing effectively in our business, developing our people and executing competitively.

Trust: we are a responsible company and commit to use our science and technology to address health needs, make our products affordable and available and be a modern employer.

We are making important progress on these long-term priorities (see page 7), which is enabling us to respond to the dynamic environment in which we operate. To harness advances in science and technology, we are forming partnerships to bring ground-breaking products to patients faster. We aim to manage pricing pressure by researching and developing differentiated medicines that will attract the greatest coverage and funding, and by pricing our medicines according to the value and outcomes they bring to patients, providers and payers. We are committed to building trust by addressing societal expectations and by operating responsibly and transparently.

Stakeholder engagement

Engaging with our stakeholders is key to our success and delivering our strategy. We have various mechanisms that enable the Board and management to understand and consider stakeholder views as part of their oversight and decision-making (see page 89).

This page sets out our key stakeholder groups, why they are important to us and some of the ways in which we engage with them.

Patients and consumers

Insights from patient organisations and consumers enable us to develop products and advocate for policies that better meet their needs.

– Advisory boards and Patient Advocacy Leaders Summits provide patient insights
– Engaging with and supporting patient groups (disclosed on gsk.com) and supporting initiatives that empower patients to get more involved in medicine development
– Our market research and consumer sensory labs help us understand consumer needs

Investors

We maintain regular and constructive dialogue with investors to communicate our strategy and performance in order to promote investor confidence and ensure our continued access to capital.

– One-to-one meetings between Board members, senior executives and institutional investors
– Running investor roadshows; attending conferences and events
– Annual General Meeting

Healthcare professionals and medical experts

We work with healthcare professionals (HCPs) and medical experts to understand patient needs and to ensure our products are being administered in the right way.

– Advisory boards to gather insights related to scientific research and disease management
– Collaboration on clinical trials and research
– Peer-to-peer scientific dialogue to increase understanding of diseases and develop effective prevention

R&D partners and academia

We partner with scientific institutions, business partners, and academia to further advance scientific discovery and development.

– Establishing joint ventures to improve efficiency and strengthen and improve innovation
– R&D collaborations such as our gene sequencing initiative with 23andMe and UK Biobank
– Working with academic researchers to accelerate discovery and development of new medicines

Governments and regulators

We work with governments and regulators to advocate for policies that encourage innovation, promote efficient management of healthcare spending and give patients the support they need.

– Engaging with regulatory bodies during drug development
– Engaging with government health agencies to demonstrate the value of our products
– Working with governments to build a strong operating environment for life sciences

NGOs and multilateral organisations

We work with partners to improve access to healthcare services and our products, and to advocate for the policy environment in which we can be successful.

– Working with non-governmental organisations (NGOs) and partners to research and develop products to support global health
– Partnering with NGOs and generic manufacturers to manufacture and supply our products to developing countries
– Working with multilateral organisations to drive progress on key global health priority areas

Suppliers

We work with thousands of suppliers, large and small, who provide goods and services that support us in delivering high-quality, safe products for our patients and consumers.

– Engaging with suppliers through our Third Party Oversight programme and external platforms to help monitor performance
– Providing a platform for our suppliers to share best practices in environmental performance through our Supplier Exchange online community
– Auditing our suppliers' quality processes to ensure they comply with relevant regulations

Employees

We involve and listen to employees to help us maintain strong employee engagement and retain talented people.

– Conducting a twice-yearly global employee survey so we can act on employee feedback
– Promoting informal dialogue and collaboration through our new internal tech platform
– Let's Talk events with leaders and members of the Corporate Executive Team
– Established a Board-level Workforce Engagement Director (Dr Vivienne Cox) (see page 90)

Our business model

We discover, develop and manufacture innovative pharmaceutical medicines, vaccines and consumer healthcare products. Our operations span the value chain, from identifying and researching ground-breaking discoveries, through development and testing to regulatory approval, manufacturing and commercialisation.

Our resources:

Talented employees
Our people help deliver our purpose with their scientific and technical know-how and their expertise in regulation, intellectual property and commercialisation (see page 28).

Partnerships
Business development helps strengthen our pipeline and complement our in-house resources. We have important relationships with external organisations, suppliers and third parties (see page 11).

Access to capital
Cash, equity and debt enables us to invest in our business over the long term (see page 57).

How we create value:

Our purpose

To help people do more, feel better, live longer

Our long-term priorities

Innovation | **Performance** | **Trust**

Through our three global businesses we improve health and create financial value:

Invest in scientific research
We invested £3.9 billion in research and development to bring new medicines, vaccines and consumer healthcare products to patients, payers and consumers.

Generate revenue and profit
We generate revenue by executing new product launches brilliantly and from the sales of our existing portfolios.

Reinvest and distribute returns
As part of our capital allocation framework we reinvest in our three businesses and also provide returns to shareholders in the form of dividends.

The value we create:

For patients and consumers
We improve the health of patients and consumers around the world through our innovative medicines, vaccines and consumer healthcare products (see pages 13, 18, 21).

For investors
We deliver growth based performance and in 2018 we paid a dividend of 80p per share to shareholders (see pages 17, 20, 22).

For employees
We employ 95,490 people globally and offer a broad range of benefits, including preventative healthcare services for all employees, to attract, retain and motivate the best people to support our business. (see page 28).

Culture

We are committed to building a culture with greater performance focus underpinned by our values and expectations.

Our values	Our expectations
Patient focus – Transparency – Respect – Integrity	Courage – Accountability – Development – Teamwork

Pharmaceuticals

Our Pharmaceuticals business has a broad portfolio of innovative and established medicines, with leadership positions in respiratory and HIV. We are strengthening our pipeline through a focus on immunology, human genetics and advanced technologies to help us identify the most promising new medicines.

Progress against our long-term priorities

Innovation

- New R&D approach with a focus on science related to the immune system, human genetics and advanced technologies
- Strengthened pipeline with 33[1] of 46 medicines in development targeting modulation of the immune system
- Accelerated our oncology pipeline by doubling the number of assets in clinical development via advancing key internal assets, e.g. GSK '916, and targeted business development, e.g. acquisition of Tesaro and the proposed alliance with Merck KGaA.
- Launched *Juluca*, the first two-drug HIV regimen, and expanded indications for *Trelegy Ellipta* and *Nucala*

Performance

- Total 2018 turnover £17.3 billion, flat AER, up 2% CER
- New Respiratory product sales £2.6 billion, up 35% AER, 38% CER; HIV sales £4.7 billion, up 9% AER, 11% CER
- Refined the priority markets in which we target our resources to accelerate growth
- Simplified our Pharmaceuticals supply chain, separating it from Consumer Healthcare, to improve competitiveness

Trust

- Approval of tafenoquine, the first new treatment for *P. vivax* malaria in 60 years
- Partnering to increase access to paediatric formulations of our HIV medicines
- Trained over 15,000 healthcare professionals across 21 countries on the appropriate use of antibiotics

Innovation

To strengthen our pipeline and deliver the next generation of medicines that we see bringing the greatest value to patients, we are embedding a new approach to R&D.

This approach focuses on science related to the immune system, the use of human genetics, and advanced technologies, and is driven by the multiplier effect of Science x Technology x Culture. It will help us to accelerate the pace at which we develop and deliver transformational medicines, prioritising those molecules with a higher probability of success and terminating less promising programmes. It will also enable us to increase our focus on specialty medicines in areas such as oncology.

We have a broad clinical pipeline including 46 potential new medicines in development for a range of diseases. This includes 16[1] oncology assets – double the number we had at the start of 2018. 33 of our potential new medicines are immunomodulators, reflecting our scientific focus on immunology as the area where we see the greatest potential. In 2019, we anticipate phase III data read-outs in key areas including HIV, oncology and respiratory.

For us to focus more effectively and ensure we rapidly progress only the best assets, our culture encourages smart risk-taking and single-point accountable decision making. Dr Hal Barron, Chief Scientific Officer and President, R&D, has been instrumental in driving scientific innovation since he joined GSK in January 2018.

HIV

We have a long-standing commitment to advancing the treatment, prevention and cure of HIV by developing medicines that suppress or prevent the virus in new ways and help reduce the burden of treatment. Our HIV business is managed through ViiV Healthcare, a global specialist HIV company that GSK controls as majority owner, with Pfizer and Shionogi also as shareholders. Its broad portfolio of 13 antiretroviral medicines offers a wide range of therapeutic options for people living with HIV. They include the highly successful therapies, *Tivicay* and *Triumeq*, which are based on dolutegravir, the world-leading core agent.

Marking a new era in HIV care, *Juluca*, the first two-drug regimen (2DR), once-daily, single-pill for the treatment of HIV, has now been launched in the US, Japan and several European markets. By containing fewer drugs than conventional HIV therapies, *Juluca* – and the other potential 2DRs in the pipeline – reduces patients' exposure to multiple medicines during what is often life-long treatment.

In 2018, we filed regulatory submissions in the US and Europe for another single-tablet 2DR, of dolutegravir and lamivudine. These followed the phase III GEMINI 1 & 2 studies which demonstrated similar efficacy for the 2DR compared with traditional three-drug regimens. Decisions on regulatory approvals are anticipated in 2019.

1 Includes M7824, the subject of the proposed alliance with Merck KGaA, Darmstadt, Germany, expected to close in Q1 2019.

Pharmaceuticals continued

We made further progress with the investigational once-monthly, long-acting injectable 2DR of cabotegravir and rilpivirine, a new option for patients that avoids daily, oral treatment. The LATTE-2 study showed high rates of virologic response and long-term durability over a three-year period, while the FLAIR and ATLAS studies both demonstrated similar efficacy to *Triumeq* with a once-monthly injection. Regulatory filing with the FDA is planned in 2019.

In other research, the INSPIRING phase IIIb study demonstrated the efficacy and safety of a dolutegravir-based treatment regimen in HIV and tuberculosis co-infected patients.

A phase III study of fostemsavir on heavily treatment-experienced patients with HIV, whose current antiretroviral medicines are proving inadequate, also delivered positive results. An application for regulatory approval of fostemsavir is expected to be filed in 2019.

Oncology

Cancer is one of the leading causes of death in the developed world. We are focused on delivering transformational therapies for people living with cancer. Our pipeline is focused on immuno-oncology, cell therapy and cancer epigenetics. In 2018, we made significant progress by doubling the number of oncology assets in clinical development to 16.[1] Our goal is to achieve a sustainable flow of new treatments based on a diversified portfolio of investigational medicines utilising modalities such as small molecules, antibodies, antibody drug conjugates and cells, either alone or in combination.

Our antibody drug conjugate targeting BCMA, GSK 2857916, has the potential to target multiple myeloma. It has been granted European PRIME and FDA breakthrough status, potentially enabling faster regulatory review, and has also been recognised as an orphan drug. Despite advances in treatment of multiple myeloma over the last decade, there remains no cure and high unmet need. We have an extensive development plan exploring use in the fourth to first line settings. In fourth line, following encouraging efficacy data from the DREAMM-1 study, we initiated the pivotal DREAMM-2 study which was fully recruited by October 2018. Data is expected in mid-2019 with potential regulatory submissions by year end. The second line DREAMM-6 pilot study looking at use in combination with standard of care was initiated in 2018. The results which will be available in 2019 will inform future pivotal studies. The DREAMM-5 pilot study looking at first line use in relapsed and refractory patients is planned to start in 2019.

In 2018, we accelerated the strengthening of our pipeline with the acquisition of Tesaro, an oncology-focused biopharmaceutical company. Tesaro's major marketed product, *Zejula*, is an oral poly ADP ribose polymerase (PARP) inhibitor approved in the US and Europe for adults with recurrent ovarian cancer. PARP inhibitors are transforming the treatment of ovarian cancer, demonstrating marked clinical benefit in patients with and without germline mutations in a BRCA gene. We believe they also offer significant opportunities for treating patients with many other cancer types.

Clinical trials to assess the use of *Zejula* as a monotherapy and in combinations for the significantly larger opportunity of first line maintenance treatment of ovarian cancer are under way. Results from the first of these studies, PRIMA, are expected in late 2019. *Zejula* is also being investigated as a possible treatment in lung, breast and prostate cancer, both as a monotherapy and in combination with other medicines. In addition to *Zejula*, Tesaro has several other oncology assets in its pipeline including a PD-1 inhibitor (TSR-042, dostarlimab) currently being studied for endometrial cancer. We expect pivotal data that could support a regulatory filing of dostarlimab in the second half of 2019.

In January 2019, we announced a proposed global strategic alliance with Merck KGaA, Darmstadt, Germany, to jointly develop and commercialise M7824 (bintrafusp alfa). M7824 is an investigational bifunctional fusion protein immunotherapy that is currently in clinical development, including potential registration studies, for multiple difficult-to-treat cancers. This includes a phase II trial to investigate M7824 compared with pembrolizumab as a first line treatment in patients with PD-L1 expressing advanced non-small cell lung cancer (NSCLC).

We have completed the transition of the NY-ESO SPEAR T-cell therapy programme to GSK from Adaptimmune. Early trial data suggests that this asset could be transformational in synovial sarcoma. It is the first cell therapy to show clinical response in solid tumours and is another recipient of European PRIME and FDA breakthrough status.

Another of our oncology therapies is an agonistic antibody for inducible T-cell costimulator (ICOS) – the first investigational anti-ICOS agonist antibody to enter human clinical trials. Phase I safety, pharmacokinetic and pharmacodynamic data, for the therapy alone and in combination with pembrolizumab, show early, positive indications of activity.

Respiratory

We have led the way in developing innovative medicines that advance the management of asthma and COPD for nearly 50 years. Over the past five years, we have launched six respiratory medicines, giving us the broadest portfolio of once-daily, inhaled respiratory medicines in our industry.

In 2018, we launched *Trelegy Ellipta* in 26 countries. We are now class leaders in key markets including the US, UK and France.

Following the landmark IMPACT trial in which *Trelegy Ellipta* demonstrated superiority to two of our dual medicines on multiple endpoints, expanded indications were approved in the US and Europe, enabling use across a broader group of COPD patients. We submitted regulatory filings for *Trelegy Ellipta* in Japan and China – the first for a single inhaler triple therapy for COPD in both countries. Further launches are planned throughout 2019. Results from our phase III CAPTAIN study, which is exploring the efficacy and safety of *Trelegy Ellipta* in asthma, are anticipated in 2019.

Our *Ellipta* portfolio was further strengthened with an expanded indication for *Relvar Ellipta* in asthma, and applications to support label updates in the US and Europe for *Anoro Ellipta* and *Incruse Ellipta*.

1 Includes M7824, the subject of the proposed alliance with Merck KGaA, Darmstadt, Germany, expected to close in Q1 2019.

Our first-in-class severe eosinophilic asthma biologic, *Nucala*, gained approval in Europe as the first anti-interleukin (IL-5) with a paediatric indication, alongside its earlier approval for adults. We also filed regulatory submissions for a paediatric licence in the US, and in the EU and US for a new formulation of *Nucala* that could be used subcutaneously to allow patients or caregivers to administer treatment themselves.

We continue to innovate in respiratory biologics, with investigational programmes for *Nucala* in nasal polyps and hypereosinophilic syndrome.

Immuno-inflammation

Benlysta is the world's first and only biologic medicine specifically approved to treat systemic lupus erythematosus (SLE), a chronic, incurable, autoimmune disease. Building on data from four previous phase III clinical trials, we presented results from the phase II PLUTO study exploring use in paediatric patients with childhood-onset SLE. In addition, the pivotal phase III BLISS studies showed low rates of organ damage progression in SLE patients treated with *Benlysta*.

Results from the phase IV EMBRACE study of black adult patients with active, autoantibody-positive SLE are expected in 2019. We also began a new phase III study investigating *Benlysta* in combination with rituximab in adult patients with SLE. This is assessing whether co-administration enhances *Benlysta*'s treatment effect, to potentially provide sustained disease control, with the possibility of clinical remission. Headline results are expected in 2020.

We are continuing research into our anti-GM-CSF antibody for patients with rheumatoid arthritis and expect to progress to phase III in 2019.

Additional programmes

In 2018, we received approvals in the US and Australia for *Krintafel/ Kozenis* (tafenoquine), the first new treatment for *P. vivax* malaria in over 60 years (see page 25).

In Japan, we announced positive phase III results for daprodustat, an oral hypoxia-inducible factor prolyl hydroxylase inhibitor, in patients with anaemia associated with chronic kidney disease, and a strategic collaboration with the Kyowa Hakko Kirin Company for its future commercialisation. In addition, we have two ongoing daprodustat phase III studies which are anticipated to report in 2020.

We also continue to develop gepotidacin, the first in a new class of antibiotics.

Advanced technologies

Significant investment in a wide range of advanced technologies is central to our new R&D approach. We are developing a core capability in artificial intelligence and machine learning, to enhance our ability to interpret and understand genetics and genomic data. We will also invest in functional genomics, applying techniques for gene modification such as CRISPR technology, to help discover and validate potential targets. These investments supplement our existing strengths in other advanced technologies, including our leading position in cell and gene therapy, which we continue to develop.

Partnerships are key to our innovation. In 2018, we formed an exclusive collaboration with 23andMe, the world's leading consumer genetics and research company. This will combine our scientific and medical knowledge with 23andMe's large-scale genetic resources and unique data science skills, improving the probability of R&D success. This exciting collaboration builds on our existing partnerships, such as the Altius Institute, which pioneers new technologies and approaches for decoding gene control; the UK Biobank, which is generating anonymised genetic sequence data from 500,000 volunteers, and the Open Targets consortium, which supports an open access search engine that searches, evaluates and integrates biologic and genetic disease data.

Improving R&D governance

We have established two new governance boards, the Research Review Board (RRB) and the Development Review Board (DRB). The RRB is accountable for our future portfolio, providing technical review on the quality of our research and early-stage programmes. The DRB reviews late-stage programmes to make sure our studies are robust and innovative.

Aligned to these changes, we have created separate organisations for research and for development to enable rigorous and disciplined decision-making and oversight across the early and late stage portfolio. Due to their specialist nature, we have kept distinct R&D units for oncology and global health.

To support the most promising potential medicines in the portfolio we terminated or divested around 80 programmes. Terminations included danirixin, miridesap and dezamizumab. We also transferred our rare disease gene therapy portfolio to Orchard Therapeutics, in which we have become an equity shareholder, and sold the rights to tapinarof to Dermavant Sciences.

Pharmaceuticals continued

Pharmaceuticals pipeline overview

We have 46 assets in development, with 33 immunomodulators of which 16 are focused on oncology.
We expect a number of pivotal readouts in 2019.

Phase	Compound	Indication
Pivotal/registration*	*Benlysta* + *Rituxan*[1]	SLE[2]
	cabotegravir[2] LA + rilpivirine[1]	LA HIV
	D3, dolutegravir + lamivudine	HIV
	1278863 (daprodustat HIF-PHI)	anaemia
	3684934 (fostemsavir HIV AI)	HIV
	Nucala	COPD/HES/nasal polyps
	Trelegy Ellipta[1]	asthma
	Dectova[1,4] IV	influenza
	2857916[1] (BCMA ADC)[1]	multiple myeloma
	Zejula (PARP inhibitor)[1]	first-line maintenance ovarian cancer[2]
	dostarlimab (PD-1 antagonist)[1]	endometrial cancer
Phase II	3196165[1] (GM-CSF inhibitor)	RA
	3389404[1]/3228836[1] (HBV ASO)	HBV
	3359609[1] (ICOS receptor agonist)	cancer
	2982772 (RIP1k inhibitor)	pso/RA/UC
	3772847[1] (IL33r antagonist)	severe asthma
	3377794[1] (NY-ESO-1 TCR)	cancer
	2586881[1] (rhACE2)	acute lung injury/PAH
	2140944 (gepotidacin, topoisomerase IV inhibitor)	antibacterial
	2330811 (OSM antagonist)	systemic sclerosis
	2881078 (SARM)	COPD muscle weakness
	2862277 (TNFR1 antagonist)	acute lung injury
	3174998[1] (OX40 agonist)	cancer
	525762 (BET inhibitor)	cancer
	2330672 (IBAT inhibitor)	cholestatic pruritus
	3326595[1] (PRMT5 inhibitor)	cancer
	GR121619[1] (oxytocin)	postpartum haemorrhage
	TSR-022 (TIM-3 antagonist)[1]	cancer
	M7824[1,3] (TGFβ trap/anti PD-L1 bispecific)	NSCLC[2]
Phase I	2831781[1] (LAG3)	ulcerative colitis
	3358699[1] (BET targeted inhibitor)	RA
	3858279[1] (CCL17 antagonist)	OA
	2636771 (PI3kb inhibitor)	cancer
	2983559 (RIP2k inhibitor)	IBD
	3036656[1] (leucyl t-RNA inhibitor)	TB
	3640254 (HIV maturation inhibitor)	HIV
	3511294[1] (IL5 LA antagonist)	asthma
	2292767 (PI3kd inhibitor)	respiratory diseases
	1795091 (TLR4 agonist)	cancer
	3810109[1] (broadly neutralizing antibody)	HIV
	3537142[1] (NYESO1 ImmTAC)	cancer
	3439171[1] (HPGD2 inhibitor)	muscle repair
	3145095 (RIP1k inhibitor)	pancreatic cancer
	3368715[1] (PRMT1 inhibitor)	cancer
	TSR-033 (LAG3)[1]	cancer
	2269557 (nemiralisib PI3Kd inhibitor)	APDS

* Includes programmes in pivotal phases of development or where pivotal data has reported and regulatory submissions are under consideration or under review.
1 In-licence or other alliance relationship with third party.
2 Additional indications also under investigation.
3 Pending closure of transaction with Merck, KGaA, Darmstadt, Germany.
4 Subject to regulatory approval.
Note: for oncology where phase I studies are conducted in patients, the shift from phase I to phase II is defined when expansion cohorts are started.

Performance

2018 performance summary

Pharmaceuticals turnover in 2018 was £17,269 million, flat at AER, but up 2% CER, driven primarily by the growth in HIV sales. In the US, sales declined 2% AER but grew 1% at CER, with growth in the HIV portfolio and *Benlysta* offsetting declines in established pharmaceuticals and respiratory following patent expiries. In Europe, sales grew 2% AER, 1% CER, with growth in the respiratory portfolio offsetting the continued impact of generic competition to *Epzicom* and *Avodart*. International was flat at AER but grew 5% CER, with growth driven by HIV and the new respiratory portfolio.

Respiratory sales declined 1% AER, but grew 1% CER, to £6,928 million, with growth from the *Ellipta* portfolio and *Nucala* partly offset by lower sales of *Seretide/Advair* as the market prepares for the entry of a generic. Sales of new respiratory products, comprising *Ellipta* products and *Nucala*, grew 35% AER, 38% CER to £2,612 million.

HIV sales increased 9% AER, 11% CER to £4,722 million, reflecting share growth in the dolutegravir portfolio: *Triumeq*, *Tivicay* and *Juluca*. This was partly offset by the decline in the established portfolio, particularly the impact of generic competition to *Epzicom/Kivexa* in Europe.

Immuno-inflammation sales were up 25% AER, 28% CER in 2018, primarily driven by *Benlysta*.

Our Established Pharmaceuticals portfolio includes mainly off-patent medicines. Sales were £5,147 million, down 7% AER, 4% CER, reflecting efforts to maximise the value from this portfolio but also the benefit of certain post-divestment contract manufacturing sales and the first instalment of a 12-month *Relenza* supply contract in Europe.

The Pharmaceuticals operating margin of 33.3% was 1.0 percentage points lower at AER than in 2017 and 0.9 percentage points lower on a CER basis. This primarily reflected increased investment in new product support, the continued impact of lower prices, particularly in respiratory, the broader transition of the respiratory portfolio, and a reduction in royalty income. This was partly offset by the benefits of prioritisation within R&D and a favourable comparison with the impact of the Priority Review Voucher purchased in 2017.

Focusing our resources to accelerate growth

In 2018, we made significant changes to the way our Pharmaceuticals organisation works to accelerate growth and deliver the best results for all our stakeholders.

We refocused our resources, prioritising the major markets such as the US and China, while reducing investment in lower priority markets. We have also prioritised resource behind brands and therapies with the greatest growth potential and which generate the highest revenue. To support our ambitions for the oncology therapies in our pipeline, we strengthened our oncology commercial infrastructure; recruiting more experts in oncology and haematology and co-locating our R&D and commercial teams.

We simplified our commercial, medical and regulatory teams, with fewer complex structures, systems and processes, and clearer accountabilities. This enables greater speed and efficiency and frees local operating companies to focus on customer-facing activities and insights. The savings released by these changes will be reinvested into our priority products and markets.

In recent years, we have significantly strengthened our online resources and in-house medical capabilities to provide bespoke product information for healthcare professionals (HCPs). In 2018, we updated our policy on working with HCPs, following consistent feedback that they value the opportunity to learn about new products through peer-to-peer programmes with expert practitioners who have direct experience of our medicines.

The new policy will ensure prescribers have access to all available information on our innovative products, so they can make fully informed decisions that support better outcomes for patients. When we have new medicines or significant new data we will allow payment to global experts to speak about the scientific evidence, the diseases they treat and their own clinical experience. The change was implemented in the US and Japan in late 2018, and depending on effective implementation and assessment of risk will be implemented in other major developed markets in Europe, North America and Asia from 2019 onwards. To avoid any perceived conflict of interest, we have strengthened our commitment to transparency with new controls and expanded disclosure of payments to individual HCPs.

Creating a simpler, competitive supply chain

Reliable supply is fundamental to enabling growth in key therapy areas. Our Pharmaceuticals supply performance levels continued to improve in 2018 with an on-time, in-full supply to customers rating of 95.3%. All new products were launched on time.

We are adopting a simplified structure and operating model geared to driving performance with increased focus on priority brands and markets, clearer accountabilities and more pace. This has included separating our Pharmaceuticals manufacturing and supply organisation from our Consumer Healthcare network.

We continued to adapt our manufacturing network to support growth, improve competitiveness and meet business and patient needs. We opened a £54 million facility in Montrose, Scotland to supply active pharmaceutical ingredients for our *Ellipta* respiratory medicines, and a £26 million facility in Parma, Italy that will produce fostemsavir, our investigational HIV treatment.

We revised our supply and demand, warehousing and distribution operations to align with commercial priorities and announced manufacturing site closures in Mexico and Bangladesh. Following an extensive review of our cephalosporins antibiotics assets we decided to restructure its supply chain and manufacturing site at Ulverston in the UK. This will help us improve competitiveness and support growth in emerging markets. We continued to simplify our supplier base and product portfolio and are ahead of schedule to reduce our contract manufacturers by 35% by 2021.

The Pharmaceuticals manufacturing and supply organisation again delivered good performance for safety, quality and compliance. There were 55 regulatory inspections in 2018, all resulting in satisfactory outcomes.

Vaccines

We are the leading vaccines company in the world, delivering over 2 million vaccine doses every day to people living in 158 countries. Our portfolio and pipeline help protect individuals throughout their lives. We have recently introduced breakthrough vaccines *Shingrix* for shingles and *Bexsero*, the first vaccine for meningitis B.

Progress against our long-term priorities

Innovation

- *Shingrix* launched successfully in the US and Canada
- 23% of 2018 sales came from recent innovations, driven by *Shingrix* and *Bexsero*
- We have 16 candidate vaccines across all R&D phases
- Capabilities in science and new technologies continues to be differentiator

Performance

- Total 2018 turnover £5.9 billion, up 14% AER, up 16% CER
- Grew ahead of the market, strengthening our position as the leading vaccines company by value
- In addition to *Shingrix*, key contributions from our influenza and hepatitis franchises, and *Bexsero*

Trust

- Over 120 million doses of vaccines delivered to Gavi, the Vaccine Alliance, to help prevent pneumococcal disease, rotavirus and cervical cancer
- 270 million doses of oral polio vaccine delivered to UNICEF for the Global Polio Eradication Initiative
- Positive results from candidate TB vaccine in phase IIb trial

Innovation

Our Vaccines business has 16 innovative candidate vaccines. We balance our focus on this robust pipeline with the active life-cycle management of our existing vaccines, helping to protect more people through expanded indications and geographies.

Our investment in breakthrough vaccines technologies creates a real point of differentiation and will deliver further benefits in the future. We have more than 2,500 vaccines scientists working in three global R&D centres, in Belgium, Italy and the US. This international spread equips us with a diversity of skills and culture, helps to attract the best talent, and opens doors to external partnerships. In 2018, the proportion of our sales from innovations introduced in the past five years was 23%.

We are expanding our capabilities to become a stronger player in the world's largest vaccines markets, the US and China. To achieve this goal, we are simplifying complexity across the business, reducing R&D timelines and developing a more dynamic culture. In September, Roger Connor became the new President, Global Vaccines.

Delivering best-in-class innovation

Shingles

In 2018, our breakthrough shingles vaccine, *Shingrix*, was recognised as the most successful biopharma launch in the past 10 years in North America[1]. In June, Canada's National Advisory Committee on Immunization (NACI) made a strong recommendation for *Shingrix* to be offered to people over 50, following a similar opinion in the US in 2017. In March, *Shingrix* received licensing approval in the EU and Japan, and in May we launched it in Germany. In December, the Standing Committee on Vaccination in Germany, STIKO, recommended *Shingrix* for all people over 60 and for those over 50 with an immune-compromising condition or severe underlying disease. The vaccine was approved in Australia in July 2018. In line with our phased launch strategy, we have the detailed capacity plans in place that are necessary to deliver the meaningful increase in doses needed to meet long-term global demand.

Shingrix marks a step change in the prevention of shingles, a painful and potentially serious condition that affects more than one in three people during their lifetimes. It was designed specifically to address the challenge of age-related decline in immunity and is the first approved shingles vaccine to combine a non-live antigen, to trigger a targeted immune response, with a specifically designed adjuvant to generate a strong and sustained immune response. Clinical trials have proven *Shingrix* efficacy of more than 90% for all age groups studied.

1 Source – independent assessment from IQVIA.

Meningitis

We are the market leader in vaccines against meningococcal meningitis, with our complementary portfolio of *Menveo*, against serogroups A, C, W, and Y, and *Bexsero*, targeting serogroup B.

In 2018, we continued to consolidate our leadership by broadening the age range that our vaccines cover. In the US, where *Bexsero* is licensed for 10-to-25-year-olds, the vaccine received Breakthrough Therapy Designation from the FDA for children between two- and 10 years old. In June, the European Medicines Agency approved a new, alternative (2+1) dosing schedule for *Bexsero* in infants (in addition to the existing 3+1 schedule), offering healthcare professionals more options to help protect infants from invasive meningococcal disease (IMD) caused by serogroup B and the potential for fewer visits to the doctor for families.

We continued to support external research into meningitis B, including funding the largest-ever study into the adolescent carriage of meningococcal bacteria. The study, led by the University of Adelaide, saw more than 34,000 teenagers being vaccinated with *Bexsero*. The early findings, which are a significant step forward in scientific understanding, show there was a fall in the number of meningitis B cases in South Australian adolescents, but no statistically significant reduction in nasopharyngeal carriage of the bacteria that causes the disease. As such, these preliminary results underscore the need for direct vaccination of vulnerable individuals, particularly infants and adolescents, as the best way to protect against meningococcal B disease.

We advanced our work on new formulations for meningitis vaccines, with our fully liquid *Menveo* candidate vaccine entering phase II clinical trials. The phase III results for the US *Menveo* booster found that it can effectively and safely extend protection four to six years after a primary course of MenACWY vaccine. We also remain committed to the challenging goal of developing a single vaccine to cover the five most common meningitis serogroups of A, B, C, W and Y.

Other priority assets

We are pursuing a full portfolio of vaccines against respiratory syncytial virus (RSV), tailored to the different age groups most at risk of infection from the virus. There is currently no prophylactic vaccine approved for the prevention of respiratory disease caused by RSV, in spite of the significant medical need. Our maternal vaccine is designed to increase antibodies in the mother that will transfer to the baby and help protect them in the first months of life, when the disease is most severe. Our candidate paediatric vaccine, given directly to babies, is designed to induce protection from the disease throughout childhood and, potentially, for recipients' entire lives. In late 2018, we began a phase I/II trial for children, and commenced a phase I study on the maternal vaccine. The US FDA has given fast track designation to our RSV candidate vaccines for pregnant women and older adults, which have just entered clinical development.

By 2030, COPD is predicted to become the world's third-leading cause of death. Our COPD candidate vaccine marks a move away from the traditional concept of a vaccine given to healthy people to prevent a specific disease towards the development of a disease-modifying vaccine that could reduce the frequency of COPD exacerbations and slow down the disease's progress. It combines two antigens from bacteria commonly found in acute COPD exacerbations with our proprietary adjuvant system, ASO1.

The phase I and II studies demonstrated that our candidate vaccine was safe and capable of inducing an immune response. We began a phase IIb (proof of concept) study in Europe and North America in 2017, with efficacy results expected in mid-2020.

In influenza, we are working on a universal (supra-seasonal) vaccine with researchers at Mount Sinai in the US. We also expanded the indications for our existing flu vaccines, with European approval for a paediatric indication for *Fluarix Tetra*.

New technologies

Our success in innovation reflects our unique combination of advanced technologies, scientific experts across three global R&D centres, and external collaborations. Our broad range of technologies includes adjuvant systems, self-amplifying messenger RNA (SAM), bioconjugates, generalised modules for membrane antigens (GMMA) and the chimpanzee adenovirus (ChAd) platform. Such capabilities have the potential to significantly reduce the cost and time of vaccine development and help make radical advances that address unmet medical needs.

External partnerships

Partnerships remain central to our innovation. We have around 150 external scientific collaborations, with most of our 16 candidate vaccines being developed in partnership. Our partnerships and technologies also support our work on tuberculosis and shigella for instance, which is part of our ongoing commitment to developing vaccines against the diseases of the developing world. Such collaborations enable our Vaccines scientists to learn from other leading experts and stay close to emerging technologies and new science.

Vaccines pipeline

Phase	Indication/vaccine
Phase III	*Shingrix* (for immunocompromised)
	Bexsero (infants in the US)
	Rotarix (PCV-free)
	MMR (in US)
Phase II	COPD
	Hepatitis C
	Malaria (next gen)
	MenABCWY
	Menveo (liquid)
	Shigella
	Tuberculosis
	RSV paediatric
	HIV
Phase I/II	RSV older adults
	Flu universal
	RSV maternal

Vaccines continued

Performance

2018 performance summary

Vaccines turnover grew 14% AER, 16% CER to £5,894 million, primarily driven by growth in sales of *Shingrix*, hepatitis vaccines, which also benefited from a competitor supply shortage, and higher sales of influenza products.

The operating margin of 33.0% was 1.1 percentage points higher at AER than in 2017 and 2.5 percentage points higher on a CER basis. This was primarily driven by enhanced operating leverage from strong sales growth, an improved product mix, including the impact of the launch of *Shingrix*, together with further restructuring and integration benefits. This was partly offset by the comparison with the benefit of a settlement for lost third-party supply volume recorded in 2017, increased supply chain costs and increased SG&A investments to support new launches and business growth.

Shingrix recorded sales of £784 million, primarily in the US and Canada, driven by demand and share gains. US sales benefited from market growth in new patient populations now covered by immunisation recommendations and *Shingrix* has now achieved a 98% market share. In the first half of 2018 alone, *Shingrix* performed twice as strongly as the competitor vaccine had during the whole of 2017.

Meningitis sales were down 1% AER but up 2% CER to £881 million. *Bexsero* sales grew 5% AER, 9% CER, driven by demand and share gains in the US, together with continued growth in private market sales in International, partly offset by the completion of vaccination of catch-up cohorts in certain markets in Europe. *Menveo* sales declined 15% AER, 12% CER, primarily reflecting supply constraints in Europe and International as well as a strong comparator in 2017 and unfavourable year-on-year CDC stockpile movements in the US, partly offset by demand and share gains in the US.

Fluarix/FluLaval sales grew 7% AER, 10% CER to £523 million, driven by strong sales execution in the US and improved sales in Europe, partly offset by increased price competition in the US.

Established Vaccines sales were down 1% AER and flat CER reflecting lower sales of DTPa-containing vaccines (*Infanrix*, *Pediarix* and *Boostrix*) due to increased competitive pressures, particularly in Europe, and unfavourable year-on-year CDC stockpile movements in the US, together with lower *Synflorix* sales, reflecting lower pricing and demand in emerging markets. Hepatitis vaccines sales grew 17% AER, 19% CER to £808 million, benefiting from stronger demand in the US and Europe, as well as a competitor supply shortage in the US.

Focusing on growth markets

In 2018, we strengthened our position as the world's leading vaccines company by value. Sales grew ahead of the market, increasing our market share and profitability.

Having established our leadership in Europe and emerging markets, we are now focusing on increasing our presence in the world's largest vaccines markets – US and China – to protect more people and improve business performance. The US is our number one priority market and our performance in the US in 2018 has been particularly strong. We welcome the Chinese government's recent steps to fast-track the approval of 'clinically urgently needed' new medicines and vaccines, reflecting its commitment to enabling faster entry of new prevention and treatment options. We look forward to responding to that need with our innovative vaccines in the years ahead.

Creating a simpler, competitive supply chain

We have 13 manufacturing sites, across 10 countries. This international presence enables us to produce our vaccines with flexibility, as demonstrated during the year, when we leveraged our secondary manufacturing network to increase capacity for *Shingrix*.

We have delivered more than 9 million doses globally since launch and we are working hard to build capacity and meet long-term global demand. We continue to target high-teens millions of doses over the next two or three years. To do this, we are undertaking multiple initiatives to boost production across our global manufacturing network in the US and Europe, and at every stage of the manufacturing process from primary antigen production to packaging. These initiatives will ensure sustainable, steady supply growth for the vaccine over the coming years.

During the year, we continued to simplify our supply chain, and discontinued several vaccines that duplicate existing products. Our ongoing investment in our manufacturing network enabled a 10% growth in our filling volume and we maintained our strong focus on the safety and high quality of all our vaccines.

Consumer Healthcare

Our Consumer Healthcare business combines science and consumer insights to develop innovative everyday healthcare brands for oral health, pain relief, respiratory, skin health, nutrition and digestive health categories.

In 2018, we reached agreement with Pfizer to combine our consumer healthcare businesses into a new world-leading joint venture.

Progress against our long-term priorities

Innovation

- Worldwide rollout of *Sensodyne Rapid Relief, Voltaren No Mess* and *parodontax/Corsodyl*
- Science-based innovations included *Theraflu PowerPods* and a *Polident* denture care range
- New digital innovation hub established to accelerate innovations in self-care

Performance

- Total 2018 turnover £7.7 billion, down 1% AER, up 2% CER
- Bought out Novartis' 36.5% stake in Consumer Healthcare Joint Venture for £9.2 billion
- Agreement with Pfizer to combine our consumer healthcare businesses into a new world-leading joint venture
- Announced the sale of *Horlicks* and other consumer nutrition brands to Unilever

Trust

- Supply chain service levels continued to improve, achieving 98% on-time, in-full delivery performance
- Five-year partnership with Smile Train launched to help more children access life-changing cleft lip and palate surgery
- Continued our partnership with Allied Against Dengue in India and South East Asia to prevent outbreaks of dengue fever
- Employee engagement score increased to 81%

Innovation

We delivered 36 first market launches across our categories and 250 roll outs of new products. In 2018, the proportion of our sales from innovations introduced in the past three years was 11%.

Delivering best-in-class innovation

We use deep consumer insights and scientific and technical expertise to deliver innovations across each of our categories. For example, in oral health, we further strengthened our leadership in denture care with the delivery of two innovations to improve the experience for denture wearers. We addressed a consumer need for an easy, discreet denture-cleaning solution with the launch of *Polident Clean & Refresh* wipes, which can be used anywhere without the need for water. The wipes combine a unique and patented combination of tear-resistant tissue and a double mint solution, offering consumers a quick and effective clean and improved denture confidence. In addition, our new denture adhesive, *Polident Max Seal*, has an innovative precision nozzle with a finer tip which enables exactly the right amount of fixative to be applied, creating a precise seal around the edge of the denture for a more comfortable eating experience. The successful rollout of *Sensodyne Rapid Relief*, a premium extension of our *Sensodyne* brand, continued. Launched in 2017, it is designed to provide fast relief from tooth sensitivity in as little as 60 seconds. During 2018, we introduced it in an additional 40 markets, including the US, Italy, Argentina, New Zealand and Egypt bringing the total number of successful market launches to more than 90.

In respiratory, consumer insight inspired the packaging innovation behind *Theraflu PowerPods*, a new extension of *Theraflu*, our respiratory power brand. *Theraflu PowerPods*, which were launched in the US, contain cold and flu relief medicine or active ingredients within a pod that can be used in single-serve coffee makers. This format is much more convenient for US consumers, who rarely use kettles.

In pain relief, we continued the rollout of *Voltaren No Mess* in an additional 17 markets in 2018, including Russia, UK, Australia, Italy and Spain. The innovative No Mess cap was designed to address a key consumer barrier to using topical pain relief and makes the product easier and less messy to apply.

In digestive health, we launched two extensions of our *Tums* brand. *Tums Gas Relief* which offers consumers multi-symptom relief from heartburn as well as gas, was introduced in our 'chewy bites' format which is the preferred format for the growing number of younger consumers entering this category. We also introduced a sugar-free version of *Tums* in 2018 for consumers looking to reduce their overall daily sugar intake.

Building industry-leading capabilities

Each of our main categories is supported by a dedicated global innovation hub, where our scientists work in close partnership with commercial teams. This means that R&D in each of our hubs is both science-based and consumer-led and helps speed new innovations to market. The network's footprint in Europe, the US and Asia, also enables us to stay close – and relevant – to all global trends and markets.

Our Consumer Sensory Labs enable us to listen to, understand and meet the needs of consumers. Scientists and commercial teams in these labs assess consumer reactions to products during the development process to help improve existing products and develop new ones. During the year, we brought the capabilities of our sensory labs closer to our markets via labs in the US, the UK and India so that we can understand consumer preferences in different parts of the world. For example, we developed *Otrivin Unblock & Heal* in response to consumer need for a medicated spray that both relieves the congestion and nasal dryness that can accompany a cold and also helps fight the virus. We launched this triple-action spray in Europe in late 2018.

Consumer Healthcare continued

The increasing use of digital technology is revolutionising the way that consumers learn about, buy, and use healthcare products. In 2018, we created a new London-based consumer healthcare digital innovation hub. The hub is a close partnership of commercial, technology and R&D, focused on identifying and accelerating innovations in our categories to develop digitally driven brands, products and services that consumers can use to monitor, manage and improve their own health.

Emerging markets opportunities

More than one-third of our sales are in emerging markets, where increasing prosperity is boosting the proportion of middle-class consumers and, in turn, the demand for consumer healthcare. Our innovation hubs in India and China are at the forefront of our efforts to understand and meet this growing consumer need, and to remain competitive in these important markets. In India, we entered the high protein drink category with the launch of *Horlicks Protein Plus* which blends quality, fast and slow release proteins with its high level of amino acids, enabling the product to develop stronger science-based claims than its competitors.

External partnerships

By combining the insights and expertise of our scientists with breakthrough ideas developed externally, we can develop and deliver a strong, competitive pipeline of consumer-led, science-based innovation. Since 2016, the percentage of innovation sales coming from externally sourced product innovation has increased fivefold. In 2018, products from external partnerships accounted for 11% of innovation sales, including *Otrivin Unblock & Heal*. During the year, we entered into over 30 external R&D partnerships and our aim is that they will make up 30% of our pipeline in the future.

Performance

2018 performance summary

Our marketing and innovation resources are targeted on the brands which deliver the strongest growth and highest returns – our seven global power brands, including *Sensodyne*, *Voltaren*, *Panadol* and *Theraflu*, and our 12 regional core brands, such as *Tums* and *Excedrin*. Together, these brands drive performance of Consumer Healthcare and reinforce our global leadership in pain relief, respiratory and therapeutic oral health.

Consumer Healthcare sales were £7,658 million, down 1% AER and up 2% CER, with broad-based growth in oral health and wellness partly offset by a decline in *Panadol* and lower sales of smaller brands. International markets performed strongly, particularly India and Brazil, while Europe was impacted by intensifying competitive pressure in the second half of 2018. The aggregate impact from generic competition on *Transderm Scop* in the US, the divestment of *Horlicks* and *MaxiNutrition* in the UK and other small non-strategic brands and implementation of the Goods & Service Tax (GST) in India reduced overall sales growth by approximately one percentage point.

Oral health sales grew 1% AER, 4% CER to £2,496 million, as increased competitive pressures in Europe were offset by double digit growth from *Sensodyne* in a number of International markets, including India and Turkey, and strong single-digit growth in the US driven by *Sensodyne Rapid Relief*. Our premium gum health brand *parodontax/Corsodyl* became the world's fastest growing global toothpaste, outperforming the market four fold, driven by continued momentum in the US since its launch in 2017, and a strategic brand repositioning across 40 countries. Our denture care brands out-performed the category, supported by innovations including *Polident Max Seal* and *Polident Clean & Refresh*, further strengthening our global leadership position.

Wellness sales declined 2% AER but grew 1% CER to £3,940 million. Respiratory sales grew in low single digits, led by *Theraflu* supported by a strong cold and flu season earlier in the year. *Otrivin* grew in mid single digits, benefiting from new variants, and *Flonase* returned to growth following a weaker allergy season earlier this year.

In pain relief, sales were flat. Low single-digit growth in *Voltaren*, supported by the roll-out of *Voltaren No Mess* in 20 markets, and double-digit growth in *Fenbid* were offset by a decline in *Panadol* sales due to a change in the route-to-market model in South East Asia and the discontinuation of slow-release *Panadol* products in the Nordic countries.

Nutrition sales declined 5% AER but grew 1% CER to £643 million. The nutrition business in India performed strongly across the product portfolio including new innovations such as *Horlicks Protein Plus*. The impact of divestments and India GST implementation on nutrition category growth was approximately eight percentage points. Skin health sales were down 4% AER, 1% CER to £579 million.

Consumer Healthcare operating margin of 19.8% was 2.1 percentage points higher than in 2017 and 2.2 percentage points higher on a CER basis. This primarily reflected improved product mix and manufacturing restructuring and integration benefits, as well as continued focus on delivering improved return on investment on our advertising and promotional spend.

Strategic business development

During 2018, we made further progress against our Performance priority to deliver sales growth, operating margin improvements and attractive returns, completing a £9.2 billion buyout of Novartis' 36.5% stake in GSK Consumer Healthcare in June.

After conducting a strategic review of our nutrition portfolio, in December we announced the sale of *Horlicks* and other consumer nutrition brands to Unilever. As part of this transaction, we announced that we will merge our 72.5% stake in GlaxoSmithKline Consumer Healthcare Limited in India with Hindustan Unilever Limited. The proposed merger includes a distribution arrangement, which will allow Hindustan Unilever Limited to leverage its scale and strong reach to sell and distribute our OTC and oral health brands in India. This transaction is expected to close by the end of 2019.

Most recently, we reached an agreement with Pfizer in December 2018 to combine our consumer healthcare businesses to create a new world-leading joint venture with combined sales of approximately £9.8 billion. This brings together two highly complementary portfolios of trusted consumer healthcare brands, including GSK's *Sensodyne*, *Voltaren* and *Panadol* and Pfizer's, *Advil*, *Centrum* and *Caltrate*. The new combined business will have leadership positions in pain relief, respiratory and vitamins, minerals and supplements in addition to our number one position in therapeutic oral healthcare, and will be well positioned to deliver strong sales, cash flow and earnings growth.

Together, these moves provide confidence to improve our margin target to mid-to-high-20s by 2022, assuming the close of the transaction with Pfizer. This improvement is expected to be achieved in part by delivering £0.5 billion of total annual costs savings through the joint venture and additionally through delivery of a business-wide programme aimed at freeing up cash to improve returns to shareholders and reinvest in the business to drive growth. This is focused on four pillars: net revenue management to maximise the value of our brands with shoppers and customers; cost and cash discipline enabled by zero-based budgeting; strategic resource allocation to focus our investments in the right areas to get the best returns; and increased efficiencies in our supply chain.

Joining forces with Pfizer Consumer Healthcare will be transformational to the scale of GSK Consumer Healthcare and lays the foundations for the new JV to be separated from GSK via a demerger. This is expected to take place within three years of closing the transaction with Pfizer, which we expect to occur in the second half of 2019, subject to approvals. Further details on the risks associated to the transaction are set out on page 36.

Digital transformation

By putting digital technology at the heart of our business, we aim to deliver more meaningful interactions with consumers, fuel brand growth and achieve efficiency savings. In 2018, we invested strongly in our digital capabilities, including hiring expert new talent.

Reflecting the far higher return on online media, compared with traditional television advertising, we significantly increased the digital balance of our marketing. To streamline our media buying, we appointed one global media agency to oversee our digital and offline paid media strategy and planning around the world. We also boosted our attractiveness in e-commerce channels by optimising the findability of our products, developing rich content for retailer portals, and securing high-profile ads on customers' e-commerce sites. To enrich our people's digital skills, we rolled out a new Marketing IQ development programme to 1,300 of our marketers.

Our digital impact is aided by innovative industry partnerships: a collaboration with Google helps us deliver relevant content to consumers, while a partnership with Chinese marketing and media organisation Alimama enables us to target shoppers with appropriate and timely information. Our partnership with Google has driven greater efficiency in our media targeting. We drove 4.5 billion more viewable digital media impressions than the same investment would have generated in 2017, representing a 74% increase. We also draw on invaluable external insights from our Digital Advisory Board (DAB), which is made up of digital marketing, data and e-commerce experts. Members of the GSK Consumer Healthcare strategic leadership team attend DAB meetings and benefit from the mentorship of a DAB member. The role of the DAB is to challenge our thinking and help shape our digital strategy.

Winning with shoppers, customers and experts

Expert endorsement builds trust in our brands and drives shopper purchase decisions. *Sensodyne*, for instance, is the number one dentist-recommended brand for sensitivity in 80% of the markets in which we compete. Of our OTC brands 70% are sold in pharmacies. We continued to prioritise our relationships with dentists and pharmacists and to invest in information that supports our products. In 2018, our expert sales representatives called on 400,000 dentists in over 90 markets to share relevant science-based information and we published approximately 30 abstracts on our clinical trials and science.

Business partnering with retailers is key. For example, our top six customers in the US account for approximately 70% of our sales there. We continue to develop our strong capabilities in joint business planning, category management and distribution management to ensure we win with our retailers.

Our Shopper Science Labs in the UK, US and Singapore use state-of-the-art technology to track shopper behaviour in real time to provide us with rich insights on consumers' shopping habits around the world. We have satellite facilities located by the headquarters of our major retail partners. These labs enable us to adapt the shopping experience to meet each consumer's need and make decisions about what new products, promotions or packaging will really make a difference.

Creating a simpler, competitive supply chain

We have continued to strengthen our supply chain and reduce complexity to improve efficiency. In addition, we have formally integrated it within our business, where previously some central resources and processes were shared between the Consumer Healthcare and Pharmaceuticals supply chains as a central unit. We also reorganised our supply chain on a regional basis, more closely reflecting our commercial operations, to make it more responsive and agile.

During 2018, we sold two sites (Aiken, US and Slough, UK) and announced the closure of three more in Ireland, the US and the Philippines as part of our commitment to remove complexity across our network and streamline our operations. Overall, since 2015, we have removed four sites from our supply chain network and announced the closure of another five. We continued to streamline the number of contract manufacturers (CMOs) we use and have reduced the number by almost 30% since 2015. We continued to simplify our portfolio by further reducing the number of different ways that our products are packaged.

Our manufacturing sites recorded a strong on-time in-full delivery performance, as service levels continued to improve. Reflecting this good performance, the supply chain successfully supported our growing power brands and met business innovation targets in full, including all first-market launches.

We continued to drive and deliver robust performance in quality and safety, with no issues arising from regulatory inspections.

Trust

Operating responsibly to deliver on our purpose and ensure the greatest possible long-term impact in improving health around the world.

Trust is one of our three long-term priorities and is essential to how we deliver our purpose. Society has high expectations of us, and the dynamic environment in which we operate presents us with big challenges and opportunities that we must respond to in order to remain commercially successful, uphold our reputation and build trust.

To ensure that we are able to identify and respond to these expectations effectively, we need to have mechanisms in place to engage with our key stakeholders. On page 9 we summarise the key trends for our industry and on page 11 we highlight how we engage across the different stakeholder groups.

With these external expectations in mind, in 2018 we published a new set of 13 commitments describing the actions we will take to help deliver societal value and build trust. Our ambitious commitments will drive progress in three key areas, underpinned by our fundamental commitments to running our business responsibly:

- Using our science and technology to address health needs
- Making our products affordable and available
- Being a modern employer

External benchmarking

- **ATMI:** topped the Access to Medicines Index and led the industry in the Antimicrobial Resistance Benchmark.
- **DJSI:** ranked 2nd in the DJSI World and Europe indices, placing us in the top 2% of our sector.
- **FTSE4Good:** member of the FTSE4Good Index since 2004.
- **CDP:** received a score of 'B' in CDP Carbon and CDP Water. Named a CDP Supplier Engagement Leader in CDP's supply chain programme.
- **Corporate Political Engagement Index:** ranked number one in Transparency International UK's 2018 Corporate Political Engagement Index.

Our approach to reporting

From 2019, we are reporting progress against our 13 commitments in our Annual Report to reflect the integration of our responsible business approach into our core business strategy. A performance data document is also available online to provide both current and previous years' data. These replace the annual publication of our Responsible Business Supplement.

GSK.com: 2018 performance data summary

Our commitments on Trust

Our purpose is to help people do more, feel better and live longer

Using our science and technology to address health needs

New medical innovations
Develop differentiated, high-quality and needed medicines, vaccines and consumer healthcare products to improve health

Global health
Improve global health impact through R&D for infectious diseases that affect children and young people in developing countries focusing on HIV, malaria and TB

Health security
Help the world to better prepare for future disease outbreaks with pandemic potential, and tackle antimicrobial resistance

Making our products affordable and available

Pricing
Improve the health of millions of people each year by making our products available at responsible prices that are sustainable for our business

Product reach
Use access strategies to reach 800 million underserved people in developing countries with our products by 2025

Healthcare access
Partner to improve disease prevention, awareness and access to healthcare services by 12 million people by 2025

Being a modern employer

Engaged people
Achieve and maintain a competitive employee engagement score by 2022

Inclusion and diversity
Accelerate our progress on inclusion and diversity, aiming for over 37% female representation in senior roles and recognition in global LGBT+ indices, by 2022

Health, wellbeing and development
Be a leading company in how we support employee health, wellbeing and personal development

Being a responsible business

Reliable supply
Commit to quality, safety and reliable supply of our products for patients and consumers

Ethics and values
Operate an ethical, values-driven culture, in which any issues are responded to swiftly and transparently

Data and engagement
Use data responsibly and transparently. Improve patient and scientific engagement

Environment
Reduce our environmental impact by one quarter by 2030

Science and technology

We are using our science and technology to address health needs. This is achieved through our medical innovation but we also have a responsibility to impact global health, particularly in the prevention and treatment of infectious diseases where we have world-leading scientific expertise. We have taken a proactive approach to addressing some of the biggest global health challenges, from preventing child deaths from infectious diseases to tackling the urgent public health threat from growing resistance to antibiotics.

New medical innovations

The biggest impact that we can have as a science-led global healthcare company is to successfully research and develop innovative products. Through our innovation, we aim to develop differentiated, high-quality and needed medicines, vaccines and consumer healthcare products to improve health. Read more about innovation within our three businesses on pages 13, 18 and 21.

Global health

Each year malaria, TB and HIV/AIDS kill almost 3 million people, the vast majority in developing countries. There remains huge need for innovation to address this. Our new global health strategy aims to improve global health impact through R&D for infectious diseases that affect children and young people in developing countries, focusing on HIV, malaria and TB.

The biggest contribution we can make is through our science, but to have the greatest impact, we need strong collaboration with others to ensure there is always a clear path for our innovation – end to end – from lab to patient. We have learned from our malaria vaccine and our chlorhexidine gel, *Umbipro*, that getting our innovation to patients in developing countries is extremely challenging where the traditional route to market is absent. We cannot alone carry the significant costs and risks associated with full clinical development, registration, manufacture and market access for new medicines and vaccines that don't have a commercial return. Without action to secure the right procurement models and partnerships, we risk the potential impact of these treatments being undermined. Instead we need new sustainable, collaborative models, where risk and costs are shared across partners, to translate scientific discoveries into benefit for the most vulnerable patients.

As well as addressing the disease burden in developing countries, our investment in global health also brings business benefits, which helps us to ensure that it is sustainable over the long term. The innovative science and platforms discovered through global health R&D can be applied commercially. For example, the adjuvant used in our RTS,S malaria vaccine has been pivotal to the success of our shingles vaccine, *Shingrix*, and is being used in our TB candidate vaccine, M72, and a number of other vaccines in development. Our discovery work in infectious diseases also has the potential to uncover insights relevant to other disease areas that will benefit our portfolio in the long term.

Tuberculosis

We are aiming to develop a world-leading portfolio of first-in-class medicines for TB, including a candidate vaccine in a phase IIb trial. We have been working with non-profit scientific organisation Aeras to develop the vaccine with the support of the Bill & Melinda Gates Foundation, the UK's Department for International Development and others. We received positive interim results in 2018 for the phase IIb study, which showed that our candidate vaccine reduced the risk of developing pulmonary TB by half in adults with latent TB infection.

We are continuing the trial with the International AIDS Vaccine Initiative, a long-standing GSK collaborator in HIV vaccine development, which has recently acquired Aeras' TB vaccine clinical programme.

GSK also has a number of promising TB medicines in development, including two that are in preparation for phase II trials. We are a member of several major public–private partnerships and programmes, such as the TB Drug Accelerator, which aim to speed up the discovery and development of novel compounds against the disease. We currently have three pre-clinical candidates and a strong discovery pipeline arising from these partnerships.

Malaria

In 2018, we received approval from the US FDA and the Australian Therapeutic Goods Administration for tafenoquine (*Krintafel/ Kozenis*), a single-dose radical cure for *P. vivax* malaria developed in partnership with the Medicines for Malaria Venture (MMV). This is the first new treatment for this type of relapsing malaria in over 60 years and marks a major contribution towards efforts to eradicate the disease. Together with our partners, MMV and PATH, we aim to provide the treatment at an affordable price in malaria endemic countries. We have submitted a regulatory filing for tafenoquine in Brazil, the first submission in a malaria endemic country.

Our RTS,S vaccine aims to protect children from *P. falciparum* malaria, which is most common in sub-Saharan Africa and responsible for most malarial deaths worldwide. Ghana, Kenya and Malawi have approved the use of RTS,S for malaria as part of a pilot vaccination implementation programme coordinated by the WHO. Clinical trials are also under way for a next-generation malaria vaccine.

HIV

Developing new formulations of HIV medications specifically for children, who are disproportionately affected by the disease in developing countries, is a global priority. Through ViiV Healthcare, we are progressing clinical development programmes for paediatric formulations of our medicines in partnership with the International Maternal Paediatric Adolescent AIDS Clinical Trials Network and the Paediatric European Network for Treatment of AIDS.

TB is a leading cause of death for people living with HIV and this co-infection is hard to treat. A phase IV study of ViiV Healthcare's *Tivicay* (dolutegravir) in combination with other antiretrovirals demonstrated positive results in people receiving treatment for both HIV and TB. The latest WHO HIV treatment guidelines recommend dolutegravir-based regimens as the preferred first- and second-line treatment.

Other developing world diseases

As well as our main focus on HIV, TB and malaria, our early discovery work allows us to pursue the most promising scientific leads in other areas, both within GSK and through our Tres Cantos Open Lab and Vaccines Institute for Global Health.

In 2018, we pledged an additional £5 million in funding for the Tres Cantos Open Lab Foundation. The Open Lab furthers R&D for diseases of the developing world by offering external researchers the potential to access GSK's compound library, screening tools and scientific expertise. As well as supporting research into TB and malaria, projects include neglected tropical diseases such as Chagas disease, leishmaniasis and sleeping sickness. Since it was established in 2010, the Open Lab has approved 74 projects, trained 85 scientists in global health drug discovery and delivered a significant pipeline of candidate medicines, including a novel TB drug candidate with treatment shortening potential.

Trust continued

The Vaccines Institute for Global Health also has around 40 scientists working on diseases such as Shigella, invasive nontyphoidal salmonella, typhoid and paratyphoid fever, and Group A streptococcus.

Health security

We are using our vaccines, medicines and scientific know-how to help the world to better prepare for future disease outbreaks with pandemic potential, and tackle antimicrobial resistance (AMR).

To prepare for future public health emergencies, we continue to advance rapid-response vaccine platform technologies and we are collaborating on the development of a universal influenza vaccine candidate.

AMR is one of the biggest health challenges the world faces and we are playing a leading role in the industry's response, ranking first among the large pharmaceutical companies in the Access to Medicine Foundation's AMR Benchmark in 2018.

Vaccines play a critical role in avoiding the need for antibiotics by preventing bacterial, viral and other infections. Our vaccines against diseases such as diphtheria, meningitis, pneumonia and pertussis have protected tens of millions of individuals from bacterial infections, which are major drivers of direct antibiotic prescribing. In addition, our vaccines for non-bacterial infections such as influenza, rotavirus and malaria prevent the development of diseases that can trigger the use of antibiotics, for example to treat secondary infections.

We are also committed to researching and developing new vaccines against infections that will reduce the need for antibiotics even further. For example, we are currently developing vaccines against RSV (a virus), as well as shigellosis and TB (both caused by bacteria) which are all drivers of current antibiotic use.

In our Pharmaceuticals pipeline, gepotidacin, is the first in a new class of antibiotics. In 2018, we worked with the UK government on the proposal to develop and test a new payment model that should incentivise much-needed R&D into new antibiotics from the pharmaceutical industry. We are pleased that the UK will be the first country in the world to progress this type of model, and have submitted gepotidacin to the programme.

We supported the creation of the Innovative Medicines Initiative's AMR Accelerator, which launched a call for proposals in 2018. This public–private partnership will aim to speed up the discovery and development of new medicines to treat or prevent resistant bacterial infections through collaboration and capability building.

Through our Survey of Antibiotic Resistance (SOAR) programme, we study, analyse and publish reports on antibiotic resistance at a local level and share the findings with HCPs and public health bodies to inform the development of local antibiotic prescribing guidelines. In 2018, we trained over 15,000 HCPs across 20 countries on the appropriate use of antibiotics.

GSK.com: Antimicrobial resistance

Affordability and availability

We are making our products affordable and available to more people around the world through responsible pricing, and strategic access programmes and partnerships.

In 2018, GSK topped the Access to Medicines Index for the sixth consecutive time. The assessment recognised us for having the largest proportion of our R&D pipeline dedicated to priority diseases, and for the creation of an integrated Global Health R&D unit to stimulate collaboration.

Pricing

We aim to improve the health of millions of people each year by making our products available at responsible prices that are sustainable for our business.

In developing countries, we use innovative pricing structures as part of our access strategies to extend product reach (see page 27). However, we recognise that pricing of pharmaceutical medicines and vaccines is also an important issue in developed countries, and we understand patient and payer concerns about affordability.

When setting the price of our medicines in developed markets, we apply a value-based approach to balance reward for innovation with access and affordability. We price our medicines according to the value and outcomes they bring to patients, providers and payers, while being sensitive to market and societal expectations.

In the US, the pricing of all our product launches – including our most recent launches of *Trelegy Ellipta*, *Benlysta SC*, *Shingrix* and *Juluca* – incorporate specific market dynamics unique to the drug, as well as the profile of the new medicine or vaccine in the context of existing treatment options.

The average net price[1] for our products in the US has fallen by around 3% on average per year over the past five years. We also offer various types of patient assistance to help ensure appropriate access to our medicines, and in 2018 we provided prescribed medicines and vaccines to over 126,000 eligible uninsured patients through our Patient Assistance Programme.

In Europe, we engage with governments and payers to work towards sustainable health systems that support ongoing innovation. For example, the pricing of *Trelegy Ellipta* reflects economic value by demonstrating cost-effectiveness and innovation within an acceptable budget and offering a potential cost saving compared with alternatives.

We do not file patents for our medicines in least developed countries and low-income countries, and do not enforce historic patents that we have in those countries. This allows generic companies to manufacture and supply generic versions of GSK medicines in those countries.

GSK.com: IP and access in developing countries

1 Price after discounts, rebates or other allowances.

Product reach

We have set a new target to use access strategies to reach 800 million underserved people in developing countries with our products by 2025. These strategies include tiered pricing, product donations and voluntary licensing agreements to extend access through generic manufacturers. In 2018, our products reached over 102 million people through these access strategies.[1]

In accordance with our tiered pricing principles, we reserve our lowest vaccines prices for organisations such as Gavi, the Vaccine Alliance, which supports countries with a GNI per head of less than $1,580. Eight Gavi countries are now using our new four-dose vial presentation of our *Synflorix* pneumococcal vaccine, designed to address cold chain challenges in hot countries, and our *Rotarix* vaccine is available in 36 Gavi countries to protect against rotavirus. In 2018, we distributed around two million doses of our vaccine *Cervarix* in Zimbabwe in support of its multi-age cohort vaccination programme to protect over 800,000 girls against human papillomavirus. In 2018, we delivered 270 million doses of oral polio vaccine to UNICEF in support of the Global Polio Eradication Initiative, reaching over 54 million children.

Umbipro, our innovative chlorhexidine gel to prevent umbilical cord infections, has been approved in 13 countries so far and has already benefited over 30,000 newborns in Kenya. Created in partnership with Save the Children, this potentially life-saving product is available at an access price (not for profit, not for loss). In collaboration with USP and USAID, we will share manufacturing know-how to stimulate local production and wider access to quality-assured chlorhexidine in developing countries.

In 2018, ViiV Healthcare extended its voluntary licence agreements for dolutegravir with the UN-backed Medicines Patent Pool and our direct licensee Aurobindo to two further countries – Mongolia and Tunisia – to enable generic manufacturers to supply dolutegravir to more adults living with HIV. Our joint partnership with the Clinton Health Access Initiative, Unitaid and two generic manufacturers is also helping to catalyse the development, manufacture and supply of paediatric formulations of dolutegravir.

In 2018, we donated over 840 million albendazole tablets (8.5 billion over the last two decades) to the WHO to tackle neglected tropical diseases, helping to deworm millions of school children and free 14 countries of lymphatic filariasis (LF). Tackling LF and intestinal worms is part of our commitment with the WHO and other partners to help control or eliminate 10 of the 17 neglected tropical diseases by 2020.

Through our partnership with Americares, Direct Relief, IHP UK and MAP International, we also donated 150,000 units of essential medicines, including antibiotics and inhalers, for humanitarian and emergency response in countries such as Guatemala, South Sudan and Syria.

GSK.com: Access to medicines in developing countries

1 Total excludes reach through albendazole donations which will be assessed in 2025.

2 Health worker data is estimated based on 2017 reach through the same partner programmes and level of funding. Final 2018 data will be available in April 2019.

Healthcare access

We have set a new long-term target to partner to improve disease prevention, awareness and access to healthcare services for 12 million people by 2025. In 2018, we reached 4.2 million people through these partnerships.

This year, we have invested a further £10.5 million in improving health infrastructure in developing countries by training frontline health workers in partnership with Amref Health Africa, CARE International and Save the Children. This support is tailored to meet specific community needs and align with government health priorities. In 2018, this investment helped to train over 20,000 frontline health workers, and over two million people were directly reached with a health worker, healthcare service or health facility.[2]

As well as our efforts to combat malaria through R&D (see page 25), we have partnered with Comic Relief in Africa and South East Asia to support 21 local projects that improve awareness and prevention efforts and get treatment to the people who need it. Together, we reached more than one million people in 2018, including health workers and vulnerable populations such as pregnant women and young children.

Alongside local and global partner organisations, we continue efforts to remove stigma and support HIV education and prevention in at-risk communities around the world through ViiV Healthcare's Positive Action programmes for girls and women, adolescents, children, men who have sex with men (MSM) and transgender people. In 2018, for example, ViiV awarded grants of £2.3 million to support organisations working to prevent and treat paediatric HIV, and £1.8 million to support social science research in adolescent HIV. Our Positive Action for Children programme reached over 530,000 people in 2018 with interventions to alleviate the impact of HIV and AIDS on women and children's health.

Our partnership with Save the Children aims to combine the two organisations' global expertise, skills and energy to help reduce child mortality. In 2018, the partnership reached over 220,000 children under five (over 2.8 million children since 2013) with interventions including: widening immunisation coverage, accelerating access treatments and strengthening healthcare systems. We have extended our partnership over the next five years to support our shared ambition that no child under five should die from preventable causes.

With GSK Consumer Healthcare's heritage in specialist oral health, we know the importance of a healthy mouth. This year, we launched a five-year partnership with Smile Train to provide funding and expertise that will help more children get access to life-changing surgery for cleft lip and palate. We reached over 4,000 children in the first year through corporate donations and employee fundraising.

As a leader in pain relief and fever management, GSK's Consumer Healthcare business has also created the Allied Against Dengue campaign in India and South East Asia. The campaign was created to bring together key stakeholders and partners to prevent and treat outbreaks of dengue fever, a potentially fatal mosquito-borne disease. In 2018, we trained over 1,000 healthcare workers and reached over 100,000 people through a range of programmes to mobilise communities and promote behaviour change.

Our contribution to community health programmes amounted to £224 million in 2018. This includes our support of access partnerships such as Comic Relief and Save the Children, in-kind product donations such as albendazole and those made through our Patient Assistance programme, and the volunteering time of our employees.

GSK.com: Access to healthcare partnerships
ViiVHealthcare.com: Positive Action programmes

Trust continued

Modern employer

As a modern employer, we want to make sure that everyone is empowered to be themselves, feel good and keep growing at GSK. We believe this will help us to attract, retain and motivate the very best people to support our business now and in the future.

Engaged people

Employee engagement is an important barometer to gauge how our people feel about working at GSK. We aim to achieve and maintain a competitive employee engagement score by 2022.

We now survey our employees twice a year to get more regular feedback about how we are doing on our long-term priorities and culture change. For our first global employee survey of the year in April 2018, we had a record high 84% response rate and the results showed we had strong employee engagement at 79%. For the second survey in September, we saw a one-point drop in engagement but it remained high at 78%.

As part of our culture change, we have encouraged our people to share their views and ideas on key topics through regular conversations hosted by our leaders, including Let's Talk sessions with our executive team. We also introduced a collaborative internal tech platform to enable employees to communicate and collaborate more informally, discuss the topics that matter to them, and share knowledge and perspectives to support faster decisions across the organisation. More than 68,000 users are active on this new online tool.

Inclusion and diversity

We take a progressive approach to inclusion and diversity because we want everyone to be themselves and bring their own perspectives to our business. Together, these unique perspectives and wide variety of personal experiences make our business stronger, enhancing our ability to innovate and respond to the diverse needs of patients and consumers around the world.

We want to accelerate our progress on inclusion and diversity, aiming for over 37% female representation in senior roles and recognition in global LGBT+ indices, by 2022.

In 2018, women made up 33% of our senior roles at SVP/VP level (up from 31% in 2017) and we maintained strong female representation at management level (45%). In January 2018, we signed up to the 30% Club gender campaign focused on achieving 30% female representation in senior management within FTSE 100 companies by 2020. GSK has already exceeded this target and remains committed to maintaining and improving on this.

The latest independent Hampton-Alexander Review of FTSE 100 companies found that GSK has the sixth highest proportion of women on the Board with 45.5% representation. Overall, we have increased our female senior executive population (our executive team and their direct reports) from 25.7% to 32.5% as our long-running programmes to create a strong female pipeline deliver results.

GSK is also one of 12 prominent healthcare and life science companies to join the Healthcare Businesswomen's Association Gender Parity Collaborative in the US, launched in 2018 to foster measurable gender parity progress in the industry.

Women in management (%)

	2018	2017	2016	2015
SVP/VP	**33**	31	30	29
Director	**43**	43	42	40
Manager	**48**	47	46	45
Total	**45**	44	43	42

Employees by gender (number)

	Male	Female	**Total**
Board	6	5	**11**
Management*	9,704	8,051	**17,755**
Total	53,188	42,302	**95,490**

* Management: senior managers as defined in the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013 which includes persons responsible for planning, directing or controlling the activities of the company, or a strategically significant part of the company, other than the Board, including directors or undertakings included in the consolidated accounts.

We support development and career progression for high-performing female managers through our Accelerating Difference programme, which provided coaching and support for around 130 women in 2018. We also recruit and support women early in their careers, with women representing more than half of the intake of our graduate and MBA programmes and 35% of our apprentices in 2018.

We published our second gender pay gap report in 2018. Our gender pay gap for all permanent UK-based GSK employees is 2.15% (mean), outperforming the national average of 17.1%.

We do not tolerate harassment, unwelcome, unreasonable or offensive behaviour, or discrimination of any kind. This includes any form of sexual harassment and, in 2018, we included a module in our mandatory Code of Conduct training to reinforce our zero-tolerance approach. This emphasised the importance of bystander intervention to empower our employees to intervene if they see harassment occurring.

In September 2018, nearly 3,700 people at 150 locations took part in activities to raise awareness of our commitment to inclusion and diversity during Global Inclusion Week. As part of this, we launched new learning programmes focused on unconscious bias and resources to help build leaders' awareness of inclusion and diversity.

We have a Global Disability Council and a Global LGBT+ Council, as well as inclusion and diversity implementation groups. In addition, in 2018 we created new global gender and ethnicity councils, all of which will drive our diversity agenda with support from our employee resource groups. We achieved a top 10 listing for our LGBT+ Network Group at the British LGBT Awards and, in early 2019, the group was named the UK's 'Employee Network Group of the Year' by the Stonewall LGBT rights organisation.

In 2018, we pledged our support for the UN LGBTI Global Business Standards. In the US, GSK was named Best Place to Work for LGBT Equality for the third consecutive year in the Human Rights Campaign's Corporate Equality Index and, in early 2019, we were ranked 24th in Stonewall's UK Workplace Equality Index. We are committed to removing barriers, increasing understanding and ensuring that those with disabilities have the same opportunities. We signed the Charter for Change at the 2018 UK government's Department for International Development Global Disability Summit, joining other organisations with a common aim to ensure rights, freedoms, dignity and inclusion for people with disabilities.

Health, wellbeing and development

We need resilient, motivated people with the right skills and knowledge to help us achieve our objectives. That is why we aim to be a leading company in how we support employee health, wellbeing and personal development.

Health and wellbeing

In 2018, we successfully rolled out a comprehensive preventive healthcare package for our employees – and their eligible dependants – in every country where we operate. The Partnership for Prevention programme, now covers over 200,000 people in every country in which we operate and includes up to 40 preventive healthcare services at little or no extra cost.

We provide programmes to help our people feel good by taking control of their health, managing their energy levels and adopting healthier behaviours – as well as giving them flexibility to manage their lives through life-friendly policies.

In 2018, more than 15,000 people took part in our energy and resilience programmes. Our personalised digital health platform was piloted by over 5,000 employees in Belgium and 38% said that they changed one or more health behaviours as a result. We will continue to roll out technology platforms to support a holistic approach to health and wellbeing in 2019.

GSK was named the World's Most Active Organisation by Virgin Pulse Global Challenge for the third year running, with over 15,500 employees collectively taking over 18 billion steps during May 2018. Participants reported increased productivity and lower stress levels.

Mental wellbeing is just as important as physical wellbeing and we raised awareness of this important issue on World Mental Health Day, encouraging people to seek support through our 24-hour confidential Employee Assistance Programme and other resources.

Preventing injuries and illnesses at work is fundamental to our people's health and wellbeing. Our reportable injury and illness rate has continued to decline from 0.24 per 100,000 hours[1] worked in 2017 to 0.23 in 2018, and remains comparable with other leading companies in our sector.[2]

Development

We want our people to keep growing at every stage of their career. That's why development is one of four expectations for the company and we have a strong focus on improving the effectiveness of our people managers. In 2018, 89% of our employees had development plans in place and, in support of developing leaders, more than 2,000 managers also participated in leadership development programmes this year.

In 2018, we introduced One80 reviews for nearly 9,000 managers to help them improve based on feedback from their teams. Through a short survey, it measures leadership effectiveness in three key areas: knowing their people, delivering results and maximising potential. One80 is part of our performance management system and is designed to ensure our managers are role models for our values and expectations, as well as helping them enhance their leadership skills. We know from One80 scores that employees feel supported by managers in their development. The question "my manager provides highly effective coaching and guidance to support my development" scored an average of 3.8 out of 5 from 51,630 responses. We are encouraged by this and have aspirations to further improve on these scores.

GSK is now a member of the 5% Club, a group of companies committed to hiring young people in development programmes into at least 5% of UK roles. In 2018, 336 people joined our graduate development programmes globally and 165 began apprenticeships in the UK, Canada, Ireland, Singapore, Belgium and the US.

This year, employees contributed over 120,000 volunteering hours through our Orange Days and 63 employees went on PULSE assignments with 25 non-profit organisations in 31 countries to share their expertise and learn new skills. Our most recent volunteer assessment found that, after completing their assignment, 73% agreed that they brought new ideas and fresh ways of thinking or working to GSK.

GSK.com: Employee volunteering • Training and development data

Reliable supply

Ensuring a high-quality, safe and reliable supply of our products for patients and consumers is a priority for all three of our businesses. Product shortages can happen for a variety of reasons, including supply disruptions and unexpected demand. Since launching our *Shingrix* vaccine, we have delivered more than 9 million doses globally, but the unprecedented demand has meant that some people have experienced supply shortages. We are working hard to build capacity and meet this long-term global demand and we are committed to communicating transparently on the actions we are taking.

Our robust quality management system supports continuous improvement, helping us to maintain high standards for product quality and safety and comply with relevant regulations, including those on Good Manufacturing Practice, Good Pharmacovigilance Practice and Good Clinical Practice.

Of the 151 external regulatory inspections at our Pharmaceutical, Vaccines and Consumer Healthcare manufacturing sites in 2018, most found no issues or resulted in only minor observations. We address every issue, however minor, and regulatory authorities have accepted our proposed plans for corrective actions.

In 2018, we conducted 1,650 audits of our suppliers' quality processes and 221 audits of clinical trials run by, or on behalf of GSK, to assess their quality and safety.

Detecting, monitoring, understanding and preventing side effects (pharmacovigilance) is important in evaluating the safety of pharmaceutical products, and we work with the WHO and other partners to enhance systems for reporting these. Through the TransCelerate Collaboration, we are working with others to promote harmonised approaches and procedures for the clinical development and safety evaluation of drugs, and to implement key regulations.

Counterfeit GSK products present a risk to patient safety. We support efforts to prevent the manufacture and distribution of counterfeit GSK products by working closely with government bodies, international organisations (such as the World Customs Organization and the WHO), customs authorities and industry associations. We also conduct our own investigation and enforcement activities to tackle counterfeit GSK products. Our commitment to high standards of product quality and safety across the value chain helps to ensure a reliable supply, which is important for our performance (see the sections of this report on performance in our individual businesses).

GSK.com: Pharmacovigilance • Anti-counterfeiting

1 2017 data has been restated from 0.23 to 0.24 due to incidents reported after the previous verification period.

2 Based on benchmarking data from the Pharmaceutical Safety Group.

Trust continued

Ethics and values

We are committed to creating an ethical, values-driven culture, in which any issues are responded to swiftly and transparently. We expect everyone at GSK to live our values and expectations, speak up if they have any concerns, engage appropriately with stakeholders and respect human rights. We also extend these ethical expectations to the third parties we work with.

Living our values and expectations

Together, our values (patient focus, integrity, respect and transparency) and expectations (courage, accountability, development and teamwork) help us to create the culture we want. They are included in our Code of Conduct, which we have updated to make it simpler and easier to use.

Every GSK employee and complementary worker is required to complete mandatory training on the Code of Conduct annually. In 2018, 98% of our employees and 91% of our complementary workers completed the training, which covered topics such as safety, health and wellbeing, third party oversight, data breach reporting, sexual harassment, and anti-bribery and corruption (ABAC).

We also introduced additional microlearning modules to be taken throughout the year to keep our values and expectations top of mind, and updated our discussion guides for leaders to engage with their teams about related topics. Further in-depth training for over 35,000 people used real-life examples of dilemmas experienced at GSK to help them understand how to manage ABAC risks relevant to their roles and reinforce our zero-tolerance approach to bribery and corruption.

In 2018, we assessed 18 different parts of the business against a values maturity matrix – including interviewing approximately 1,500 employees – to understand how well our values and expectations are embedded. Individual areas of the business are using insights from the assessments to put plans in place that further enhance the way our values are integrated into ways of working at GSK. Local examples include increasing opportunities for engagement with leadership teams to improve trust and enhancing employee recognition to encourage a greater sense of accountability.

⊕ GSK.com: GSK Code of Conduct

Reporting and investigating concerns

We encourage people to speak up if they have any concerns relating to unethical conduct or behaviour that is inconsistent with our values – or if they simply want to ask a question about how to apply our Code of Conduct.

Anyone within or outside GSK can raise concerns or speak to an independent third party through our integrity lines, confidentially or anonymously if they prefer. We take every reported concern very seriously and we review each one to understand whether a formal investigation is warranted. If our investigations show that an employee has breached our policies, we take appropriate disciplinary action.

In 2018, 2,842 employees were accused of misconduct; we reviewed all of these cases, and initiated 1,805 formal investigations. As a result, 940 employees were disciplined for policy violations, of whom 115 employees were dismissed or voluntarily left the organisation. A further 656 received other documented warnings. In other instances, action short of a documented warning was taken.

Employees disciplined in 2018: breakdown of types of policy violation (%)

Mandatory training completion	29%
Behaviour in the workplace	20%
Good manufacturing and distribution practices	11%
Marketing and promotional activities	8%
Expenses	4%
Protection of physical assets and security	3%
Other	25%

Political engagement

Everyone working for, or on behalf of, GSK must follow our Code of Conduct in their interactions with political stakeholders. Additionally our selection process for public policy groups includes criteria to ensure those groups share our values.

In 2018, GSK topped Transparency International UK's Corporate Political Engagement Index of 104 global companies operating in the UK, based on criteria such as political contributions, responsible lobbying and transparency in reporting.

We spent $4.57 million on federal lobbying activities in the US in 2018, which are registered on the US Federal Lobbying Register. The spend includes the cost of operating our office in Washington DC, and the cost of travel and consulting. The cost of representing our interests to EU institutions, published on the EU Transparency Register, was €1.73 million.[1] We also publish a list of our memberships in trade associations that may lobby indirectly on our behalf.

GSK does not make corporate political contributions. Our US employees may support individual candidates or political groups financially through a Political Action Committee, which contributed $345,190 to state and federal candidates in 2018. A breakdown of this spend is available online.

⊕ GSK.com and online: EU Transparency Register ▪ US Federal Lobbying Register ▪ Trade association membership list ▪ Criteria for working with Public Policy Groups

1 These are the latest available figures, and 2018 figures will be available in April 2019 for submission to the EU's Transparency Register.

Human rights

GSK is committed to upholding the Universal Declaration of Human Rights and the core labour standards set out by the International Labour Organization. In 2018, as part of our commitment to implementing the UN Guiding Principles on Business and Human Rights, we reassessed our human rights risks to ensure we are focusing efforts where our business has the greatest potential to impact people.

Six priority areas were identified: access to healthcare; research practices; patient safety; labour rights; environment, health and safety; and privacy. An initial review found that there were appropriate measures in place to manage the human rights risks related to most of these areas, but identified the need to continue to strengthen our approach to managing third-party labour rights risks. We are developing actions to address this, and will continue to build our understanding and management of human rights risks, taking account of evolving external expectations and best practice.

GSK.com: Human rights ▪ Modern Slavery Act statement

Working with third parties

Our Third Party Oversight programme strengthens our management of risk in the supply chain by driving improvements in our network of third parties – including suppliers, distributors and other organisations with which there is a transfer of value – to ensure that they share our values and work to the ethical and business standards expected by GSK. The programme has now been rolled out across all areas of the business.

During 2018, over 23,000 risk assessments were completed, and over 1,400 third parties identified as high-risk have undergone detailed independent assessments by EcoVadis. In 2018, we also conducted 83 in-depth audits on health and safety, ethics and environment. While we will work with third parties to help them improve, if significant issues are not resolved, we may suspend or terminate their contract.

GSK.com: Working with third parties

Data and engagement

We are committed to using data responsibly and transparently, and engaging with patients and healthcare providers to help meet patient needs. This includes treating data with respect, sharing the results of our clinical trials, integrating patient insights into our product development and providing healthcare professionals with the information they want in the way that they want it.

Using data responsibly and transparently

Data is becoming increasingly central to our business and the healthcare industry more broadly. Our digital, data and analytics strategy harnesses the power of data and technology to strengthen our business and make a real difference to patients around the world. We believe this will help our scientists develop innovative medicines more quickly and with higher probability of success than ever before, it will enhance clinical trials and improve interaction with healthcare providers, customers and consumers, and it will make our own processes more efficient.

Data privacy

We recognise that people are increasingly concerned about the protection, and inappropriate use of personal data, particularly when this is related to health. New EU regulations have also increased requirements on how companies use personal data. Loss or inappropriate use of personal information could have a serious impact, both on the individuals affected and on our business, and we take our responsibility for data and privacy very seriously.

We have developed a comprehensive suite of training to drive a culture where everyone at GSK takes personal responsibility for the correct handling of personal data. Our privacy principles ensure that our use of personal information is kept to the minimum necessary and is fair, transparent, accurate and secure. In 2018, we trained 113,000 of our employees and complementary workers on our privacy principles to help them understand how to apply them in their daily work and raise awareness of why privacy matters for all those who handle personal data.

In addition, people in key roles across the organisation are undergoing certification from an accredited external association to increase expertise and enable us to make informed decisions about handling personal data.

The protection of individuals' data and privacy is a high priority in our exclusive collaboration with 23andMe, which combines 23andMe's genetic expertise and advanced data science skills with GSK's extensive scientific capabilities and scale, to enhance the discovery and development of entirely new medicines and potential cures. 23andMe customers can choose to participate in research and contribute their information to the unique and dynamic database for the purpose of advancing scientific research. Participation is voluntary and customers are required to affirmatively consent to their data being used for research. Should they choose to participate, their information is aggregated so no individual will be identifiable to GSK.

Clinical trial transparency

As part of our long-standing commitment to data transparency for our clinical trials, we have published 2,484 clinical study reports and 6,427 summaries of results – positive and negative – from our trials on our clinical study register.

We also share anonymised patient-level data from 2,333 of our trials via www.clinicalstudydatarequest.com, which we launched five years ago to facilitate innovative data-driven research. It is now used by 19 other trial sponsors and funders. External researchers are granted access based on a review of the scientific merit of their research proposal by an independent panel. Access to GSK trial data has been approved for 125 proposals since 2013.

GSK.com and online: GSK Privacy Notice ▪ GSK Clinical Study Register

Trust continued

Improve patient and scientific engagement

To improve the delivery of ground-breaking new therapies, we are strengthening our focus on patients' needs by seeking their insights across the business. In 2018, we began implementing new global standards on working with and supporting patients.

We also support several initiatives that are empowering patients to get more involved in the development of medicines through training, tools and dialogue – including the European Patients' Academy, PARADIGM (Patients Active in Research and Dialogues for an Improved Generation of Medicines) and Patient Focused Medicines Development.

We held Patient Advocacy Leaders Summits in Japan, Portugal and Switzerland and supported one in the US this year, to build relationships between GSK employees, patient advocates, health policy experts and industry. Representatives of patient organisations also provide insights through our European Health Advisory Board and our Respiratory Health Board.

To improve engagement with patients involved in our clinical trials, we have begun developing patient engagement plans for key assets to get their input on the development of trial protocols, improve their experience during the trial and make sure they are informed about the results when it is completed.

Through our engagement with HCPs, we aim to provide information on our products in the way that best suits them. In recent years, we have significantly strengthened our online resources and in-house medical capabilities to provide bespoke product information for HCPs.

In 2018, we updated our policy on working with HCPs, following consistent feedback that they prefer to learn about new products through peer-to-peer programmes with experts who have direct experience of our medicines. The update was designed to ensure that we continue to operate responsibly and improve how we help prescribers to understand new data and clinical experience with our innovative products. The Pharmaceuticals section of this report provides more detail on this policy change.

GSK.com: Patient engagement

Environment

Our new goal, by 2030, is to reduce our environmental impact by one quarter, cutting greenhouse gas emissions, reducing water impact and redirecting waste for beneficial use. This is underpinned by five new environmental commitments for 2030 (against a 2016 baseline) to:

- reduce operational carbon emissions (Scope 1 and 2) by 20%;
- reduce value chain carbon emissions (Scope 3) by 25% per £ billion revenue;
- source 60% of electricity from renewable sources;
- reduce total water use at each high-risk site by 30%;
- ensure all waste is repurposed for beneficial uses.

Carbon

We are committed to playing our part to address climate change. In 2018, we set new targets to cut our carbon footprint across the value chain, which are intended to be challenging but achievable. We also conducted a review of the reporting requirements of the Task Force on Climate-related Financial Disclosures (TCFD) and will be considering how we can use the guidelines to better understand and report the risks that climate change presents to our business. In early 2019, we were accredited by the Science Based Targets Initiative for a set of Scope 1, 2 and 3 targets in line with a level of decarbonisation required to keep global temperature increase below 2°C.

Our overall value chain carbon footprint is made up of Scope 1 and 2 emissions from our own operations (14%) and Scope 3 emissions from our supplier base (48%), logistics (4%) and the use of our products (34%).

In 2018, Scope 1 and 2 emissions were reduced by 8% through ongoing efficiency measures, investment in on-site generation of renewable energy and a reduction in the number of sites. In India, for example, we have saved over 24,700 tonnes of CO_2e emissions over the past four years through investment in solar installations, a combined heat and power plant, and more efficient lighting, heating and manufacturing.

Globally, around 5% of our electricity came from renewable sources in 2018. We are targeting 60% by 2030, with an interim target of 30% by 2020 to further reduce our operational emissions.

In 2017 (our latest available data), Scope 3 emissions increased by less than 1%, but decreased by 8% per £1 billion revenue.[1] Our supply chain makes up the largest share (48%) of our value chain carbon footprint. We encourage suppliers to share best practices through the GSK Supplier Exchange, running 'kaizen' events to improve energy efficiency and recognising achievements through our Supplier Environmental Sustainability Awards.

Carbon emissions plus intensity ratios (as per regulations)

'000 tonnes CO_2e[2]	2018	2017	2016
Scope 1 emissions	**823**	865	889
Scope 2 emissions	**606**	694	700
Scope 3 emissions	**Full data available in next year's report**	18,152	17,897
Intensity ratios	**2018**	2017	2016
Scope 1 and 2 emissions/ sales revenue (tonnes CO_2e/£m)	**46.4**	51.5	56.0
Scope 1 and 2 emissions/ FTE (tonnes CO_2e/FTE)	**15.0**	15.8	16.0
Scope 3 emissions/£bn revenue (million tonnes CO_2e/£bn revenue)	**Full data available in next year's report**	0.6	0.64

1 2018 figures will be available from April 2019.

2 Carbon emissions are calculated according to the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (revised edition).

In 2018, the emissions from the use of our products have increased by 4% since 2017, as we make medicines accessible to more people. Most of these emissions come from propellant gases used in Ventolin metered dose inhalers (MDIs). Over the last few years we have conducted detailed analysis to explore the requirements of developing a new propellant for MDIs with a lower carbon footprint. Our findings show that this would be extremely complex, requiring extensive R&D, significant changes to our manufacturing process and new clinical trials to test for efficacy and safety for patients.

Weighing up these challenges, and given there are no incremental benefits to patients, along with the need for us to allocate our capital investments to developing promising new medicines to improve health, we have therefore decided to instead focus our investment on our new generation dry powder inhaler technologies which do not release greenhouse gas emissions. Our entire new portfolio of inhaled medicines is delivered via the dry powder *Ellipta* inhaler which has a lifecycle carbon footprint around 24 times lower than a propellant-based inhaler,[1] based on an assessment that won GSK the Carbon Trust's Best in Product Carbon Footprinting Award in 2018. In addition, we support efforts to promote low-carbon inhalers where possible, such as the commitment made by the UK government, and to increase inhaler recycling for the recovery and reuse of HFA gas.

Water

While climate change must be tackled at a global level, water challenges are much more localised. We used 12.9 million cubic metres of water across our operations in 2018 (compared with 14.7 in 2017) and we are focusing our reduction programmes in the areas where we have the biggest overall water impact.

All our Pharmaceutical and Consumer Healthcare manufacturing sites have completed risk assessments to ensure compliance with our water stewardship standard by 2020. Through these assessments, we identified 13 high-risk sites, based on water scarcity, local water quality, health and social risks, and regulatory and reputational risks. These sites are now developing strategies to reduce their water impact. Our goal is to reduce our total water use at each high-risk site by 30% by 2030.

Waste

We have cut the amount of waste we produce by 7% since 2016, generating a total of 126,000 tonnes in 2018 (including 36,000 tonnes of hazardous waste).

Further reductions in the amount of waste created – or complete elimination of waste – is extremely challenging. Our new goal is for all our waste to be repurposed for beneficial uses by 2030. This avoids harmful environmental impacts from landfill and keeps materials, such as solvents, in circulation for use in new products.

In 2018, 71% of our sites achieved zero waste to landfill. Globally, 77% of our waste was recycled or incinerated with energy recovery. For example, more than 1.5 million used inhalers have been recycled through our Complete the Cycle programme in the UK since it began in 2012.

Environmental stewardship

We are committed to moving towards deforestation-free sourcing for all key commodities purchased directly by GSK or indirectly on our behalf, although we recognise that this is a challenge due to the complex nature of our supply chains. To date, we have focused on paper packaging, palm oil and palm oil derivatives and have developed supplier selection criteria, as well as sourcing standards in conjunction with the Rainforest Alliance.

The packaging of our products plays an important role in delivering safe, stable and trusted medicines, vaccines and consumer healthcare products. However, GSK recognises the impact that plastic packaging has on the environment. We have a number of initiatives in place to reduce plastic use, increase use of recycled plastic content and encourage the recycling of plastic components. For example, ensuring our packaging is no larger in volume, weight and thickness than it needs to be to fulfil its function of protecting the product.

In 2018, we took steps to understand and quantify the amount of plastic packaging that we produce globally across our business. We are now using this information to evaluate how we can further reduce the impact that our plastic use has on the environment.

GSK.com: Environmental policies

1 For one year's treatment, use of propellant-based inhalers results in a carbon footprint of 228kg CO_2e compared with a carbon footprint of 9.6kg CO_2e from using *Ellipta* dry powder inhalers.

Risk management

Our risk management framework is well embedded and continually reviewed, with oversight at Board level through our Audit and Risk Committee, assisted by our Risk Oversight and Compliance Council. The framework enables the Board to identify, evaluate and manage our Principal Risks and is designed to support our long-term priorities. It provides our businesses with a framework for risk management and upward escalation of significant risks. In conjunction with our values and expectations and Speak Up processes, it ensures that the risks associated with our business activities are actively and effectively agreed and mitigated and provides reasonable assurance against material misstatement or loss. Each of our businesses is governed by a Risk Management and Compliance Board, which promotes the 'tone from the top', establishes the culture regarding risk and oversees internal controls. Our annual confirmation exercise ensures a consistent risk management approach across GSK which reinforces leader accountability.

Each Corporate Executive Team member performs a review of their key Principal Risks to ensure controls are in place – and wherever gaps are identified, clear plans are assigned to address them.

During the year, the Audit and Risk Committee considered GSK's risks and the strategies to address them. These reviews were undertaken through: annual business unit risk and assurance update reports; strategy papers for each of our most significant risks; and an annual risk review.

We have emphasised the importance of data privacy from an internal risk management perspective by separating Privacy as a new, stand-alone Enterprise Risk from the Information Security Enterprise Risk. Consequently, we now report on 11 Principal Risks, rather than 10. The risks are listed below with our assessment of the external macro environment and the risk exposure post mitigation. They are not in order of significance.

Risk	Assessment and mitigation activities
Patient safety Macro environment ↑ GSK exposure post mitigation →	– The macro risk level has increased on a global scale due to an expanding, strict and diverse regulatory environment, which is going to evolve further, as exemplified in China. In general the macro environment in the established US and European markets remains unchanged with patient safety and Good Pharmacovigilance Practices (GVP) remaining consistent. Plans are in place to ensure that GSK's approach to patient safety is not compromised by Brexit. – The GSK risk exposure remains unchanged. We are providing strong oversight to mitigate risk during implementation of organisational improvements to the local and central pharmacovigilance model.
Product quality Macro environment → GSK exposure post mitigation →	– The macro risk level remained unchanged, with continuing industry-level regulatory scrutiny of data integrity, drug shortages caused by manufacturing issues, and the need for timely communication of issues with authorities. – The overall GSK exposure level remains unchanged; however, improvements in annual performance metrics reflect GSK's ongoing investment and improvement initiatives in facilities, operating systems and training.
Financial controls & reporting Macro environment → GSK exposure post mitigation ↓	– The macro level remains unchanged, as there has been no material increase in financial reporting requirements. – The GSK exposure level has reduced as a result of the successful completion of the US and intercompany system migrations onto the new ERP platform.
Anti-bribery & corruption (ABAC) Macro environment → GSK exposure post mitigation →	– The macro risk level remains unchanged with continued strict ABAC laws and scrutiny from government and regulators, and the high standards expected of corporations. – The GSK exposure level remains unchanged as we improved targeted training to those most exposed to bribery and corruption risks in their roles; revised and simplified applicable written standards; and continued to develop risk indicators intended to provide meaningful and useful data about the potential for corruption (e.g. financial crimes). We have reduced our exposure to ABAC risk through a business model change in some very high-risk markets and will continue to embed these changes into 2019. The SEC and DOJ investigations regarding third party advisers engaged by GSK in China are ongoing.
Commercial practices Macro environment ↑ GSK exposure post mitigation →	– The macro risk level has increased due to greater competitive pressure, increased regulatory enforcement and an expansion of digital engagement, where laws and regulations are still evolving. – The GSK exposure level remains unchanged as we continue to enhance and maintain control over evolving commercial practices, notably the shift in marketing and sales practices utilising data analytics and e-commerce channels. In October 2018, GSK announced changes to the way we will engage expert practitioners to improve sharing of new data on our innovative medicines and vaccines for a limited time among healthcare practitioners. New controls and training have been implemented to support these changes while ensuring appropriate oversight and assurance across the markets.

ARC Report, see page 79
Principal risks and uncertainties, see page 241
Viability statement, see page 44
Internal Control Framework, see page 87

Risk	Assessment and mitigation activities
Privacy Macro environment ↑ GSK exposure post mitigation →	– The macro risk level has increased due to new, more stringent data privacy legislation in multiple countries and the rise of enforcement by regulators. – The GSK exposure level remains unchanged following implementation of a new global privacy framework and operating model in the European Economic Area during 2018. This has resulted in the development of critical privacy expertise in compliance, legal, and business roles, along with the embedding of privacy controls within IT and third party oversight.
Research practices Macro environment ↑ GSK exposure post mitigation →	– The macro risk level is increasing, primarily driven by the high rate of change to regulations and external ethical standards and by increasing data use and technological complexity. – The GSK exposure level remains unchanged as we continue to establish appropriate controls and a culture of continuous improvement, overseen by an enterprise risk governance structure.
Third party oversight (TPO) Macro environment → GSK exposure post mitigation →	– The macro environment remains unchanged as the industry continues to be vigilant about third-party risks in global sourcing and supply, and consumer and investor expectations mature. – The GSK exposure level remains unchanged. The TPO programme has been fully deployed. Due diligence for low-risk engagements is based on embedded process controls, relieving Business Owners of TPO activity without a significant change in risk appetite. High-risk engagements continue to require an engagement risk assessment and prescribed next steps. The risk-based approach proposed means that some low-risk issues may occur that will require a reactive response.
Environment, health & safety and sustainability (EHS&S) Macro environment ↑ GSK exposure post mitigation →	– The macro risk level has increased due to greater emphasis on environment controls from regulators, activists and stakeholders. Particular focus areas include antimicrobial resistance related to manufacturing releases, the wider issue of pharmaceuticals in the environment (PiE) and increasing emerging market regulation. External scrutiny of our external supply chain for active ingredients (both for existing and pipeline assets) has also increased significantly. – The GSK exposure level remains unchanged. Risks associated with restructuring of the site network are being proactively managed. Mitigation and improvement plans have been established and are progressing through implementation.
Information security Macro environment ↑ GSK exposure post mitigation →	– The macro risk level continues to increase as the threat against the pharmaceutical business and industry generally become more sophisticated and targeted, as evidenced by the Wannacry and NotPetya global incidents. – Despite this, the GSK exposure level remains unchanged due to further development of our programme to safeguard against cyber-attacks and protect critical information and systems, and our ability to balance the demands of regulation with our digital transformation, which involves increased data collection and analysis.
Supply continuity Macro environment → GSK exposure post mitigation →	– The macro risk level remains unchanged with ongoing stringent regulation, a continued US focus on contract manufacturers outside the UK/EU, and Brexit uncertainties. – The overall GSK risk exposure level is unchanged. We have improved risk management of our supplier portfolio; reduced the complexity of our internal and external networks; and improved our crisis and continuity management framework. However, we have seen an increase in complexity with the introduction of a major serialisation change programme for the EU Falsified Medicines Directive coinciding with Brexit preparations.

Risk management continued

Risks associated with the proposed separation of GSK's Consumer Healthcare business

A separation of our Consumer Healthcare business may be dependent on a number of factors that are outside GSK's control, including any required shareholder and regulatory approvals, favourable conditions in public equity markets and public or private debt markets and changes in applicable law and regulation. Therefore, there can be no certainty that a separation will be completed as proposed (or at all). In addition, if a separation is completed, there can be no assurance that either GSK or Consumer Healthcare will realise the expected benefits of separation or that the separation will not adversely affect GSK or Consumer Healthcare or the value or liquidity of their respective shares.

Our approach to Brexit

In preparing for the UK's exit from the EU (Brexit), our overriding priority has been to maintain continuity of supply of our medicines, vaccines and consumer healthcare products to people in the UK and EU.

As a result, we have taken a risk-based approach to planning and mitigation, allocating costs of up to £70 million to implement relevant changes over the next one to two years, while the future relationship between the UK and EU is negotiated. We have made good progress in implementing our Brexit contingency plan in 2018. Our activity has included: arranging the retesting and certifying of our medicines in Europe; submitting marketing authorisation holder transfers; updating packaging; securing additional warehousing; and supporting employees in obtaining settled status or equivalent in both the UK and Europe. UK technical guidance, which outlines acceptance of testing from EU sites for a time-limited period, has allowed us to reduce some potential duplication in our supply chain in the short term.

Our Brexit plans prepare us for elements that are within our control. We have significant experience of maintaining resilient supply chains, and we have used existing processes to develop a new supply model based on the UK leaving the EU in March 2019. To minimise disruption to patients, we have also adjusted stock levels in both the UK and EU. Uncertainty remains about the new operating environment, and as a result we support efforts to secure a status quo operating period post-Brexit, and UK and EU preparations to minimise potential disruption to the supply of medicines to patients.

We anticipate subsequent and ongoing costs arising from Brexit could include further customs duties and will include the cost of duplicate testing and release of our products. We continue to estimate these potential costs at approximately £50 million per year. As more details emerge on how our business will need to change after Brexit, the assumptions underlying these forecasts could change, with consequent adjustments up or down. We will continue to revise our plans and their expected financial impact as negotiations and regulations develop. Over the longer term, we continue to believe that Brexit will not have a material impact on our business.

Group financial review

In this section

CFO's statement

"We continued to make progress in delivering against our strategy and the financial goals we have set out in our financial architecture"

I am pleased to report that the Group's results for 2018 demonstrate continued operational execution of our key strategic objectives with strong performances from all three businesses.

Sales

Group turnover was up 2% AER, 5% CER to £30,821 million. Pharmaceuticals sales were flat at AER but up 2% CER, driven primarily by growth in HIV sales and further progress by the new Respiratory products, *Nucala* and the *Ellipta* portfolio. This was partly offset by lower sales of *Seretide/Advair* and Established Pharmaceuticals. Overall Respiratory sales declined 1% AER but grew 1% CER.

Vaccines sales were up 14% AER, 16% CER, primarily driven by sales of *Shingrix* in the US and growth in influenza and Hepatitis vaccines, which also benefited from a competitor supply shortage, partly offset by declines in some Established Vaccines.

Consumer Healthcare sales declined 1% AER but grew 2% CER with broad-based growth in Oral health and Wellness partly offset by increased competitive pressures in Europe, the divestments of some smaller brands, including *Horlicks* and *MaxiNutrition* in the UK, as well as the impact of the implementation of the Goods & Services Tax (GST) in India.

Cost of sales

Cost of sales as a percentage of turnover was 33.2%, down 1.0 percentage points AER and 1.4 percentage points CER. This primarily reflected a favourable comparison with the write-downs of assets in 2017 related to the decision to withdraw *Tanzeum*, together with a more favourable product mix in Vaccines and Consumer Healthcare, partly offset by adverse pricing pressure in Pharmaceuticals, particularly in Respiratory, and in Established Vaccines.

Selling, general and administration

SG&A costs as a percentage of turnover were 32.2%, up 0.1 percentage points at both AER and CER, reflecting growth of 3% AER, 5% CER. The increase primarily reflected higher restructuring costs and investment in promotional product support, particularly for new launches in Respiratory, HIV and Vaccines.

Research and development

R&D expenditure was lower in 2018 compared with 2017 at £3,893 million on a Total basis and £3,735 million on an Adjusted basis. This reflected a favourable comparison with the impact of the Priority Review Voucher, purchased and used to accelerate registration of our first HIV two-drug regimen (dolutegravir and lamivudine) in 2017, as well as benefits from recent R&D prioritisation initiatives.

Savings from these initiatives are being used to build investments in a number of mid and late-stage clinical development programmes, particularly in oncology and functional genomics.

Operating profit

Total operating profit was £5,483 million, up 34% AER, 43% CER, and showed strong progression on 2017. Higher charges for the re-measurement of the contingent consideration liability related to ViiV Healthcare were more than offset by a stronger operating performance, lower restructuring costs, lower asset impairment charges and a favourable comparison with the charges taken in 2017 related to US tax reform of £0.7 billion.

Adjusted operating profit was £8,745 million, up 2% AER, 6% CER, driven by margin growth in Vaccines and Consumer Healthcare. Pharmaceuticals operating profit was down 3% AER, but flat at CER, reflecting continued investment in our new products and a weaker gross margin in the face of ongoing pricing pressures.

Earnings per share

Our stronger operational performance helped to deliver improved earnings per share (EPS) for the Group. Total EPS more than doubled to 73.7 pence. Adjusted EPS was 119.4 pence up 7% AER, and up 12% CER.

Total EPS also benefited from a favourable comparison with charges in 2017 arising from the impact of US tax reform and a lower non-controlling interest allocation of Consumer Healthcare profits following the acquisition of Novartis' interest in our Consumer Healthcare business in June 2018.

These factors were partly offset by higher transaction-related charges arising from increases in the valuation of the liabilities for contingent consideration, put options and preferential dividends.

The Adjusted EPS growth of 12% CER was well ahead of the 6% CER increase in Adjusted operating profit, primarily as a result of the reduced non-controlling interest allocation of Consumer Healthcare profits and a lower Adjusted tax rate.

Cash generation

We have continued to drive a strong focus on greater cash discipline across the Group and I am pleased to report we made significant further progress this year, resulting in a net cash inflow from operations of £8,421 million (2017 – £6,918 million) and free cash flow of £5,692 million (2017 – £3,485 million). This increase was particularly driven by progress on working capital, despite the growth in the business, especially in inventory control and stronger collections. Reductions in capital expenditure, lower legal costs and higher proceeds from intangible divestments also contributed. Cash conversion remains a key focus for 2019.

Net debt was £21.6 billion at 31 December 2018, compared with £13.2 billion at 31 December 2017, comprising gross debt of £26.1 billion and cash and liquid investments of £4.5 billion, including £0.5 billion reported within Assets held for sale. The increase in net debt from last year was primarily driven by our decision to buy-in the minority stake held by Novartis in our Consumer Healthcare business for £9.3 billion and an adverse currency translation impact of £0.8 billion.

Capital allocation

We have pursued a disciplined approach to capital allocation, reflected in the investment choices we made in 2018 and in the transactions we initiated to strengthen our business and improve our financial flexibility to support GSK's key strategic priorities. This culminated in the agreement announced in December last year to establish a new world-leading Consumer Healthcare Joint Venture that we intend to separate from the Group within three years of the transaction closing. This will give us a unique value creating opportunity to establish two leading global companies, each with appropriate balance sheets better able to support their respective future investment requirements, while continuing to offer shareholders attractive distributions.

Given the improvements in cash conversion and free cash flow generation across the Group over the last few years, we remain comfortable that we can support our future investment requirements. However, this new pathway for the Group gives us additional confidence and visibility in our ability to invest behind our first priority – strengthening the R&D pipeline.

Delivering cash returns to shareholders through dividends is also a priority. Dividends paid to shareholders in 2018 were £3.9 billion and we have delivered on the expectations we laid out, with a dividend of 80p per share for the year. We expect to maintain the dividend at the same level of 80p for 2019.

Viability statement

Our viability statement sets out our assessment of the prospects of the Group over the next three years and is presented on page 44.

Outlook

In 2019, we expect Adjusted EPS to decline in the range of -5 to -9% at CER. This guidance reflects the expected impact of the Tesaro acquisition and the significant investments we are making behind its products and pipeline. It also reflects the completion of the other recently announced transactions, as well as the approval of a substitutable generic competitor to *Advair* in the US.

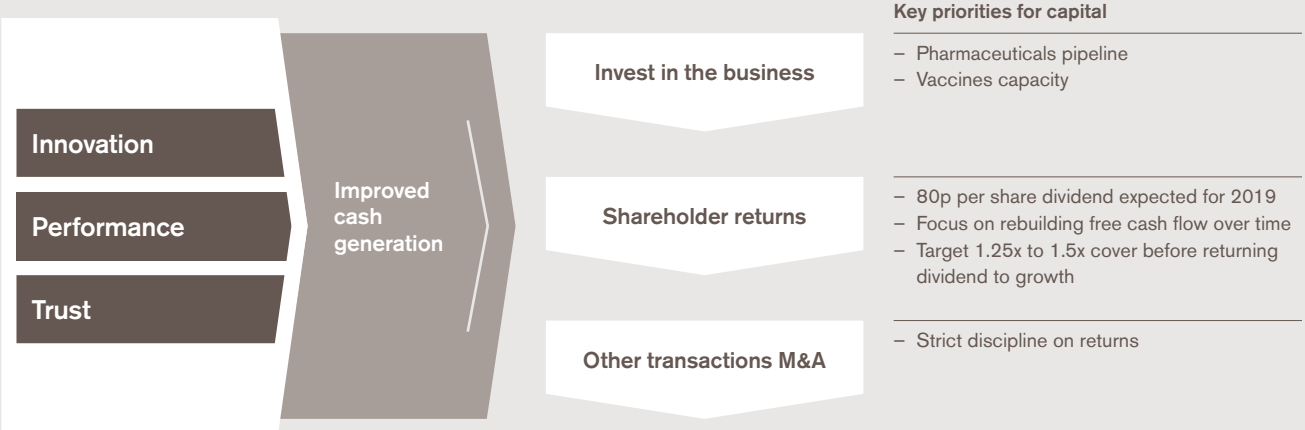
2018 was a strong year of operational performance, with good progress made in commercial delivery of our new products, which together with continued focus on costs, has led to improved operating margins. The business is showing good momentum and, together with the important strategic moves we have made through the different transactions initiated in 2018, I am confident in the outlook and prospects for GSK.

Finally, this is my last report to shareholders as CFO, and I would like to thank them and our many partners for their support in my time with the company.

Simon Dingemans

Chief Financial Officer

Capital allocation framework



Group financial review

Reporting framework

Total and Adjusted results

The Group financial review discusses the operating and financial performance of the Group, its cash flows and financial position and our resources. The results for each year are compared primarily with the results of the preceding year.

Total results

Total reported results represent the Group's overall performance.

GSK also uses a number of adjusted, non-IFRS, measures to report the performance of its business. Adjusted results and other non-IFRS measures may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS. Adjusted results are defined below and other non-IFRS measures are defined on page 42.

GSK believes that Adjusted results, when considered together with Total results, provide investors, analysts and other stakeholders with helpful complementary information to understand better the financial performance and position of the Group from period to period, and allow the Group's performance to be more easily compared against the majority of its peer companies. These measures are also used by management for planning and reporting purposes. They may not be directly comparable with similarly described measures used by other companies.

GSK encourages investors and analysts not to rely on any single financial measure but to review GSK's Annual Reports, including the financial statements and notes, in their entirety.

GSK is committed to continuously improving its financial reporting, in line with evolving regulatory requirements and best practice and has made a number of changes in recent years. In line with this practice, GSK expects in 2019 to continue to review its reporting framework (including, where relevant, the use of alternative performance measures).

Adjusted results

Adjusted results exclude the following items from Total results, together with the tax effects of all of these items:

- amortisation of intangible assets (excluding computer software) and goodwill
- impairment of intangible assets (excluding computer software) and goodwill
- major restructuring costs, which include impairments of tangible assets and computer software, (under specific Board approved programmes that are structural, of a significant scale and where the costs of individual or related projects exceed £25 million), including integration costs following material acquisitions
- transaction-related accounting or other adjustments related to significant acquisitions
- proceeds and costs of disposals of associates, products and businesses; significant legal charges (net of insurance recoveries) and expenses on the settlement of litigation and government investigations; other operating income other than royalty income, and other items
- the impact of the enactment of the US Tax Cuts and Jobs Act in 2017.

Costs for all other ordinary course smaller scale restructuring and legal charges and expenses are retained within both Total and Adjusted results.

As Adjusted results include the benefits of Major restructuring programmes but exclude significant costs (such as significant legal, major restructuring and transaction items), they should not be regarded as a complete picture of the Group's financial performance, which is presented in its Total results. The exclusion of other Adjusting items may result in Adjusted earnings being materially higher or lower than Total earnings. In particular, when significant impairments, restructuring charges and legal costs are excluded, Adjusted earnings will be higher than Total earnings.

GSK has undertaken a number of Major restructuring programmes in recent years in response to significant changes in the Group's trading environment or overall strategy, or following material acquisitions, including the Novartis transaction in 2015. Costs, both cash and non-cash, of these programmes are provided for as individual elements are approved and meet the accounting recognition criteria. As a result, charges may be incurred over a number of years following the initiation of a Major restructuring programme.

From time to time, the Group divests non-core investments, products and businesses and records the profit or loss on disposal as an Adjusting item. The most notable divestment in the past five years was the disposal of the Oncology business as one element of the three-part transaction with Novartis in 2015.

Significant legal charges and expenses are those arising from the settlement of litigation or government investigations that are not in the normal course and materially larger than more regularly occurring individual matters. They also include certain major legacy matters.

Reconciliations between Total and Adjusted results, providing further information on the key Adjusting items for 2017 and 2018 are set out on page 51 and for the five years to 2018 are set out on pages 232 to 234.

GSK provides earnings guidance to the investor community on the basis of Adjusted results. This is in line with peer companies and expectations of the investor community, supporting easier comparison of the Group's performance with its peers. GSK is not able to give guidance for Total results as it cannot reliably forecast certain material elements of the Total results, particularly the future fair value movements on contingent consideration and put options that can and have given rise to significant adjustments driven by external factors such as currency and other movements in capital markets.

Reporting framework continued

Historical record of Adjusting items

The reconcilations between Total and Adjusted operating profit over the last five years can be summarised as follows:

	2018 £m	2017 £m	2016 £m	2015 £m	2014 £m
Total operating profit	**5,483**	4,087	2,598	10,322	3,597
Intangible asset amortisation	**580**	591	588	563	575
Intangible asset impairment	**116**	688	20	206	150
Major restructuring	**809**	1,056	970	1,891	750
Transaction-related items	**1,977**	1,599	3,919	2,238	839
Divestments, significant legal and other items	**(220)**	(119)	(424)	(9,561)	545
US tax reform	**–**	666	–	–	–
Adjusted operating profit	**8,745**	8,568	7,671	5,659	6,456

The analysis of the impact of transaction-related items on operating profit for each of the last five years is as follows:

	2018 £m	2017 £m	2016 £m	2015 £m	2014 £m
Novartis Consumer Healthcare Joint Venture put option	**658**	986	1,133	83	–
Contingent consideration on former Shionogi-ViiV Healthcare JV (including Shionogi preferential dividends)	**1,188**	556	2,162	1,874	768
ViiV Healthcare put options and Pfizer preferential dividends	**(58)**	(126)	577	–	–
Contingent consideration on former Novartis Vaccines business	**58**	101	69	108	–
Other adjustments	**131**	82	(22)	173	71
Transaction-related items	**1,977**	1,599	3,919	2,238	839

Full reconciliations between Total and Adjusted results for 2014–2018 are set out on pages 232 to 234.

Further explanations on the Adjusting items for 2018 are reported on page 51.

Non-controlling interests in ViiV Healthcare

Trading profit allocations

Because ViiV Healthcare is a subsidiary of the Group, 100% of its operating results (turnover, operating profit, profit after tax) are included within the Group income statement and then a portion of the earnings is allocated to the non-controlling interests owned by the other shareholders, in line with their respective equity shareholdings (Pfizer 11.7% and Shionogi 10%). Each of the shareholders, including GSK, is also entitled to preferential dividends determined by the performance of certain products that each shareholder contributed. As the relative performance of these products changes over time, the proportion of the overall earnings of ViiV Healthcare allocated to each shareholder will change. In particular, the increasing sales of dolutegravir-containing products have a favourable impact on the proportion of the preferential dividends that is allocated to GSK. Adjusting items are allocated to shareholders based on their equity interests. GSK was entitled to approximately 85% of the Total earnings and 82% of the Adjusted earnings of ViiV Healthcare for 2018. Re-measurements of the liabilities for the preferential dividends allocated to Pfizer and Shionogi are included within other operating income.

Acquisition-related arrangements

As consideration for the acquisition of Shionogi's interest in the former Shionogi-ViiV Healthcare joint venture in 2012, Shionogi received the 10% equity stake in ViiV Healthcare and ViiV Healthcare also agreed to pay additional future cash consideration to Shionogi, contingent on the future sales performance of the products being developed by that joint venture, principally dolutegravir. Under IFRS 3 'Business combinations', GSK was required to provide for the estimated fair value of this contingent consideration at the time of acquisition and is required to update the liability to the latest estimate of fair value at each subsequent period end. The liability for the contingent consideration recognised in the balance sheet at the date of acquisition was £659 million. Subsequent re-measurements are reflected within other operating income/expense and within Adjusting items in the income statement in each period, and at 31 December 2018, the liability, which is discounted at 8.5%, stood at £5,937 million, on a post-tax basis.

Cash payments to settle the contingent consideration are made to Shionogi by ViiV Healthcare each quarter, based on the actual sales performance of the relevant products in the previous quarter. These payments reduce the balance sheet liability and hence are not recorded in the income statement. The cash payments made to Shionogi by ViiV Healthcare in 2018 were £793 million.

Because the liability is required to be recorded at the fair value of estimated future payments, there is a significant timing difference between the charges that are recorded in the Total income statement to reflect movements in the fair value of the liability and the actual cash payments made to settle the liability.

Group financial review continued

Reporting framework continued

The cash payments are reflected in the cash flow statement partly in operating cash flows and partly within investing activities. The tax relief on these payments is reflected in the Group's Adjusting items as part of the tax charge. The part of each payment relating to the original estimate of the fair value of the contingent consideration on the acquisition of the Shionogi-ViiV Healthcare joint venture in 2012 of £659 million is reported within investing activities in the cash flow statement and the part of each payment relating to the increase in the liability since the acquisition is reported within operating cash flows. Movements in contingent consideration payable to Shionogi were as follows:

	2018 £m	2017 £m
Contingent consideration at beginning of the year	**5,542**	5,304
Re-measurement through income statement	**1,188**	909
Cash payments: operating cash flows	**(703)**	(587)
Cash payments: investing activities	**(90)**	(84)
Contingent consideration at end of the year	**5,937**	5,542

Of the contingent consideration payable (on a post-tax basis) to Shionogi at 31 December 2018, £815 million (31 December 2017 – £724 million) is expected to be paid within one year.

Exit rights

Pfizer may request an IPO of ViiV Healthcare at any time and if either GSK does not consent to such IPO or an offering is not completed within nine months, Pfizer could require GSK to acquire its shareholding. Under the original agreements, GSK had the unconditional right, so long as it made no subsequent distribution to its shareholders, to withhold its consent to the exercise of the Pfizer put option and, as a result, in accordance with IFRS, GSK did not recognise a liability for the put option on its balance sheet. However, during Q1 2016, GSK notified Pfizer that it had irrevocably given up this right and accordingly recognised the liability for the put option on the Group's balance sheet during Q1 2016 at an initial value of £1,070 million. Consistent with this revised treatment, at the end of Q1 2016 GSK also recognised liabilities for the future preferential dividends anticipated to become payable to Pfizer and Shionogi on the Group's balance sheet.

The closing balances of the liabilities related to Pfizer's shareholding are as follows:

	2018 £m	2017 £m
Pfizer put option	**1,240**	1,304
Pfizer preferential dividend	**15**	17

Under the original agreements, Shionogi could also have requested GSK to acquire its shareholding in ViiV Healthcare in six month windows commencing in 2017, 2020 and 2022. GSK had the unconditional right, so long as it made no subsequent distribution to its shareholders, to withhold its consent to the exercise of the Shionogi put option and, as a result, GSK did not recognise a liability for the put option on its balance sheet.

However, during Q1 2016, GSK notified Shionogi that it had irrevocably given up this right and accordingly recognised the liability for the put option on the Group's balance sheet during Q1 2016 at an initial value of £926 million. In Q4 2016, Shionogi irrevocably agreed to waive its put option and as a result GSK de-recognised the liability for this put option on the Group's balance sheet directly to equity. The value of the liability was £1,244 million when it was de-recognised.

GSK also has a call option over Shionogi's shareholding in ViiV Healthcare, which under the original agreements was exercisable in six month windows commencing in 2027, 2030 and 2032. GSK has now irrevocably agreed to waive the first two exercise windows, but the last six month window in 2032 remains. As this call option is at fair value, it has no value for accounting purposes.

Free cash flow

With the introduction of the new R&D strategy in 2018, GSK has revised its definition of free cash flow, a non-IFRS measure, to include proceeds from the sale of intangible assets. This balances with the expenditure on purchases of intangible assets, which is deducted in calculating free cash flow, and makes the treatment of intangible assets consistent with property, plant and equipment. Free cash flow is now defined as the net cash inflow from operating activities less capital expenditure on property, plant and equipment and intangible assets, contingent consideration payments, net interest, and dividends paid to non-controlling interests plus proceeds from the sale of property, plant and equipment and intangible assets, and dividends received from joint ventures and associates. It is used by management for planning and reporting purposes and in discussions with and presentations to investment analysts and rating agencies. Free cash flow growth is calculated on a reported basis. A reconciliation of net cash inflow from operations to free cash flow is set out on page 56.

Free cash flow conversion

Free cash flow conversion is free cash flow as a percentage of earnings.

Working capital conversion cycle

The working capital conversion cycle is calculated as the number of days sales outstanding plus days inventory outstanding, less days purchases outstanding.

CER and AER growth

In order to illustrate underlying performance, it is the Group's practice to discuss its results in terms of constant exchange rate (CER) growth. This represents growth calculated as if the exchange rates used to determine the results of overseas companies in Sterling had remained unchanged from those used in the comparative period. CER% represents growth at constant exchange rates. £% or AER% represents growth at actual exchange rates.

Our approach to tax

We understand our responsibility to pay an appropriate amount of tax, and fully support efforts to ensure that companies are appropriately transparent about how their tax affairs are managed. Tax is an important element of the economic contribution we bring to the countries in which we operate. We do not engage in artificial tax arrangements – those without business or commercial substance. We do not seek to avoid tax by the use of 'tax havens' or transactions we would not fully disclose to a tax authority. We have a zero tolerance approach to tax evasion and the facilitation of tax evasion.

We have a substantial business and employment presence in many countries around the globe and we pay a significant amount of tax, including corporation and other business taxes, as well as tax associated with our employees. At the same time, we have a responsibility to our shareholders to be financially efficient and deliver a sustainable tax rate. As part of this approach we look to align our investment strategies to those countries where we already have substantial economic activity, and where government policies promote regimes which are attractive to business investment and R&D activity, and are transparent in their intent and available to all relevant tax payers. Examples include the UK Patent Box and Research and Development Expenditure Credit.

Tax risk is managed through robust internal policies and processes to ensure that we have alignment across our business and compliance with tax legislation. Our Audit & Risk Committee and the Board are responsible for approving our tax policies and risk management approach.

We seek to maintain open, positive relationships with governments and tax authorities worldwide and we welcome constructive debate on taxation policy.

In 2018, the Group corporate tax charge was £754 million (2017 – £1,356 million) on profits before tax of £4,800 million (2017 – £3,525 million) representing an effective tax rate of 15.7% (2017 – 38.5%). We made cash tax payments of £1,326 million in the year (2017 – £1,340 million). In addition to the taxes we pay on our profits, we pay duties, levies, transactional and employment taxes.

Our Adjusted tax rate for 2018 was 19.0% (2017 – 21.0%). Subject to any material changes in our product mix, or other material changes in tax regulations or laws in the countries in which we operate, and reflecting the ongoing impact of US tax reform, the Group's effective Adjusted tax rate for 2019 and the next several years is expected to be around 19%.

The Group's Total tax rate of 15.7% (2017 – 38.5%) for 2018 was lower than the Adjusted tax rate as the Total tax charge includes the effect of a reduced estimate of the 2017 impact of US tax reform, following additional guidance being released by the IRS, and a re-assessment of estimates of uncertain tax positions following the settlement of a number of open issues with tax authorities.

In 2018, there has been an ongoing public focus on the tax affairs of multinational companies as well as the continued focus on tax reform. This has been driven by the OECD's Base Erosion and Profit Shifting (BEPS) project and European Commission initiatives such as fiscal state aid investigations. The outputs from the OECD BEPS projects clarified the important principle that tax should be paid on profits throughout the supply chain, where the profit-making activity takes place. GSK is subject to taxation throughout its supply chain.

GSK supports the BEPS proposals, in particular the implementation of the OECD's recommendations on 'Country by Country Reporting', including the exchange of this data between tax authorities. This data, validated against existing information held on taxpayers, will support their ability to ensure that multinational groups pay an appropriate amount of tax.

The detailed tax implications of Brexit are dependent on the outcome of negotiations between the UK and EU, and are therefore currently unknown. However, we continue to work closely with the ABPI and BIA to analyse the potential implications for the industry in order to highlight key focus areas for the Government as part of its Brexit negotiations. The direct tax implications, in particular, are expected to be limited for GSK while the indirect tax implications may be more significant, including potential customs duty costs and additional transaction or administrative costs associated with managing import and export obligations on the movement of goods between the UK and the EU. Our approach to Brexit is set out on page 36.

Our Tax Strategy is set out in detail within the Public Policy positions section of our website. Further details about our corporate tax charges for the year are set out on page 161.

Group financial review continued

Viability statement

In accordance with provision C.2.2 of the 2014 revision of the Code, GSK has assessed the prospects of the Company over a longer period than the 12 months required by the 'Going Concern' provision. The Directors confirm that they have a reasonable expectation that GSK will continue to operate and meets its liabilities, as they fall due, over the next three years. The Directors' assessment has been made with reference to GSK's current position and prospects, our strategy, the Board's risk appetite and GSK's principal risks and how these are managed, as detailed on pages 34 and 35 in the Strategic report. This assessment has been made assuming no separation of the new Consumer Healthcare Joint Venture during the three-year period under consideration.

The Board reviews our internal controls and risk management policies and approves our governance structure and code of conduct. It also appraises and approves major financing, investment and licensing decisions, and evaluates and monitors the performance and prospects of GSK as a whole. The focus is largely on improving our long-term financial performance through delivery of our company and three business strategies and aligned Innovation, Performance and Trust priorities.

The Board reviews GSK's strategy and makes significant capital investment decisions over a long-term time horizon, based on a multi-year assessment of return on capital, the performance of the company and three business units, and the market opportunity in the pharmaceutical, vaccines and consumer sectors. This approach is aligned to GSK's model of achieving balanced growth by investing in high quality, innovative products for patients, consumers and healthcare providers. However, since many internal and external parameters become increasingly unpredictable over longer time horizons, GSK focuses its detailed, bottom-up Plan on a three-year cycle. The Plan is reviewed at least annually by the Directors, who approve business forecasts showing expected financial impact. The Directors believe that a three-year assessment period for the Viability statement is most appropriate as it aligns with the Company's well established business planning processes that balance the long-term nature of investments in the pharmaceutical, vaccines and consumer sectors with an assessment of the period over which analysis of near-term business performance is realistically visible.

The Plan has been stress tested in a series of robust operational and principal risk downside scenarios as part of the Board's review on risk. These include the potential effects of Brexit, which are not expected to be material, although there may be some short-term disruption. The downside scenarios consider GSK's cash flows, sustainability of dividends, funding strategy, insurance provision and recovery as well as other key financial ratios over the period. These metrics have been subject to sensitivity analysis, which involves flexing a number of the main assumptions underlying the forecasts both individually and in combination, along with mitigating actions that could realistically be taken to avoid or reduce the impact or occurrence of the underlying risk.

The following hypothetical downside scenarios have been evaluated:

- **Scenario 1:** Business performance risks. These include key performance risks, including lower sales from new products; greater adverse impact from generic competition and other competitive launches to other GSK products; as well as possible supply and manufacturing challenges.
- **Scenario 2:** External and macroeconomic risks. This scenario reflects incremental risks to the business driven by outside factors, such as more intense competition, increased pricing pressure in both the US and Europe as well as the potential impact of material negative changes in the macro-economic and healthcare environment.
- **Scenario 3:** Principal risks. This scenario includes a severe assessment of the potential loss impact from the principal risks related to patient safety, product quality, supply chain continuity as well as anti-bribery and corruption and any consequent regulatory actions or fines, all of which could fundamentally threaten our operations. These risks are managed through mitigating activities described on pages 241 to 250.
- **Scenario 4:** Put option exercise. This scenario evaluates the additional funding requirements assuming the earliest potential exercise of the outstanding put option held by our partner in the HIV business.

The three-year review also makes certain assumptions about the normal level of capital recycling likely to occur and considers whether additional financing facilities will be required and the respective level of funding flexibility and headroom.

The results of this stress testing show that certain combinations of these hypothetical scenarios could increase funding demands on GSK and require mitigating changes to the Group's funding strategy. However, in light of the liquidity available to the Group and based on this analysis, the Directors have a reasonable expectation that, even under these most severe stress tests, the Company will be able to continue in operation and meet its liabilities as they fall due over the three-year period of assessment.

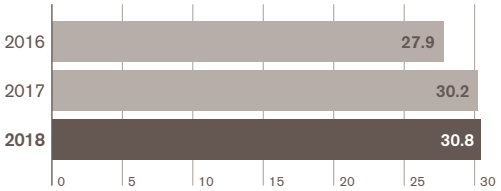
Total results

Turnover (£bn)

£30.8bn

AER growth 2%

CER growth 5%

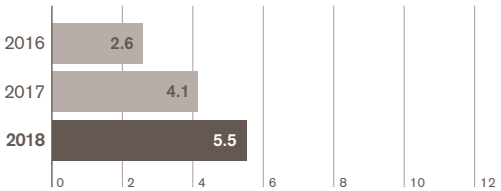


Total operating profit (£bn)

£5.5bn

AER growth 34%

CER growth 43%



The total results of the Group are set out below.

	2018		2017		Growth	
	£m	% of turnover	£m	% of turnover	£%	CER%
Turnover	**30,821**	**100**	30,186	100	2	5
Cost of sales	**(10,241)**	**(33.2)**	(10,342)	(34.3)	(1)	–
Selling, general and administration	**(9,915)**	**(32.2)**	(9,672)	(32.0)	3	5
Research and development	**(3,893)**	**(12.6)**	(4,476)	(14.8)	(13)	(12)
Royalty income	**299**	**1.0**	356	1.1	(16)	(17)
Other operating income/(expense)	**(1,588)**	**(5.2)**	(1,965)	(6.5)		
Operating profit	**5,483**	**17.8**	4,087	13.5	34	43
Net finance costs	**(717)**		(669)			
Profit on disposal of interest in associates	**3**		94			
Share of after tax profits of associates and joint ventures	**31**		13			
Profit before taxation	**4,800**		3,525		36	46
Taxation	**(754)**		(1,356)			
Profit after taxation for the year	**4,046**		2,169		87	100
Profit attributable to shareholders	**3,623**		1,532			
Earnings per share (p)	**73.7**		31.4		>100	>100
Earnings per ADS (US$)	**1.96**		0.82			

Group turnover

	2018 £m	2017 £m	Growth £%	Growth CER%
Pharmaceuticals	**17,269**	17,276	–	2
Vaccines	**5,894**	5,160	14	16
Consumer Healthcare	**7,658**	7,750	(1)	2
Group turnover	**30,821**	30,186	2	5

Group turnover was up 2% AER, 5% CER to £30,821 million.

Pharmaceuticals sales were flat at AER but up 2% CER, driven primarily by the growth in HIV sales and the new Respiratory products, *Nucala* and the *Ellipta* portfolio. This was partly offset by lower sales of *Seretide/Advair* and Established Pharmaceuticals. Overall Respiratory sales declined 1% AER but grew 1% CER.

Vaccines sales were up 14% AER, 16% CER, primarily driven by sales of *Shingrix* in the US and growth in influenza and Hepatitis vaccines, which also benefited from a competitor supply shortage, partly offset by declines in some Established Vaccines.

Consumer Healthcare sales declined 1% AER but grew 2% CER with broad-based growth in Oral health and Wellness partly offset by increased competitive pressures in Europe, the divestments of some smaller brands, including *Horlicks* and *MaxiNutrition* in the UK, as well as the impact of the implementation of the GST in India.

Group turnover by geographic region

	2018 £m	2017 £m	Growth £%	Growth CER%
US	**11,982**	11,263	6	9
Europe	**7,973**	7,943	–	(1)
International	**10,866**	10,980	(1)	4
	30,821	30,186	2	5

US sales grew 6% AER, 9% CER, driven by the growth of *Shingrix* and Hepatitis vaccines as well as strong performances from HIV and *Benlysta*, offset by declines in Established Pharmaceuticals and Respiratory.

Europe sales were flat at AER, but declined 1% CER, as declines in Established Pharmaceuticals, older HIV products, Meningitis vaccines and Consumer Healthcare more than offset growth from *Tivicay* and *Triumeq* and the new Respiratory products.

In International, sales declined 1% AER, but grew 4% CER, reflecting strong growth in *Tivicay*, *Triumeq* and the Respiratory portfolio. Sales in Emerging Markets declined 2% AER, but grew 4% CER.

Group financial review continued

Total results continued

Pharmaceuticals

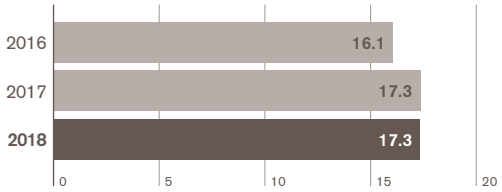
Turnover (£bn)

£17.3bn

56% of Group turnover

AER growth 0%

CER growth 2%



Pharmaceuticals turnover

	2018 £m	2017 £m	Growth £%	Growth CER%
Respiratory	**6,928**	6,991	(1)	1
HIV	**4,722**	4,350	9	11
Immuno-inflammation	**472**	377	25	28
Established Pharmaceuticals	**5,147**	5,558	(7)	(4)
	17,269	17,276	–	2

Pharmaceuticals turnover in the year was £17,269 million, flat at AER, but up 2% CER, driven primarily by the growth in HIV sales, which were up 9% AER, 11% CER, to £4,722 million, reflecting share growth over the year in the dolutegravir portfolio: *Triumeq*, *Tivicay* and *Juluca*. Respiratory sales declined 1% AER, but grew 1% CER, to £6,928 million, with growth from our *Ellipta* portfolio and *Nucala* partly offset by lower sales of *Seretide/Advair*. Sales of Established Pharmaceuticals were down 7% AER, 4% CER.

In the US, sales declined 2% AER but grew 1% at CER, with growth in the HIV portfolio and *Benlysta* offsetting declines in Established Pharmaceuticals and Respiratory. In Europe, sales grew 2% AER, 1% CER, with growth in the Respiratory portfolio offsetting the continued impact of generic competition to *Epzicom* and *Avodart*. International was flat at AER but grew 5% CER, with growth driven by HIV and the new Respiratory portfolio.

Respiratory

Total Respiratory sales declined 1% AER, but grew 1% CER, with the US down 5% AER, 3% CER. In Europe, sales grew 5% AER, 4% CER and International grew 3% AER, 7% CER. Growth from our *Ellipta* portfolio and *Nucala* was partly offset by lower sales of *Seretide/Advair*.

Sales of *Nucala* were £563 million in the year, up 64% AER, 66% CER, continuing to benefit from the global rollout of the product. US sales of *Nucala* grew 44% AER, 48% CER to £341 million, despite increased competition, benefiting from continued market expansion.

Sales of *Ellipta* products were up 29% AER, 32% CER, driven by continued growth in all regions. In the US, sales grew 24% AER, 27% CER, reflecting further market share gains, partly offset by the impact of continued competitive pricing pressures, particularly for ICS/LABAs. In Europe, sales grew 42% AER, 41% CER. Sales of *Trelegy Ellipta*, our new once-daily closed triple product, contributed £156 million to total *Ellipta* sales, benefiting from an expanded label in the US.

Relvar/Breo Ellipta sales grew 8% AER, 10% CER, to £1,089 million, primarily driven by growth in Europe, which was up 25% AER, 24% CER to £253 million, and in International, which was up 26% AER, 31% CER to £255 million. In the US, *Breo Ellipta* sales declined 3% AER, 1% CER, with volume growth of 27%, reflecting continued market share growth, offset by the combined impact of prior period payer rebate adjustments and increased competitive pricing pressure. *Anoro Ellipta* sales grew 39% AER, 42% CER to £476 million, driven primarily by share gains in the US. All of our *Ellipta* products, *Breo*, *Anoro*, *Incruse*, *Arnuity* and *Trelegy*, continued to grow market share in the US during the year.

Sales of New Respiratory products, comprising *Ellipta* products and *Nucala*, grew 35% AER, 38% CER to £2,612 million.

Seretide/Advair sales declined 23% AER, 21% CER to £2,422 million. Sales of *Advair* in the US declined 32% AER, 30% CER (9% volume decline and 21% negative impact of price) primarily reflecting increased competitive pricing pressures. In Europe, *Seretide* sales were down 19% AER, 20% CER to £599 million (13% volume decline and a 7% price decline). This reflected continued competition from generic products and the transition of the Respiratory portfolio to newer products. In International, sales of *Seretide* were down 7% AER, 4% CER, to £726 million (5% volume decline and 1% positive impact of price), with declines in markets with generic competition partly offset by growth from other developing markets.

HIV

HIV sales increased 9% AER, 11% CER to £4,722 million in the year, with the US up 8% AER, 10% CER, Europe up 7% AER, 6% CER and International up 14% AER, 20% CER.

The growth was driven by the increase in market share over the year in our dolutegravir products which grew 14% AER, 16% CER. This was partly offset by the decline in our established portfolio, particularly the impact of generic competition to *Epzicom/Kivexa* in Europe. *Triumeq*, *Tivicay* and *Juluca* (which was approved in the US in November 2017), recorded sales of £2,648 million, £1,639 million and £133 million, respectively, in the year. *Epzicom/Kivexa* sales declined 50% AER, 48% CER to £117 million.

Immuno-inflammation

Sales in the year were up 25% AER, 28% CER, primarily driven by *Benlysta*, which grew 26% AER, 29% CER to £473 million. In the US, *Benlysta* grew 24% AER, 27% CER to £420 million, benefiting from the launch of the sub-cutaneous formulation in the third quarter.

Established Pharmaceuticals

Sales of Established Pharmaceuticals were £5,147 million, down 7% AER, 4% CER, reflecting our efforts to maximise the value from this portfolio but also the benefit of certain post-divestment contract manufacturing sales and the first instalment of a 12-month *Relenza* supply contract in Europe.

The *Avodart* franchise was down 7% AER, 5% CER to £572 million, primarily due to the loss of exclusivity in Europe, with the US impact now broadly annualised. *Coreg* franchise sales declined 63% AER, 63% CER following a generic *Coreg CR* entrant to the US market in Q4 2017. *Lamictal* sales declined 5% AER, 3% CER to £617 million.

Total results continued

Vaccines

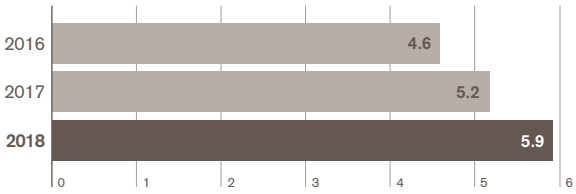
Turnover (£bn)

£5.9bn

19% of Group turnover

AER growth 14%

CER growth 16%



Vaccines turnover

	2018 £m	2017 £m	Growth £%	Growth CER%
Meningitis	**881**	890	(1)	2
Influenza	**523**	488	7	10
Shingles	**784**	22	>100	>100
Established Vaccines	**3,706**	3,760	(1)	–
	5,894	5,160	14	16

Vaccines turnover grew 14% AER, 16% CER to £5,894 million, primarily driven by growth in sales of *Shingrix*, Hepatitis vaccines, which also benefited from a competitor supply shortage and higher sales of influenza products. This was partly offset by lower sales of DTPa-containing vaccines (*Infanrix*, *Pediarix* and *Boostrix*) due to increased competitive pressures, particularly in Europe, and unfavourable year-on-year CDC stockpile movements in the US, together with lower *Synflorix* sales, reflecting lower pricing and demand in Emerging Markets.

Meningitis

Meningitis sales were down 1% AER but up 2% CER to £881 million. *Bexsero* sales grew 5% AER, 9% CER driven by demand and share gains in the US, together with continued growth in private market sales in International, partly offset by the completion of vaccination of catch-up cohorts in certain markets in Europe. *Menveo* sales declined 15% AER, 12% CER, primarily reflecting supply constraints in Europe and International as well as a strong comparator in 2017 and unfavourable year-on-year CDC stockpile movements in the US, partly offset by demand and share gains in the US.

Influenza

Fluarix/FluLaval sales grew 7% AER, 10% CER to £523 million, driven by strong sales execution in the US and improved sales in Europe, partly offset by increased price competition in the US.

Shingles

Shingrix recorded sales of £784 million, primarily in the US and Canada, driven by demand and share gains. US sales benefited from market growth in new patient populations now covered by immunisation recommendations, and *Shingrix* has now achieved a 98% market share.

Established Vaccines

Sales of our DTPa-containing vaccines (*Infanrix*, *Pediarix* and *Boostrix*) were down 8% AER, 7% CER. *Infanrix*, *Pediarix* sales were down 8% AER, 7% CER to £680 million, reflecting increased competitive pressures in Europe as well as unfavourable year-on-year CDC stockpile movements in the US, partly offset by stronger demand in International. *Boostrix* sales declined 8% AER, 7% CER to £517 million, primarily driven by the return to the market of a competitor in Europe and lower demand in International.

Hepatitis vaccines grew 17% AER, 19% CER to £808 million, benefiting from stronger demand in the US and Europe as well as a competitor supply shortage in the US.

Rotarix sales were down 1% AER but up 1% CER to £521 million, reflecting higher demand in Europe, partly offset by lower demand in International.

Synflorix sales declined 17% AER, 17% CER to £424 million, primarily impacted by lower pricing and demand in Emerging Markets.

Group financial review continued

Total results continued

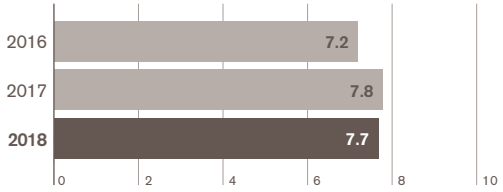
Consumer Healthcare

Turnover (£bn)

£7.7bn

25% of Group turnover

AER growth	CER growth
(1)%	2%



Consumer Healthcare turnover

	2018 £m	2017 £m	Growth £%	Growth CER%
Wellness	**3,940**	4,001	(2)	1
Oral health	**2,496**	2,466	1	4
Nutrition	**643**	680	(5)	1
Skin health	**579**	603	(4)	(1)
	7,658	7,750	(1)	2

	2018 £m	2017 £m	Growth £%	Growth CER%
US	**1,828**	1,826	–	2
Europe	**2,340**	2,360	(1)	(2)
International	**3,490**	3,564	(2)	4
	7,658	7,750	(1)	2

Consumer Healthcare sales in the year declined 1% AER but grew 2% CER to £7,658 million, with broad-based growth in Oral health and Wellness partly offset by a decline in *Panadol* and lower sales of smaller brands. International markets performed strongly, particularly India and Brazil, whilst Europe was impacted by intensifying competitive pressure in the second half of 2018.

The aggregate impact from generic competition on *Transderm Scop* in the US, the divestment of *Horlicks* and *MaxiNutrition* in the UK and other small non-strategic brands and implementation of the GST in India was to reduce overall sales growth by approximately one percentage point.

Wellness

Wellness sales declined 2% AER but grew 1% CER to £3,940 million. Respiratory sales grew in low single digits, led by *Theraflu* supported by a strong cold and flu season earlier in the year as well as the *Theraflu PowerPods* launch in the US in the second half of the year. *Otrivin* grew in mid single digits, benefiting from new variants, and *Flonase* returned to growth following a weaker allergy season earlier this year.

Pain relief sales were flat as low single-digit growth in *Voltaren* and double-digit growth in *Fenbid* were offset by a decline in *Panadol* sales due to a change in the route-to-market model in South East Asia and the discontinuation of slow-release *Panadol* products in the Nordic countries.

Oral health

Oral health sales grew 1% AER, 4% CER to £2,496 million, as increased competitive pressures in Europe were offset by double-digit growth from *Sensodyne* in a number of International markets, including India and Turkey, and strong single-digit growth in the US driven by *Sensodyne Rapid*. Denture care grew in high single digits through the launch of *Corega Max* in Russia and Brazil, and Gum health delivered double-digit growth with continued strong *parodontax* performance in the US. Growth was also partly impacted by de-stocking in International.

Nutrition

Nutrition sales declined 5% AER but grew 1% CER to £643 million. Our Nutrition business in India performed strongly across the product portfolio including new innovations such as *Horlicks Protein+* which was launched earlier in the year. The impact of divestments and India GST implementation on growth was approximately eight percentage points.

Skin health

Skin health sales were down 4% AER, 1% CER to £579 million, largely driven by a decline in *Physiogel* and the divestment of several small non-strategic brands in the US, which had a negative impact on growth of one percentage point.

Total results continued

Cost of sales

Cost of sales as a percentage of turnover was 33.2%, down 1.0 percentage points at AER and 1.4 percentage points in CER terms compared with 2017. This primarily reflected a favourable comparison with £363 million of non-cash restructuring costs from the write-downs of assets in 2017 related to the decision to withdraw *Tanzeum*. The year also benefited from a more favourable product mix in Vaccines and Consumer Healthcare, particularly the launch of *Shingrix*, together with a further contribution from integration and restructuring savings. This was partly offset by continued adverse pricing pressure in Pharmaceuticals, particularly in Respiratory, and in Established Vaccines, together with increased input costs and an adverse comparison with the benefit of a settlement for lost third-party supply volume in 2017 in Vaccines.

Selling, general and administration

SG&A costs as a percentage of turnover were 32.2%, 0.1 percentage points higher than in 2017 at both AER and CER, reflecting growth of 3% AER, 5% CER. The increase in SG&A costs primarily reflected higher restructuring costs, and investment in promotional product support, particularly for new launches in Respiratory, HIV and Vaccines, partly offset by tight control of ongoing costs, particularly in non-promotional and back office spending, across all three businesses.

Research and development

R&D expenditure was £3,893 million (12.6% of turnover), 13% AER, 12% CER lower than in 2017. This reflected reduced restructuring costs primarily due to the comparison with the provision for obligations as a result of the decision to withdraw *Tanzeum* in 2017 and lower intangible impairments, a favourable comparison with the impact of the Priority Review Voucher purchased and utilised in H1 2017 and the benefit of our R&D prioritisation initiatives started in the second half of last year. This was partly offset by increased investment in the progression of a number of mid and late-stage programmes, particularly in Oncology, as well as provisions for the costs payable to a third party relating to the use of a Priority Review Voucher awarded in 2018.

	2018	2017 (revised)	Growth	
	£m	£m	£%	CER%
Discovery	**892**	1,007	(11)	(10)
Development	**1,332**	1,423	(6)	(5)
Facilities and central support functions	**600**	576	4	6
Total Pharmaceuticals	**2,824**	3,006	(6)	(5)
Vaccines R&D	**673**	621	8	8
Consumer Healthcare R&D	**238**	235	1	3
	3,735	3,862	(3)	(2)
Items reconciling Adjusted R&D to Total R&D	**158**	614		
Research and development	**3,893**	4,476	(13)	(12)

The decline in Discovery reflected the transfer of certain Oncology assets to the Development phase. The decline in Development primarily reflects the comparison with the impact of the utilisation of the Priority Review Voucher in 2017 and the benefit of the prioritisation initiatives started in the second half of 2017. This was partly offset by increased investment in the progression of a number of mid and late-stage programmes, particularly in Oncology, and the provision for costs payable to a third party relating to the use of a Priority Review Voucher awarded in 2018. The growth in Technology, facilities and functional support costs primarily reflected increased investments in data analytics.

Royalty income

Royalty income was £299 million (2017 – £356 million), down 16% AER and 17% CER, the reduction primarily reflecting the patent expiry of *Cialis*, partly offset by an increase in the *Gardasil* royalty.

Other operating income/(expense)

Other operating expense of £1,588 million (2017 – £1,965 million) primarily reflected £1,846 million (2017 – £1,517 million) of accounting charges arising from the re-measurement of our contingent consideration liabilities related to the acquisitions of the former Shionogi-ViiV Healthcare joint venture and the former Novartis Vaccines business, the value attributable to the Consumer Healthcare Joint Venture put option previously held by Novartis and the liabilities for the Pfizer put option and Pfizer and Shionogi preferential dividends in ViiV Healthcare. The 2017 charges included the impact of US tax reform, which increased the fair value of these liabilities by £666 million. This was partly offset by the profit on a number of asset disposals, including tapinarof, as well as a gain arising from the increase in value of the shares in Hindustan Unilever Limited to be received on the disposal of *Horlicks* and other Consumer Healthcare brands, net of disposal costs.

The accounting charges were driven primarily by a £758 million re-measurement of the contingent consideration liability due to Shionogi, largely related to the regular updates of exchange rate assumptions to period end rates and sales forecasts following a number of studies including the GEMINI study completed in Q2 2018, together with a £430 million unwind of the discount. In addition, a net charge of £658 million reflected the re-measurement of the valuation of the Consumer Healthcare put option to reflect the price agreed with Novartis to acquire its shareholding, together with movements in exchange rates, largely offset by gains on hedging contracts.

Group financial review continued

Total results continued

Operating profit

Total operating profit was £5,483 million in 2018 compared with £4,087 million in 2017. The increase in operating profit primarily reflected a favourable comparison with charges of £666 million in 2017 arising from the impact of US tax reform on the valuation of the Consumer Healthcare and HIV businesses and reduced restructuring costs and asset impairments. In addition, there was a contribution from sales growth, a more favourable mix, primarily in Vaccines and Consumer Healthcare, benefits from the prioritisation of R&D expenditure and comparison with the impact of the Priority Review Voucher utilised and expensed in 2017, alongside continued tight control of ongoing costs. This was partly offset by the increased impact of accounting charges related to the re-measurement of the liabilities for contingent consideration, put options and preferential dividends, continuing pricing pressure, particularly in Respiratory, increased input costs, the comparison with the benefit in Q2 2017 of a settlement for lost third-party supply volume in Vaccines, investments in new product support, particularly for launches in Respiratory, HIV and Vaccines and a reduction in royalty income.

Contingent consideration cash payments which are made to Shionogi and other companies reduce our balance sheet liability and hence are not recorded in the income statement. Total contingent consideration cash payments in 2018 amounted to £1,137 million (2017 – £685 million). This included a cash milestone paid to Novartis of $450 million (£317 million) as well as cash payments made to Shionogi of £793 million (2017 – £671 million).

Net finance costs

Finance income	2018 £m	2017 £m
Interest and other income	**81**	63
Fair value movements	**–**	2
	81	65
Finance expense		
Interest expense	**(717)**	(720)
Unwinding of discounts on liabilities	**(15)**	(16)
Remeasurements and fair value movements	**3**	(4)
Other finance expense	**(69)**	6
	(798)	(734)

Net finance costs were £717 million compared with £669 million in 2017. This reflected higher debt levels following our acquisition from Novartis of its stake in the Consumer Healthcare Joint Venture in June 2018 as well as additional interest on tax arising from a historic tax settlement, recorded in Q3 2018, and an adverse comparison with a provision release of £24 million in Q4 2017 (both reflected in other finance expense). This was partly offset by the benefit of a one-off accounting adjustment to the amortisation of long-term bond interest charges of £20 million in Q1 2018 (reported through interest expense), the benefit from older bonds being refinanced at lower interest rates and the translation impact of exchange rate movements on the reported Sterling costs of foreign currency denominated interest-bearing instruments.

Profit on disposal of associates

The profit on disposal of associates was £3 million (2017 – £94 million).

Share of after tax profits of associates and joint ventures

The share of profits of associates and joint ventures was £31 million (2017 – £13 million), primarily arising from our investment in Innoviva.

Profit before taxation

Taking account of net finance costs the profit on disposal of associates and the share of profits of associates, profit before taxation was £4,800 million compared with £3,525 million in 2017.

Taxation

	2018 £m	2017 £m
UK current year charge	**234**	199
Rest of world current year charge	**1,426**	1,928
Charge in respect of prior periods	**(492)**	(508)
Total current taxation	**1,168**	1,619
Total deferred taxation	**(414)**	(263)
Taxation on total profits	**754**	1,356

The charge of £754 million represented an effective tax rate on Total results of 15.7% (2017 – 38.5%) and reflected the different tax effects of the various Adjusting items. This includes the effect of a reduced estimate of the 2017 impact of US tax reform of £125 million, following additional guidance being released by the IRS and a re-assessment of estimates of uncertain tax positions following the settlement of a number of open issues with tax authorities. The reduction from the prior year effective tax rate on Total profits was driven primarily by a favourable comparison with the impact of US tax reform, which resulted in a number of charges in Q4 2017.

Non-controlling interests

The allocation of earnings to non-controlling interests amounted to £423 million (2017 – £637 million). The reduction was primarily due to the lower allocation of Consumer Healthcare profits of £117 million (2017 – £415 million) following the buyout of Novartis' interest. This was partly offset by an increased allocation of ViiV Healthcare profits and higher net profits in some of our other entities with non-controlling interests.

Earnings per share

Total earnings per share was 73.7p, compared with 31.4p in 2017. The increase in earnings per share primarily reflected a favourable comparison with charges in 2017 arising from the impact of US tax reform, reduced restructuring costs and asset impairments, increased operating profits, a lower tax rate and a reduced non-controlling interest allocation of Consumer Healthcare profits, partly offset by higher transaction-related charges arising from increases in the valuation of the liabilities for contingent consideration, put options and preferential dividends.

Dividends

The Board declared four interim dividends resulting in a total dividend for the year of 80 pence, in line with the dividend declared for 2017. See Note 16 to the financial statements, 'Dividends'.

Adjusting items

Adjusted results reconciliation 31 December 2018	Total results £m	Intangible asset amortisation £m	Intangible asset impairment £m	Major restructuring £m	Transaction -related £m	Divestments, significant legal and other items £m	Adjusted results £m
Turnover	30,821						30,821
Cost of sales	(10,241)	536	69	443	15	–	(9,178)
Gross profit	20,580	536	69	443	15	–	21,643
Selling, general and administration	(9,915)		2	315	98	38	(9,462)
Research and development	(3,893)	44	45	49		20	(3,735)
Royalty income	299						299
Other operating income/(expense)	(1,588)			2	1,864	(278)	–
Operating profit	5,483	580	116	809	1,977	(220)	8,745
Net finance costs	(717)			4	(3)	18	(698)
Profit on disposal of associates	3					(3)	–
Share of after tax profits of associates and joint ventures	31						31
Profit before taxation	4,800	580	116	813	1,974	(205)	8,078
Taxation	(754)	(109)	(19)	(170)	(239)	(244)	(1,535)
Tax rate	*15.7%*						*19.0%*
Profit after taxation	4,046	471	97	643	1,735	(449)	6,543
Profit attributable to non-controlling interests	423				251		674
Profit attributable to shareholders	3,623	471	97	643	1,484	(449)	5,869
Earnings per share	73.7p	9.6p	2.0p	13.1p	30.2p	(9.2)p	119.4p
Weighted average number of shares (millions)	4,914						4,914

Adjusted results reconciliation 31 December 2017	Total results £m	Intangible asset amortisation £m	Intangible asset impairment £m	Major restructuring £m	Transaction -related £m	Divestments, significant legal and other items £m	US tax reform £m	Adjusted results £m
Turnover	30,186							30,186
Cost of sales	(10,342)	546	400	545	80	–		(8,771)
Gross profit	19,844	546	400	545	80	–		21,415
Selling, general and administration	(9,672)			248		83		(9,341)
Research and development	(4,476)	45	288	263		18		(3,862)
Royalty income	356							356
Other operating income/(expense)	(1,965)				1,519	(220)	666	–
Operating profit	4,087	591	688	1,056	1,599	(119)	666	8,568
Net finance costs	(669)			4		8		(657)
Profit on disposal of associates	94					(94)		–
Share of after tax profits of associates and joint ventures	13							13
Profit before taxation	3,525	591	688	1,060	1,599	(205)	666	7,924
Taxation	(1,356)	(134)	(176)	(209)	(619)	(251)	1,078	(1,667)
Tax rate	*38.5%*							*21.0%*
Profit after taxation	2,169	457	512	851	980	(456)	1,744	6,257
Profit attributable to non-controlling interests	637				42		114	793
Profit attributable to shareholders	1,532	457	512	851	938	(456)	1,630	5,464
Earnings per share	31.4p	9.4p	10.5p	17.4p	19.2p	(9.4)p	33.3p	111.8p
Weighted average number of shares (millions)	4,886							4,886

Group financial review continued

Adjusting items continued

Intangible asset amortisation and impairment

Intangible asset amortisation was £580 million compared with £591 million in 2017. Intangible asset impairments related to commercial and Pharmaceuticals R&D development assets were £116 million (2017 – £688 million). The 2017 charge included impairments related to the withdrawal of *Tanzeum* and a number of other commercial and Pharmaceuticals R&D development assets. These charges were non-cash items.

Major restructuring and integration

Within the Pharmaceuticals sector, the highly regulated manufacturing operations and supply chains and long lifecycle of the business mean that restructuring programmes, particularly those that involve the rationalisation or closure of manufacturing or R&D sites, are likely to take several years to complete.

Major restructuring costs are those related to specific Board-approved Major restructuring programmes. Major restructuring programmes, including integration costs following material acquisitions, are those that are structural and are of a significant scale where the costs of individual or related projects exceed £25 million. Other ordinary course smaller scale restructuring costs are retained within Total and Adjusted results.

The Board approved a new Major restructuring programme in July 2018, which is designed to significantly improve the competitiveness and efficiency of our cost base with savings delivered primarily through supply chain optimisation and reductions in administrative costs.

Total Major restructuring charges incurred in 2018 were £809 million (2017 – £1,056 million), analysed as follows:

	2018			2017		
	Cash £m	**Non-cash £m**	**Total £m**	Cash £m	Non-cash £m	Total £m
Combined restructuring and integration programme	**330**	**110**	**440**	531	525	1,056
2018 major restructuring programme	**279**	**90**	**369**	–	–	–
	609	**200**	**809**	531	525	1,056

Non-cash charges arising under the existing Combined restructuring and integration programme primarily related to the write-down of assets as part of the announced plans to reduce the manufacturing network. Cash charges arose from restructuring in the Europe and International Pharmaceuticals commercial operations and some manufacturing sites. Non-cash charges under the 2018 major restructuring programme primarily related to announced plans to restructure the manufacturing network and cash charges to date under the 2018 major restructuring programme primarily related to restructuring in the US Pharmaceuticals commercial operation, as well as some manufacturing sites and central functions.

Total cash payments for the two programmes made in the year were £537 million (2017 – £555 million).

The analysis of major restructuring charges by business was as follows:

	2018 £m	2017 £m
Pharmaceuticals	**563**	682
Vaccines	**104**	177
Consumer Healthcare	**72**	137
	739	996
Corporate & central functions	**70**	60
Total Major restructuring charges	**809**	1,056

The analysis of Major restructuring charges by Income statement line was as follows:

	2018 £m	2017 £m
Cost of sales	**443**	545
Selling, general and administration	**315**	248
Research and development	**49**	263
Other operating income/(expense)	**2**	-
Total Major restructuring charges	**809**	1,056

The Combined restructuring and integration programme delivered incremental annual cost savings in the year of £0.3 billion. Given its relatively recent launch, the benefit delivery this year from the 2018 major restructuring programme was not material.

The analysis of incremental annual cost savings in the year by Income statement line was as follows:

	2018 £bn	2017 £bn
Cost of sales	**0.2**	0.2
Selling, general and administration	**0.1**	0.4
Research and development	**-**	0.1
	0.3	0.7

Total cash charges for the Combined restructuring and integration programme are now expected to be approximately £4.1 billion with non-cash charges up to £1.6 billion. The programme has now delivered approximately £3.9 billion of annual savings, including an estimated currency benefit of £0.3 billion. The programme is now expected to deliver by 2020 total annual savings of £4.4 billion on a constant currency basis, including an estimated benefit of £0.4 billion from currency on the basis of 2018 average exchange rates.

The 2018 major restructuring programme is expected to cost £1.7 billion over the period to 2021, with cash costs of £0.8 billion and non-cash costs of £0.9 billion, and is expected to deliver annual savings of around £400 million by 2021 (at 2018 rates). These savings will be fully re-invested to help fund targeted increases in R&D and commercial support of new products.

Adjusting items continued

Transaction-related adjustments

Transaction-related adjustments resulted in a net charge of £1,977 million (2017 – £1,599 million). This primarily reflected £1,846 million of accounting charges for the re-measurement of the contingent consideration liabilities related to our acquisitions of the former Shionogi-ViiV Healthcare joint venture and the former Novartis Vaccines business, the value attributable to the Consumer Healthcare Joint Venture put option held by Novartis and the liabilities for the Pfizer put option and Pfizer and Shionogi preferential dividends in ViiV Healthcare.

Charge/(credit)	2018 £m	2017 £m
Consumer Healthcare Joint Venture put option	**658**	986
Contingent consideration on former Shionogi-ViiV Healthcare Joint Venture (including Shionogi preferential dividends)	**1,188**	556
ViiV Healthcare put options and Pfizer preferential dividends	**(58)**	(126)
Contingent consideration on former Novartis Vaccines business	**58**	101
Other adjustments	**131**	82
Total transaction-related charges	**1,977**	1,599

A net charge of £658 million relating to the Consumer Healthcare Joint Venture represented the re-measurement of the valuation of the Consumer Healthcare put option to the agreed valuation of $13 billion (£9.2 billion on signing), together with an increase due to movements in exchange rates, which was largely offset by gains on hedging contracts.

The £1,188 million charge relating to the contingent consideration for the former Shionogi-ViiV Healthcare Joint Venture represented a £758 million increase in the valuation of the contingent consideration due to Shionogi, primarily as a result of updated exchange rate assumptions and sales forecasts following the GEMINI study completed in Q2 2018, together with a £430 million unwind of the discount.

Other adjustments included a £51 million charge reflecting the release of an indemnity asset relating to the tax treatment of inventory acquired as part of the Novartis Vaccines acquisition, with a corresponding offset in tax, as well as acquisition costs relating to our acquisition of Tesaro completed in January 2019 and the announced agreement with Pfizer to combine our consumer healthcare businesses.

Contingent consideration cash payments which are made to Shionogi and other companies reduce the balance sheet liability and hence are not recorded in the income statement. Total contingent consideration cash payments in the year amounted to £1,137 million (2017 – £685 million). This included a cash milestone paid to Novartis of $450 million (£317 million) as well as cash payments made by ViiV Healthcare to Shionogi in relation to its contingent consideration liability (including preferential dividends) which amounted to £793 million (2017 – £671 million).

An explanation of the accounting for the non-controlling interests in ViiV Healthcare is set out on page 41.

Divestments, significant legal charges and other items

Divestments and other items included the profit on a number of asset disposals, including tapinarof, a gain arising from the increase in value of the shares in Hindustan Unilever Limited to be received on the disposal of *Horlicks* and other Consumer Healthcare brands, which is expected to complete by the end of 2019, net of disposal costs, as well as equity investment impairments and certain other adjusting items. A charge of £33 million (2017 – £68 million) for significant legal matters included the benefit of the settlement of existing matters as well as provisions for ongoing litigation. Significant legal cash payments were £39 million (2017 – £192 million).

Group financial review continued

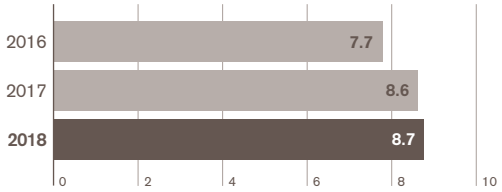
Adjusted results

Adjusted operating profit (£bn)

£8.7bn

AER growth 2%

CER growth 6%



GSK uses a number of adjusted, non-IFRS, measures to report the performance of its business. Adjusted results and other non-IFRS measures may be considered in addition to, but not as a substitute for or superior to, information presented in accordance with IFRS. Adjusted results and other non-IFRS measures are defined on pages 40 to 42.

Cost of sales

	2018		2017		Growth	
	£m	**% of turnover**	£m	% of turnover	£%	CER%
Cost of sales	**(9,178)**	**(29.8)**	(8,771)	(29.1)	5	6

Cost of sales as a percentage of turnover was 29.8%, up 0.7 percentage points at AER, and 0.4 percentage points in CER terms compared with 2017. This primarily reflected continued adverse pricing pressure in Pharmaceuticals, particularly in Respiratory, and Established Vaccines, as well as increased input costs and an adverse comparison with the benefit of a settlement for lost third-party supply volume in 2017 in Vaccines. This was partly offset by a more favourable product mix in Vaccines and Consumer Healthcare, particularly with the launch of *Shingrix*, as well as a further contribution from integration and restructuring savings in all three businesses.

Selling, general and administration

	2018		2017		Growth	
	£m	**% of turnover**	£m	% of turnover	£%	CER%
Selling, general and administration	**(9,462)**	**(30.7)**	(9,341)	(30.9)	1	4

SG&A costs as a percentage of turnover were 30.7%, 0.2 percentage points lower at AER than in 2017 and 0.3 percentage points lower on a CER basis. This reflected an increase of 1% AER, 4% CER, primarily resulting from increased investment in promotional product support, particularly for new launches in Respiratory, HIV and Vaccines, partly offset by tight control of ongoing costs, particularly in non-promotional and back office spending, across all three businesses.

Research and development

	2018		2017		Growth	
	£m	**% of turnover**	£m	% of turnover	£%	CER%
Research and development	**(3,735)**	**(12.1)**	(3,862)	(12.8)	(3)	(2)

R&D expenditure was £3,735 million (12.1% of turnover), 3% AER, 2% CER lower than 2017, primarily reflecting the favourable comparison with the impact of the Priority Review Voucher purchased and utilised in 2017 and the benefit of the prioritisation initiatives started in the second half of 2017. This was partly offset by increased investment in the progression of a number of mid and late-stage programmes, particularly in Oncology, as well as the provision for the costs payable to a third party relating to the use of a Priority Review Voucher awarded and utilised in 2018.

	2018	2017 (revised)	Growth	
	£m	£m	£%	CER%
Discovery	**892**	1,007	(11)	(10)
Development	**1,332**	1,423	(6)	(5)
Facilities and central support functions	**600**	576	4	6
Total Pharmaceuticals	**2,824**	3,006	(6)	(5)
Vaccines R&D	**673**	621	8	8
Consumer Healthcare R&D	**238**	235	1	3
Research and development	**3,735**	3,862	(3)	(2)

Adjusted R&D expenditure declined 3% AER, 2% CER with Pharmaceuticals down 6% AER, 5% CER. The decline in Discovery reflected the transfer of certain Oncology assets to the Development phase. The decline in Development primarily reflects the comparison with the impact of the utilisation of the Priority Review Voucher in 2017 and the benefit of the prioritisation initiatives started in the second half of 2017. This was partly offset by increased investment in the progression of a number of mid and late-stage programmes, particularly in Oncology, and the provision for costs payable to a third party relating to the use of a Priority Review Voucher awarded in 2018. The growth in Technology, facilities and functional support costs primarily reflected increased investments in data analytics.

Royalty income

Royalty income was £299 million (2017 – £356 million), the reduction primarily reflecting the patent expiry of *Cialis*, partly offset by an increase in the *Gardasil* royalty.

Adjusted operating profit

Adjusted operating profit was £8,745 million, 2% higher at AER compared with 2017 and 6% higher at CER on a turnover increase of 5%. The Adjusted operating margin of 28.4% was flat at AER compared with 2017 but 0.5 percentage points higher on a CER basis. This reflected the benefit from sales growth at CER in all three businesses, a more favourable mix, primarily in Vaccines and Consumer Healthcare, the benefits of prioritisation of R&D expenditure and the comparison with the impact of the Priority Review Voucher utilised and expensed in 2017 as well as continued tight control of ongoing costs across all three businesses. This was partly offset by continuing pricing pressure, particularly in Respiratory, increased input costs, the comparison with the benefit in Q2 2017 of a settlement for lost third-party supply volume in Vaccines, investments in promotional product support, particularly for new launches in Respiratory, HIV and Vaccines and a reduction in royalty income.

Adjusted results continued

Adjusted operating profit by business

	2018		2017		Growth	
	£m	Margin %	£m	Margin %	£%	CER%
Pharmaceuticals	**8,420**	**48.8**	8,667	50.2	(3)	–
Pharmaceuticals R&D	**(2,676)**		(2,740)		(2)	(1)
Pharmaceuticals	**5,744**	**33.3**	5,927	34.3	(3)	–
Vaccines	**1,943**	**33.0**	1,644	31.9	18	25
Consumer Healthcare	**1,517**	**19.8**	1,373	17.7	10	15
	9,204	**29.9**	8,944	29.6	3	7
Corporate & other unallocated costs	**(459)**		(376)		22	15
Adjusted operating profit	**8,745**	**28.4**	8,568	28.4	2	6

Pharmaceuticals operating profit

Pharmaceuticals operating profit was £5,744 million, down 3% AER but flat at CER on a turnover increase of 2% CER. The operating margin of 33.3% was 1.0 percentage points lower at AER than in 2017 and 0.9 percentage points lower on a CER basis. This primarily reflected the continued impact of lower prices, particularly in Respiratory, and the broader transition of our Respiratory portfolio, increased investment in new product support and a reduction in royalty income. This was partly offset by the benefits of prioritisation within R&D and a favourable comparison with the impact of the Priority Review Voucher purchased in 2017.

Vaccines operating profit

Vaccines operating profit was £1,943 million, 18% AER, 25% CER higher than in 2017 on a turnover increase of 16% CER. The operating margin of 33.0% was 1.1 percentage points higher at AER than in 2017 and 2.5 percentage points higher on a CER basis. This was primarily driven by enhanced operating leverage from strong sales growth, an improved product mix, including the impact of the launch of *Shingrix*, together with further restructuring and integration benefits. This was partly offset by the comparison with the benefit of a settlement for lost third-party supply volume recorded in 2017, increased supply chain costs and increased SG&A investments to support new launches and business growth.

Consumer Healthcare operating profit

Consumer Healthcare operating profit was £1,517 million, up 10% AER, 15% CER on a turnover increase of 2% CER. The operating margin of 19.8% was 2.1 percentage points higher than in 2017 and 2.2 percentage points higher on a CER basis. This primarily reflected improved product mix and manufacturing restructuring and integration benefits, as well as continued tight control of promotional and other operating expenses.

Net finance costs

Finance income	2018 £m	2017 £m
Interest and other income	**81**	63
Fair value movements	**–**	2
	81	65
Finance expense		
Interest expense	**(717)**	(720)
Unwinding of discounts on liabilities	**(5)**	(4)
Remeasurements and fair value movements	**3**	(4)
Other finance expense	**(60)**	6
	(779)	(722)

Net finance costs were £698 million compared with £657 million in 2017. The increase reflected higher debt levels following the acquisition from Novartis of its stake in the Consumer Healthcare Joint Venture in June 2018 as well as a £23 million increase in interest on tax arising from settlement of a historic tax matter and an adverse comparison with a provision release of £23 million in 2017 (both reflected in other finance expense). This was partly offset by the benefit of a one-off accounting adjustment to the amortisation of long-term bond interest charges of £20 million (reported through interest expense), the benefit from older bonds and the facilities utilised to fund the acquisition of Novartis' stake in the Consumer Healthcare Joint Venture being refinanced at lower interest rates and fair value gains on hedging instruments.

Share of after tax profits of associates and joint ventures

The share of profits of associates and joint ventures was £31 million (2017 – £13 million), primarily arising from our investment in Innoviva.

Taxation

Tax on Adjusted profit amounted to £1,535 million and represented an effective Adjusted tax rate of 19.0% (2017 – 21.0%). The reduction in the effective Adjusted tax rate in 2018 was primarily driven by the reduction in the US federal tax rate.

Non-controlling interests

The allocation of Adjusted earnings to non-controlling interests amounted to £674 million (2017 – £793 million). The reduction was primarily due to the lower allocation of Consumer Healthcare profits of £118 million (2017– £344 million) following the buyout of Novartis' interest. This was partly offset by an increased allocation of ViiV Healthcare profits of £501 million (2017 – £414 million), and the changes in the proportions of preferential dividends due to each shareholder based on the relative performance of different products, as well as increases in the allocation due to higher net profits in some of the Group's other entities with non-controlling interests.

Adjusted earnings per share

Adjusted EPS of 119.4p was up 7% AER, 12% CER, compared with a 6% CER increase in Adjusted operating profit, primarily as a result of a reduced non-controlling interest allocation of Consumer Healthcare profits and a lower Adjusted tax rate.

Group financial review continued

Cash generation and conversion

A summary of the consolidated cash flow statement is set out below.

	2018 £m	2017 £m
Net cash inflow from operating activities	**8,421**	6,918
Net cash outflow from investing activities	**(1,553)**	(1,443)
Net cash outflow from financing activities	**(6,389)**	(6,380)
Increase/(decrease) in cash and bank overdrafts	**479**	(905)
Cash and bank overdrafts at beginning of year	**3,600**	4,605
Increase/(decrease) in cash and bank overdrafts	**479**	(905)
Exchange adjustments	**8**	(100)
Cash and bank overdrafts at end of year	**4,087**	3,600
Cash and bank overdrafts at end of year comprise:		
Cash and cash equivalents	**3,874**	3,833
Cash and cash equivalents reported in assets held for sale	**485**	–
Overdrafts	**(272)**	(233)
	4,087	3,600

The net cash inflow from operating activities for the year was £8,421 million (2017 – £6,918 million). The increase primarily reflected improved operating profits, a smaller increase in working capital as a result of a reduction of inventory balances and a strong focus on collections, the favourable timing of payments for returns and rebates, and reduced legal settlement and restructuring payments, partly offset by a negative currency impact on operating profit.

Total cash payments to Shionogi in relation to the ViiV Healthcare contingent consideration liability in the year were £793 million (2017 – £671 million), of which £703 million was recognised in cash flows from operating activities and £90 million was recognised in contingent consideration paid within investing cash flows. These payments are deductible for tax purposes.

Capital expenditure and financial investment

Cash payments for tangible and intangible fixed assets amounted to £1,796 million (2017– £2,202 million) and disposals realised £453 million (2017 – £807 million). Cash payments to acquire equity investments amounted to £309 million (2017 – £80 million), primarily relating to 23andMe, and sales of equity investments realised £151 million (2017 – £64 million).

Free cash flow

Free cash flow is the amount of cash generated by the Group after meeting our obligations for contingent consideration, interest, tax and dividends paid to non-controlling interests, and after capital expenditure on property, plant and equipment and intangible assets.

	2018 £m	2017 (revised) £m
Free cash inflow	**5,692**	3,485

Free cash flow was £5,692 million for the year (2017 – £3,485 million). The increase primarily reflected improved operating profits, a smaller increase in working capital following a reduction of inventory balances and a strong focus on collections, the favourable timing of payments for returns and rebates, reduced legal settlement costs and restructuring payments, lower capital expenditure, including a favourable comparison with the impact of the Priority Review Voucher in 2017, increased disposals of intangible assets of £256 million (2017 – £48 million), primarily relating to the disposal of tapinarof, and reduced dividend payments to non-controlling interests. This was partly offset by a negative currency impact on operating profit and increased contingent consideration payments including the $450 million (£317 million) milestone paid to Novartis in the year.

Reconciliation of net cash inflow from operating activities to free cash flow

A reconciliation of net cash inflow from operating activities, which is the closest equivalent IFRS measure to free cash flow, is shown below.

	2018 £m	2017 (revised) £m
Net cash inflow from operating activities	**8,421**	6,918
Purchase of property, plant and equipment	**(1,344)**	(1,545)
Purchase of intangible assets	**(452)**	(657)
Proceeds from sale of property, plant and equipment	**168**	281
Proceeds from disposal of intangible assets	**256**	48
Interest paid	**(766)**	(781)
Interest received	**72**	64
Dividends from associates and joint ventures	**39**	6
Contingent consideration paid (reported in investing activities)	**(153)**	(91)
Contribution from non-controlling interests	**21**	21
Distributions to non-controlling interests	**(570)**	(779)
Free cash flow	**5,692**	3,485

Cash generation and conversion continued

Future cash flow

Over the long term, we expect that future cash generated from operations will be sufficient to fund our operating and debt servicing costs, normal levels of capital expenditure, obligations under existing licensing agreements, expenditure arising from restructuring programmes and other routine outflows including tax, pension contributions and dividends, subject to the 'Principal risks and uncertainties' discussed on pages 241 to 250. We may from time to time have additional demands for finance, such as for acquisitions, including potentially acquiring increased ownership interests in the ViiV Healthcare business where minority shareholders hold put options. We have access to multiple sources of liquidity from short and long-term capital markets and financial institutions for such needs, in addition to the cash flow from operations.

Investment appraisal and capital allocation

We have a strong framework for capital allocation, including a board to govern the allocation of capital between our businesses. We utilise a consistent cash return on invested capital (CROIC) methodology to prioritise investment across the Group as a whole, so that we can more effectively compare the returns from each of the businesses as we allocate capital between them. We also consider the impact on EPS and our credit profile where relevant.

The discount rate used to perform financial analyses is decided internally, to allow determination of the extent to which investments cover our cost of capital. For individual investments the discount rate may be adjusted to take into account specific country, business or project risk.

Working capital

	2018	2017
Working capital percentage of turnover (%)	**23**	22
Working capital conversion cycle (days)	**201**	191

The increase of 10 days in 2018 compared with 2017 was predominantly due to an adverse impact from exchange of approximately five days as well as a reduced denominator due to lower restructuring and impairment costs in 2018. Excluding these factors, significant improvements were made in working capital relative to the growth in the business, with reduced inventory as a result of tight control of inventory levels and stronger collections of receivables.

Group financial review continued

Financial position and resources

	2018 £m	2017 £m
Assets		
Non-current assets		
Property, plant and equipment	**11,058**	10,860
Goodwill	**5,789**	5,734
Other intangible assets	**17,202**	17,562
Investments in associates and joint ventures	**236**	183
Other investments	**1,322**	918
Deferred tax assets	**3,887**	3,796
Derivative financial instruments	**69**	8
Other non-current assets	**1,576**	1,413
Total non-current assets	**41,139**	40,474
Current assets		
Inventories	**5,476**	5,557
Current tax recoverable	**229**	258
Trade and other receivables	**6,423**	6,000
Derivative financial instruments	**188**	68
Liquid investments	**84**	78
Cash and cash equivalents	**3,874**	3,833
Assets held for sale	**653**	113
Total current assets	**16,927**	15,907
Total assets	**58,066**	56,381
Liabilities		
Current liabilities		
Short-term borrowings	**(5,793)**	(2,825)
Contingent consideration liabilities	**(837)**	(1,076)
Trade and other payables	**(14,037)**	(20,970)
Derivative financial instruments	**(127)**	(74)
Current tax payable	**(965)**	(995)
Short-term provisions	**(732)**	(629)
Total current liabilities	**(22,491)**	(26,569)
Non-current liabilities		
Long-term borrowings	**(20,271)**	(14,264)
Corporation tax payable	**(272)**	(411)
Deferred tax liabilities	**(1,156)**	(1,396)
Pensions and other post-employment benefits	**(3,125)**	(3,539)
Other provisions	**(691)**	(636)
Derivative financial instruments	**(1)**	–
Contingent consideration liabilities	**(5,449)**	(5,096)
Other non-current liabilities	**(938)**	(981)
Total non-current liabilities	**(31,903)**	(26,323)
Total liabilities	**(54,394)**	(52,892)
Net assets	**3,672**	3,489
Equity		
Share capital	**1,345**	1,343
Share premium account	**3,091**	3,019
Retained earnings	**(2,137)**	(6,477)
Other reserves	**2,061**	2,047
Shareholders' equity	**4,360**	(68)
Non-controlling interests	**(688)**	3,557
Total equity	**3,672**	3,489

Property, plant and equipment

Our business is science-based, technology-intensive and highly regulated by governmental authorities. We allocate significant financial resources to the renewal and maintenance of our property, plant and equipment to minimise risks of interruption to production and to ensure compliance with regulatory standards. A number of our processes use hazardous materials.

The total cost of our property, plant and equipment at 31 December 2018 was £22,488 million, with a net book value of £11,058 million. Of this, land and buildings represented £4,404 million, plant and equipment £4,582 million and assets in construction £2,072 million. In 2018, we invested £1,358 million in new property, plant and equipment. This was mainly related to a large number of projects for the renewal, improvement and expansion of facilities at various worldwide sites to support new product development and launches as well as to improve the efficiency of existing supply chains. Property is mainly held freehold. New investment is financed from our liquid resources. At 31 December 2018, we had contractual commitments for future capital expenditure of £665 million and operating lease commitments of £1,138 million. We believe that our property and plant facilities are adequate for our current needs.

We observe stringent procedures and use specialist skills to manage environmental risks from our activities. Environmental issues, sometimes dating from operations now modified or discontinued, are reported under 'Environment' on page 32 and in Note 45 to the financial statements, 'Legal proceedings'.

Goodwill

Goodwill increased to £5,789 million at 31 December 2018, from £5,734 million. The increase primarily reflected the impact of exchange movements, partly offset by the transfer of goodwill to assets held for sale.

Other intangible assets

Other intangible assets include the cost of intangibles acquired from third parties and computer software. The net book value of other intangible assets as at 31 December 2018 was £17,202 million (2017 – £17,562 million). The decrease in 2018 reflected the impact of amortisation and impairment of existing intangibles of £902 million and £134 million respectively, partly offset by the development costs capitalised during the year of £203 million, other additions of £327 million and the impact of exchange movements.

Investments in associates and joint ventures

We held investments in associates and joint ventures with a carrying value at 31 December 2018 of £236 million (2017 – £183 million). The market value at 31 December 2018 was £487 million (2017 – £372 million). The largest of these investments was in Innoviva Inc. which had a book value at 31 December 2018 of £189 million (2017 – £147 million). The market value at 31 December 2018 was £440 million. See Note 20 to the financial statements, 'Investments in associates and joint ventures'.

Financial position and resources continued

Other investments

We held other investments with a carrying value at 31 December 2018 of £1,322 million (2017 – £918 million). The highest value investments held at 31 December 2018 were in 23andMe, which was acquired during the year and had a book value at 31 December 2018 of £229 million, and Theravance Biopharma, Inc. which had a book value at 31 December 2018 of £194 million (2017 – £199 million). The other investments included equity stakes in companies with which we have research collaborations, which provide access to biotechnology developments of potential interest and interests in companies that arise from business divestments.

Derivative financial instruments: assets

We had current derivative financial assets held at fair value of £188 million (2017 – £68 million) and non-current derivative financial assets held at fair value of £69 million (2017 – £8 million). £100 million of current derivative financial assets related to a derivative embedded in the agreement to divest *Horlicks* and other nutritional brands to Unilever plc. See Note 38 for further information. The majority of the remainder of these financial instruments related to foreign exchange contracts both designated and not designated as accounting hedges.

Inventories

Inventory of £5,476 million decreased from £5,557 million in 2017. The decrease primarily reflected tight control of inventory levels.

Trade and other receivables

Trade and other receivables of £6,423 million increased from £6,000 million in 2017, primarily reflecting the impact of higher sales, particularly in Vaccines, partly offset by better collections, together with exchange movements.

Deferred tax assets

Deferred tax assets amounted to £3,887 million (2017 – £3,796 million) at 31 December 2018.

Derivative financial instruments: liabilities

We held current and non-current derivative financial liabilities at fair value of £128 million (2017 – £74 million). This primarily related to foreign exchange contracts both designated and not designated as accounting hedges.

Trade and other payables

At 31 December 2018, trade and other payables were £14,037 million compared with £20,970 million at 31 December 2017. The decrease primarily reflected the elimination of the Consumer Healthcare Joint Venture put option following the buyout of Novartis' interest in the Consumer Healthcare Joint Venture on 1 June 2018. The buyout was primarily funded by utilising the proceeds of bonds issued with maturity dates of between two and twelve years, in both the US and Europe, which raised $6 billion and €2.5 billion respectively. Committed bank facilities financed the remaining amount of the $13 billion transaction.

Provisions

We carried deferred tax provisions and other short-term and non-current provisions of £2,579 million at 31 December 2018 (2017 – £2,661 million). Other provisions at the year-end included £219 million (2017 – £186 million) related to legal and other disputes and £641 million (2017 – £504 million) related to Major restructuring programmes. Provision has been made for legal and other disputes, indemnified disposal liabilities, employee related liabilities and the costs of the restructuring programme to the extent that at the balance sheet date a legal or constructive obligation existed and could be reliably estimated.

Pensions and other post-employment benefits

We account for pension and other post-employment arrangements in accordance with IAS 19. The deficits, net of surpluses, before allowing for deferred taxation were £995 million (2017 – £1,505 million) on pension arrangements and £1,379 million (2017 – £1,496 million) on unfunded post-employment liabilities. The decrease in net deficit was predominantly driven by higher discount rates that we used to discount the value of the liabilities, partly offset by a reduction in UK asset values.

Other non-current liabilities

Other non-current liabilities amounted to £938 million at 31 December 2018 (2017 – £981 million).

Contingent consideration liabilities

Contingent consideration amounted to £6,286 million at 31 December 2018 (2017 – £6,172 million), of which £5,937 million (2017 – £5,542 million) represented the estimated present value of amounts payable to Shionogi relating to ViiV Healthcare and £296 million (2017 – £584 million) represented the estimated present value of contingent consideration payable to Novartis related to the Vaccines acquisition following a milestone payment of $450 million made to Novartis in January 2018.

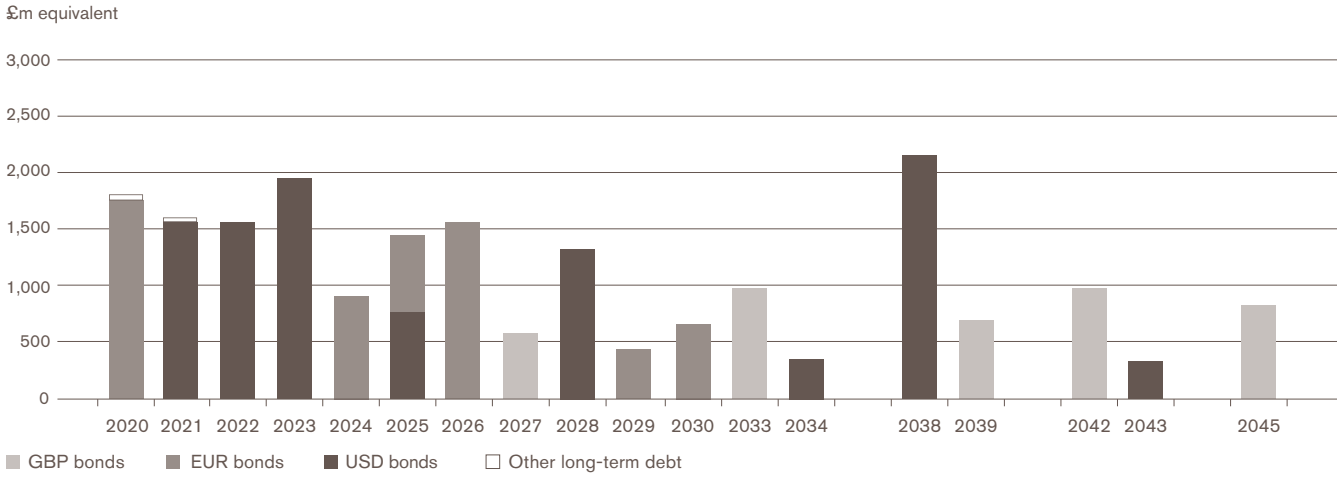
The liability due to Shionogi included £252 million in respect of preferential dividends. The liability for preferential dividends due to Pfizer at 31 December 2018 was £15 million (2017 – £17 million). An explanation of the accounting for the non-controlling interests in ViiV Healthcare is set out on page 41.

Of the contingent consideration payable (on a post-tax basis) at 31 December 2018, £837 million (2017 – £1,076 million) is expected to be paid within one year. The consideration payable for the acquisition of the Shionogi-ViiV Healthcare joint venture and the Novartis Vaccines business is expected to be paid over a number of years. As a result, the total estimated liabilities are discounted to their present values, on a post-tax basis using post-tax discount rates. The Shionogi-ViiV Healthcare contingent consideration liability is discounted at 8.5% and the Novartis Vaccines contingent consideration liability is discounted partly at 8% and partly at 9%.

Group financial review continued

Financial position and resources continued

Maturity profile of long-term debt



Net debt

	2018 £m	2017 £m
Cash, cash equivalents and liquid investments	**3,958**	3,911
Cash, cash equivalents reported in assets held for sale	**485**	–
Borrowings – repayable within one year	**(5,793)**	(2,825)
Borrowings – repayable after one year	**(20,271)**	(14,264)
Net debt	**(21,621)**	(13,178)

At 31 December 2018, net debt was £21.6 billion, compared with £13.2 billion at 31 December 2017, comprising gross debt of £26.1 billion and cash and liquid investments of £4.5 billion, including £0.5 billion reported within Assets held for sale, reflecting the agreement to divest *Horlicks* and the other Consumer Healthcare nutritional brands to Unilever plc. Net debt increased due to the £9.3 billion acquisition from Novartis of the remaining stake in the Consumer Healthcare Joint Venture in June 2018, the £0.2 billion investment in 23andMe, £0.8 billion of unfavourable exchange impacts from the translation of non-Sterling denominated debt, and dividends paid to shareholders of £3.9 billion, partly offset by increased free cash flow of £5.7 billion after the milestone payment to Novartis.

At 31 December 2018, GSK's cash and liquid investments were held as follows:

	2018 £m	2017 £m
Bank balances and deposits	**1,853**	1,715
Bank balances and deposits reported in assets held for sale	**485**	–
US Treasury and Treasury repo only money market funds	**449**	1,715
Liquidity funds	**1,572**	403
Cash and cash equivalents	**4,359**	3,833
Liquid investments – Government securities	**84**	78
	4,443	3,911

Cash and liquid investments of £2.9 billion (2017 – £2.5 billion) were held centrally at 31 December 2018.

The analysis of cash and gross debt after the effects of hedging is as follows.

	2018 £m	2017 £m
Cash and liquid investments	**4,443**	3,911
Gross debt – fixed[1]	**(21,603)**	(16,229)
– floating	**(4,432)**	(805)
– non-interest bearing	**(29)**	(55)
Net debt	**(21,621)**	(13,178)

1 Includes £1.3 billion equivalent of notes swapped from floating to fixed rates via interest rate swaps.

Movements in net debt

	2018 £m	2017 £m
Net debt at beginning of year	**(13,178)**	(13,804)
Increase/(decrease) in cash and bank overdrafts	**479**	(905)
Increase in liquid investments	**–**	(4)
Increase in long-term loans	**(10,138)**	(2,233)
Net repayment of short-term loans	**1,986**	3,200
Exchange movements	**(776)**	585
Other movements	**6**	(17)
Net debt at end of year	**(21,621)**	(13,178)

Financial position and resources continued

Total equity

At 31 December 2018, total equity had increased from £3,489 million at 31 December 2017 to £3,672 million. This primarily reflected the impact of Total profit and the re-measurement gains on defined benefit plans offset by dividends paid and an unfavourable exchange translation impact in the year.

A summary of the movements in equity is set out below.

	2018 £m	2017 £m
Total equity at beginning of year	**3,489**	4,963
Implementation of IFRS 15	**(4)**	–
Implementation of IFRS 9	**(11)**	–
Total equity at beginning of year, as adjusted	**3,474**	4,963
Total comprehensive income for the year	**4,300**	2,882
Dividends to shareholders	**(3,927)**	(3,906)
Ordinary shares issued	**74**	56
Changes in non-controlling interests	**–**	(2)
De-recognition of liabilities with non-controlling interests	**(62)**	–
Shares acquired by ESOP Trusts	**–**	(65)
Share-based incentive plans	**360**	333
Tax on share-based incentive plans	**2**	(4)
Contributions from non-controlling interests	**21**	21
Distributions to non-controlling interests	**(570)**	(789)
Total equity at end of year	**3,672**	3,489

Share purchases

No shares were acquired by the Employee Share Ownership Plan (ESOP) Trusts in 2018 (2017 – £65 million). Shares are held by the Trusts to satisfy future exercises of options and awards under the Group share option and award schemes. A proportion of the shares held by the Trusts are in respect of awards where the rules of the scheme require us to satisfy exercises through market purchases rather than the issue of new shares. The shares held by the Trusts are matched to options and awards granted.

At 31 December 2018, the ESOP Trusts held 41.5 million (2017 – 66.7 million) GSK shares against the future exercise of share options and share awards. The carrying value of £161 million (2017 – £400 million) has been deducted from other reserves. The market value of these shares was £619 million (2017 – £882 million).

During 2018, no shares were repurchased by the company. At 31 December 2018, GSK held 414.6 million shares as Treasury shares (2017 – 414.6 million shares), at a cost of £5,800 million (2017 – £5,800 million), which has been deducted from retained earnings.

No ordinary shares were purchased in the period 1 January 2019 to 1 March 2019 and the company does not expect to make any ordinary share repurchases in the remainder of 2019.

Commitments and contingent liabilities

Financial commitments are summarised in Note 41 to the financial statements, 'Commitments'. Other contingent liabilities are set out in Note 32 to the financial statements, 'Contingent liabilities'.

Contractual obligations and commitments

The following table sets out our contractual obligations and commitments at 31 December 2018 as they fall due for payment.

	Total £m	Under 1 yr £m	1-3 yrs £m	3-5 yrs £m	5 yrs+ £m
Loans	26,154	5,771	3,367	3,562	13,454
Interest on loans	9,418	714	1,383	1,187	6,134
Finance lease obligations	68	24	29	9	6
Finance lease charges	16	5	3	3	5
Operating lease commitments	1,138	223	316	228	371
Intangible assets	4,762	172	420	743	3,427
Property, plant & equipment	665	560	105	–	–
Investments	82	38	32	12	–
Purchase commitments	561	436	124	1	–
Pensions	238	75	119	44	–
Total	43,102	8,018	5,898	5,789	23,397

Commitments in respect of loans and future interest payable on loans are disclosed before taking into account the effect of derivatives.

We have entered into a number of research collaborations to develop new compounds with other pharmaceutical companies. The terms of these arrangements can include upfront fees, equity investments, loans and commitments to fund specified levels of research. In addition, we will often agree to make further payments if future 'milestones' are achieved.

As some of these agreements relate to compounds in the early stages of development, the potential obligation to make milestone payments will continue for a number of years if the compounds move successfully through the development process. Generally, the closer the product is to marketing approval, the greater the probability of success. The amounts shown above within intangible assets represent the maximum that would be paid if all milestones were achieved, and include £4.2 billion which relates to externalised projects in the discovery portfolio. There was a reduction in the commitments in 2018 due to amendments made to existing agreements and obligations which have ceased.

In 2018, we reached a revised agreement with the trustees of the UK pension schemes to make additional contributions, to assist in eliminating the pension deficit identified as part of the 31 December 2017 actuarial funding valuation. The table above includes this commitment but excludes the normal ongoing annual funding requirement in the UK of approximately £140 million. This funding commitment supersedes the previous agreement made in 2016. For further information on pension obligations, see Note 28 to the financial statements, 'Pensions and other post-employment benefits'.

Group financial review continued

Financial position and resources continued

Contingent liabilities

The following table sets out contingent liabilities, comprising discounted bills, performance guarantees, letters of credit and other items arising in the normal course of business, and when they are expected to expire.

	Total £m	Under 1 yr £m	1-3 yrs £m	3-5 yrs £m	5 yrs+ £m
Guarantees	33	13	13	4	3
Other contingent liabilities	60	17	13	11	19
Total	93	30	26	15	22

In the normal course of business, we have provided various indemnification guarantees in respect of business disposals in which legal and other disputes have subsequently arisen. A provision is made where an outflow of resources is considered probable and a reliable estimate can be made of the likely outcome of the dispute and this is included in Note 29 to the financial statements, 'Other provisions'.

We provide for the outcome of tax, legal and other disputes when an outflow of resources is considered probable and a reliable estimate of the outflow may be made. At 31 December 2018, other than for those disputes where provision has been made, it was not possible to make a reliable estimate of the potential outflow of funds that might be required to settle disputes where the possibility of there being an outflow was more than remote.

The ultimate liability for such matters may vary significantly from the amounts provided and is dependent upon negotiations with the relevant tax authorities and the outcome of litigation proceedings, where relevant. This is discussed further in 'Principal risks and uncertainties' on pages 241 to 250 and Note 45 to the financial statements, 'Legal proceedings'.

ViiV Healthcare contingent consideration liability

The contingent consideration payable to Shionogi amounted to £5,937 million at 31 December 2018 (2017 – £5,542 million), discounted at 8.5%. The undiscounted value was £8,885 million at 31 December 2018.

Treasury policies

We report in Sterling and pay dividends out of Sterling cash flows. The role of Treasury is to monitor and manage the Group's external and internal funding requirements and financial risks in support of our strategic objectives. GSK operates on a global basis, primarily through subsidiary companies, and we manage our capital to ensure that our subsidiaries are able to operate as going concerns and to optimise returns to shareholders through an appropriate balance of debt and equity. Treasury activities are governed by policies approved annually by the Board of Directors, and most recently on 18 October 2018. A Treasury Management Group (TMG) meeting, chaired by our Chief Financial Officer, takes place on a regular basis to review Treasury activities. Its members receive management information relating to these activities.

Treasury operations

The objective of GSK's Treasury activities is to minimise the post-tax net cost of financial operations and reduce its volatility in order to benefit earnings and cash flows. GSK uses a variety of financial instruments to finance its operations and derivative financial instruments to manage market risks from these operations. Derivatives principally comprise foreign exchange forward contracts and swaps which are used to swap borrowings and liquid assets into currencies required for Group purposes as well as interest rate swaps which are used to manage exposure to financial risks from changes in interest rates.

Derivatives are used exclusively for hedging purposes in relation to underlying business activities and not as trading or speculative instruments.

Capital management

Our financial strategy, implemented through the Group's Financial architecture, supports GSK's strategic priorities and it is regularly reviewed by the Board. We manage the capital structure of the Group through an appropriate mix of debt and equity. We continue to manage our financial policies to a credit profile that particularly targets short-term credit ratings of A-1 and P-1 while maintaining single A long-term ratings consistent with those targets.

Our long-term credit rating with Standard and Poor's is A+ (negative outlook) and with Moody's Investor Services ('Moody's') is A2 (negative outlook). Our short-term credit ratings are A-1 and P-1 with Standard and Poor's and Moody's respectively.

Liquidity risk management

Our policy is to borrow centrally in order to meet anticipated funding requirements. Our cash flow forecasts and funding requirements are monitored by the TMG on a regular basis. Our strategy is to diversify liquidity sources using a range of facilities and to maintain broad access to financial markets.

Each day, we sweep cash from a number of global subsidiaries to central Treasury accounts for liquidity management purposes.

Interest rate risk management

Our objective is to minimise the effective net interest cost and to balance the mix of debt at fixed and floating interest rates over time. The policy on interest rate risk management limits the net amount of floating rate debt to a specific cap, reviewed and agreed no less than annually by the Board.

Foreign exchange risk management

Foreign currency transaction exposures arising on external trade flows are not normally hedged. Foreign currency transaction exposures arising on internal trade flows are selectively hedged. Our objective is to minimise the exposure of overseas operating subsidiaries to transaction risk by matching local currency income with local currency costs where possible. GSK's internal trading transactions are matched centrally and we manage inter-company payment terms to reduce foreign currency risk. Foreign currency cash flows can be hedged selectively under the management of Treasury and the TMG. These include hedges of the foreign exchange risk arising from acquisitions and disposals of assets. Where possible, we manage the cash surpluses or borrowing requirements of subsidiary companies centrally using forward contracts to hedge future repayments back into the originating currency.

Treasury policies continued

In order to reduce foreign currency translation exposure, we seek to denominate borrowings in the currencies of our principal assets and cash flows. These are primarily denominated in US Dollars, Euros and Sterling. Borrowings can be swapped into other currencies as required.

Borrowings denominated in, or swapped into, foreign currencies that match investments in overseas Group assets may be treated as a hedge against the relevant assets. Forward contracts in major currencies are also used to reduce exposure to the Group's investment in overseas Group assets. The TMG reviews the ratio of borrowings to assets for major currencies regularly.

Counterparty risk management

We set global counterparty limits for each of our banking and investment counterparties based on long-term credit ratings from Moody's and Standard and Poor's. Treasury's usage of these limits is monitored daily by a Corporate Compliance Officer (CCO) who operates independently of Treasury. Any breach of these limits would be reported to the CFO immediately.

The CCO also monitors the credit rating of these counterparties and, when changes in ratings occur, notifies Treasury so that changes can be made to investment levels or to authority limits as appropriate. In addition, relationship banks and their credit ratings are reviewed regularly and a report is presented annually to the TMG for approval.

Critical accounting policies

The consolidated financial statements are prepared in accordance with IFRS, as adopted for use in the European Union, and also with IFRS as issued by the IASB, following the accounting policies approved by the Board and described in Note 2 to the financial statements, 'Accounting principles and policies'.

We are required to make estimates and assumptions that affect the amounts of assets, liabilities, revenue and expenses reported in the financial statements. Actual amounts and results could differ from those estimates.

The critical accounting policies relate to the following areas:

- Turnover
- Taxation (Note 14)
- Legal and other disputes (Notes 29 and 45)
- Intangible asset impairments (Note 19)
- Business combinations (Note 38)
- Pensions and other post-employment benefits (Note 28).

Information on the judgements and estimates made in these areas is given in Note 3 to the financial statements, 'Key accounting judgements and estimates'.

Turnover

In respect of the Turnover accounting policy, our largest business is US Pharmaceuticals, and the US market has the most complex arrangements for rebates, discounts and allowances. The following briefly describes the nature of the arrangements in existence in our US Pharmaceuticals business:

- We have arrangements with certain indirect customers whereby the customer is able to buy products from wholesalers at reduced prices. A chargeback represents the difference between the invoice price to the wholesaler and the indirect customer's contractual discounted price. Accruals for estimating chargebacks are calculated based on the terms of each agreement, historical experience and product growth rates
- Customer rebates are offered to key managed care and Group Purchasing Organisations and other direct and indirect customers. These arrangements require the customer to achieve certain performance targets relating to the value of product purchased, formulary status or pre-determined market shares relative to competitors. The accrual for customer rebates is estimated based on the specific terms in each agreement, historical experience and product growth rates
- The US Medicaid programme is a state-administered programme providing assistance to certain poor and vulnerable patients. In 1990, the Medicaid Drug Rebate Program was established to reduce State and Federal expenditure on prescription drugs. In 2010, the Patient Protection and Affordable Care Act became law. We participate by providing rebates to states. Accruals for Medicaid rebates are calculated based on the specific terms of the relevant regulations or the Patient Protection and Affordable Care Act
- Cash discounts are offered to customers to encourage prompt payment. These are accrued for at the time of invoicing and adjusted subsequently to reflect actual experience
- We record an accrual for estimated sales returns by applying historical experience of customer returns to the amounts invoiced, together with market related information such as stock levels at wholesalers, anticipated price increases and competitor activity.

A reconciliation of gross turnover to net turnover for the US Pharmaceuticals business is as follows:

	2018		2017		2016	
	£m	**Margin %**	(revised) £m	Margin %	(revised) £m	Margin %
Gross turnover	**18,227**	**100**	16,365	100	13,363	100
Market driven segments	**(5,147)**	**(28)**	(4,040)	(25)	(2,731)	(21)
Government mandated and state programs	**(4,594)**	**(25)**	(3,933)	(24)	(3,063)	(23)
Cash discounts	**(361)**	**(2)**	(330)	(2)	(261)	(2)
Customer returns	**(98)**	**(1)**	(97)	(1)	(98)	(1)
Prior year adjustments	**98**	**1**	86	1	109	1
Other prior year items	**(59)**	**–**	(23)	–	(25)	–
Other items	**(613)**	**(4)**	(460)	(3)	(457)	(3)
Total deductions	**(10,774)**	**(59)**	(8,797)	(54)	(6,526)	(49)
Net turnover	**7,453**	**41**	7,568	46	6,837	51

Market-driven segments consist primarily of Managed Care and Medicare plans with which we negotiate contract pricing that is honoured via rebates and chargebacks. Mandated segments consist primarily of Medicaid and Federal Government programmes which receive government-mandated pricing via rebates and chargebacks.

Group financial review continued

Critical accounting policies continued

The increased deductions in the market driven segments of the gross turnover to net turnover reconciliation primarily reflected higher rebates and chargebacks on Respiratory products, and on *Advair* in particular. During 2018, *Advair* accounted for 15% of US Pharmaceuticals turnover and approximately 34% of the total deduction for rebates and returns, and the Respiratory portfolio as a whole accounted for approximately 78% of the total deduction in the year. *Advair* continued to suffer pricing pressures in 2018 as we sought to transition our Respiratory portfolio to newer products.

The balance sheet accruals for rebates, discounts, allowances and returns for the US Pharmaceuticals and Vaccines businesses are managed on a combined basis. At 31 December 2018, the total accrual amounted to £4,356 million (2017 – £2,837 million).

A monthly process is operated to monitor inventory levels at wholesalers for any abnormal movements. This process uses gross sales volumes, prescription volumes based on third party data sources and information received from key wholesalers. The aim of this is to maintain inventories at a consistent level from year to year based on the pattern of consumption.

On this basis, US Pharmaceuticals and Vaccines inventory levels at wholesalers and in other distribution channels at 31 December 2018 were estimated to amount to approximately four weeks of turnover. This calculation uses third party information, the accuracy of which cannot be totally verified, but is believed to be sufficiently reliable for this purpose.

Legal and other disputes

In respect of the accounting policy for Legal and other disputes, the following briefly describes the process by which we determine the level of provision that is necessary.

In accordance with the requirements of IAS 37, 'Provisions, contingent liabilities and contingent assets', we provide for anticipated settlement costs where an outflow of resources is considered probable and a reliable estimate may be made of the likely outcome of the dispute and legal and other expenses arising from claims against the Group.

We may become involved in significant legal proceedings, in respect of which it is not possible to make a reliable estimate of the expected financial effect, if any, that could result from ultimate resolution of the proceedings. In these cases, appropriate disclosure about such cases would be included in the Annual Report, but no provision would be made.

This position could change over time and, therefore, there can be no assurance that any losses that result from the outcome of any legal proceedings will not exceed by a material amount the amount of the provisions reported in the Group's financial statements.

Like many pharmaceutical companies, we are faced with various complex product liability, anti-trust and patent litigation, as well as investigations of its operations conducted by various governmental regulatory agencies. Throughout the year, the General Counsel of the Group, as head of the Group's legal function, and the Senior Vice President and Head of Global Litigation for the Group, who is responsible for all litigation and government investigations, routinely brief the Chief Executive Officer, the Chief Financial Officer and the Board of Directors on the significant litigation pending against the Group and governmental investigations of the Group.

These meetings, as appropriate, detail the status of significant litigation and government investigations and review matters such as the number of claims notified to us, information on potential claims not yet notified, assessment of the validity of claims, progress made in settling claims, recent settlement levels and potential reimbursement by insurers.

The meetings also include an assessment of whether or not there is sufficient information available for us to be able to make a reliable estimate of the potential outcomes of the disputes. Often, external counsel assisting us with various litigation matters and investigations will also assist in the briefing of the Board and senior management. Following these discussions, for those matters where it is possible to make a reliable estimate of the amount of a provision, if any, that may be required, the level of provision for legal and other disputes is reviewed and adjusted as appropriate. These matters are discussed further in Note 45 to the financial statements, 'Legal proceedings'.

Strategic report

The Strategic report was approved by the Board of Directors on 11 March 2019

Simon Dingemans
Chief Financial Officer
11 March 2019