AstraZeneca

What science can do

AstraZeneca Annual Report and Form 20-F Information 2017

Welcome

We are a global, science-led biopharmaceutical business and in this Annual Report we report on the progress we made in 2017 in pushing the boundaries of science to deliver life-changing medicines.

Science *can*

Expand treatment options

Oncology | From page 48

Understand disease

Cardiovascular & Metabolic Diseases | From page 52

Transform outcomes

Respiratory | From page 56

Front cover and inside front cover image:
Upstream intervention in the inflammatory cascade.

When lungs are stressed by allergens, pathogens or irritants, epithelial cells produce cytokines that trigger multiple downstream inflammatory pathways in the lungs. AstraZeneca is researching antibodies that bind to these upstream epithelial cytokines to prevent a range of inflammatory responses.

Important information for readers of this Annual Report
For more information in relation to the inclusion of Reported performance, Core financial measures and constant exchange rate (CER) growth rates as used in this Annual Report, please see the Financial Review on page 66.

Definitions
The Glossary and the Market definitions table from page 235 are intended to provide a useful guide to terms and AstraZeneca's definitions of markets, as well as to acronyms and abbreviations, used in this Annual Report.

Use of terms
In this Annual Report, unless the context otherwise requires, 'AstraZeneca', 'the Group', 'we', 'us' and 'our' refer to AstraZeneca PLC and its consolidated entities.

Cautionary statement regarding forward-looking statements
A cautionary statement regarding forward-looking statements and other essential information relating to this Annual Report can be found on page 240.

Directors' Report
The following sections make up the Directors' Report, which has been prepared in accordance with the requirements of the Companies Act 2006:

- Chairman's Statement
- Chief Executive Officer's Review
- Business Review
- Therapy Area Review
- Financial Review: Financial risk management
- Corporate Governance: including the Audit Committee Report and Corporate Governance Report
- Directors' Responsibility Statement
- Development Pipeline
- Sustainability: supplementary information
- Shareholder Information

Strategic Report
The following sections make up the Strategic Report, which has been prepared in accordance with the requirements of the Companies Act 2006:

- AstraZeneca at a glance
- Chairman's Statement
- Chief Executive Officer's Review
- Marketplace
- Business model and life-cycle of a medicine
- Strategy and Key Performance Indicators
- Business Review
- Therapy Area Review
- Risk Overview
- Financial Review

Contents

Financial highlights

Total Revenue*
down 2% to $22,465 million at actual rate of exchange (down 2% at CER), comprising Product Sales of $20,152 million and Externalisation Revenue of $2,313 million

2017	**$22,465m**
2016	$23,002m
2015	$24,708m

$22.5bn

Net cash flow from operating activities
down 14% at actual rate of exchange to $3,578 million

2017	**$3,578m**
2016	$4,145m
2015	$3,324m

$3.6bn

Reported operating profit
down 25% at actual rate of exchange to $3,677 million (down 28% at CER)

2017	**$3,677m**
2016	$4,902m
2015	$4,114m

$3.7bn

Core operating profit
up 2% at actual rate of exchange to $6,855 million (unchanged at CER)

2017	**$6,855m**
2016	$6,721m
2015	$6,902m

$6.9bn

Reported EPS
for the full year down 14% at actual rate of exchange to $2.37 (down 15% at CER)

2017	**$2.37**
2016	$2.77
2015	$2.23

$2.37

Core EPS
for the full year down 1% at actual rate of exchange to $4.28 (down 2% at CER)

2017	**$4.28**
2016	$4.31
2015	$4.26

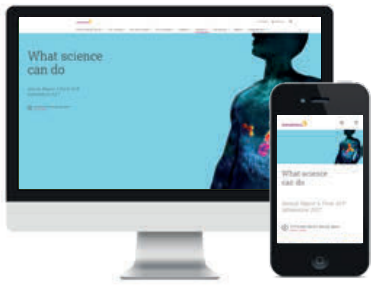
$4.28

Financial Review from page 66.

* As detailed on page 140, Total Revenue consists of Product Sales and Externalisation Revenue.

For more information within this Annual Report

For more information see www.astrazeneca.com



This Annual Report is also available on our website, www.astrazeneca.com/annualreport2017

AstraZeneca at a glance

A global biopharmaceutical business delivering medicines to patients through innovative science and excellence in development and commercialisation.

Our Purpose is to push the boundaries of science to deliver life-changing medicines. We want to be valued and trusted by our stakeholders as a source of great medicines over the long term.

Our strategic priorities

Reflect how we are working to achieve our Purpose

- 1. Achieve Scientific Leadership
- 2. Return to Growth
- 3. Be a Great Place to Work

A science-led innovation strategy

Strategy and Key Performance Indicators from page 17.

Distinctive R&D capabilities:
Small molecules, oligonucleotides and other emerging drug platforms, as well as biologic medicines, including immunotherapies, and innovative delivery devices

11
new molecular entities (NMEs) in Phase III/ pivotal Phase II or under regulatory review covering 19 indications

Broad R&D platform in three main areas

Achieve Scientific Leadership from page 23 and Therapy Area Review from page 46.

Oncology
Our ambition is to eliminate cancer as a cause of death through scientific discovery and collaborations. We seek to achieve this by means of exploiting the power of four scientific platforms

Cardiovascular & Metabolic Diseases
We are following the science to transform how cardiovascular, renal and metabolic diseases are understood, interact and impact one another

Respiratory
We aim to transform the treatment of respiratory disease with our growing portfolio of medicines and scientific research targeting disease modification

We are also selectively active in the areas of autoimmunity, neuroscience and infection

Portfolio of specialty and primary care products (Product Sales)

Oncology

$4,024m
20% of total
2016: $3,383m
2015: $2,825m

Tagrisso sales up 126% (126% at CER) and approved in more than 60 markets

Iressa sales of $528 million, up 3% (3% at CER); *Lynparza* sales of $297 million, up 36% (35% at CER)

Imfinzi launched in the US in May and sales of $19 million; *Calquence* launched in the US in October and sales of $3 million

Cardiovascular & Metabolic Diseases

$7,266m
36% of total
2016: $8,116m
2015: $9,489m

Brilinta sales of $1,079 million, up 29% (29% at CER) and *Forxiga* sales of $1,074 million, up 29% (28% at CER)

Sales of *Onglyza* were down by 15% (16% at CER) to $611 million

Legacy sales: *Crestor* down 30% (30% at CER) to $2,365 million

Respiratory

$4,706m
23% of total
2016: $4,753m
2015: $4,987m

Symbicort sales of $2,803 million, down 6% (6% at CER)

Sales of *Pulmicort* up 11% (12% at CER) at $1,176 million

Fasenra approved in the US in November

Other Disease Areas

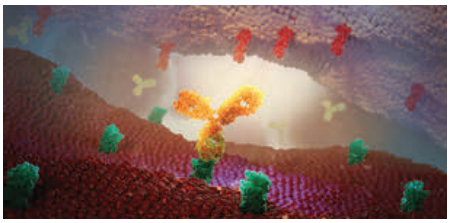
$4,156m
21% of total
2016: $5,067m
2015: $6,340m

Nexium sales down 4% (3% at CER) to $1,952 million

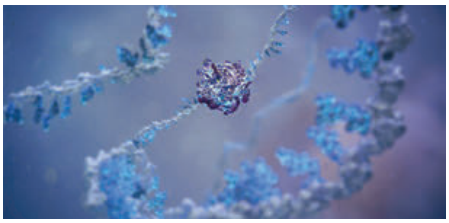
Sales of *Synagis* up 1% (1% at CER) to $687 million

Seroquel XR sales of $332 million, down 55% (55% at CER)

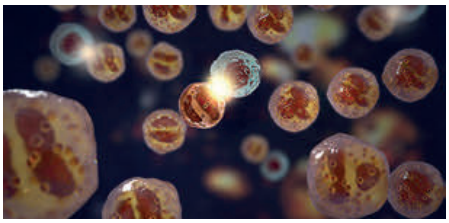
FluMist/Fluenz sales of $78 million, down 25% (28% at CER)



Oncology. See page 48



Cardiovascular & Metabolic Diseases. See page 52



Respiratory. See page 56

Global commercial presence, with strength in Emerging Markets (Product Sales)

US	Emerging Markets	Europe	Established Rest of World
$6,169m	$6,149m	$4,753m	$3,081m
31% of total	30% of total	24% of total	15% of total
2016: $7,365m	2016: $5,794m	2016: $5,064m	2016: $3,096m
2015: $9,474m	2015: $5,822m	2015: $5,323m	2015: $3,022m

Commercial Highlights:

Growth Platforms grew by 5% (6% at CER) in 2017 and represented 68% of Total Revenue

Return to Growth from page 26.

US	Emerging Markets	Europe	Established Rest of World
Emerging Markets: Sales growth of 6% (8% at CER), in line with long-term ambitions. China sales in the year grew by 12% (15% at CER), supported by the launches of new medicines	New CVMD: Sales growth of 9% (9% at CER). Strong performances from *Farxiga* and *Brilinta*, with sales exceeding $1 billion in 2017 Respiratory: Sales declined by 1% (1% at CER). Sales of *Symbicort* declined by 6% (6% at CER) and *Pulmicort* sales rose by 11% (12% at CER)	Japan: 1% growth in sales (4% at CER), underpinned by the growth of *Tagrisso* and *Forxiga*, partly mitigated by the impact of the entry of generic competition to *Crestor* in the second half of the year	New Oncology: Sales growth of 98% (98% at CER). Sales of *Tagrisso* reached $955 million to become AstraZeneca's largest-selling Oncology medicine

Our talented employees:

Committed to achieving our Purpose in a sustainable way and upholding our Values by fostering a strong AstraZeneca culture

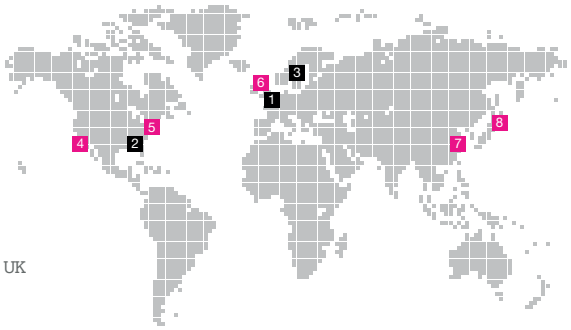
Be a Great Place to Work from page 34.

61,100
employees
2016: 59,700
2015: 61,500

100%
of employees trained in new Code of Ethics

Strategic R&D centres
1. Cambridge, UK (HQ)
2. Gaithersburg, MD, US
3. Gothenburg, Sweden

Other R&D centres
4. California, US
5. Boston, MA, US
6. Alderley Park and Macclesfield, UK
7. Shanghai, China
8. Osaka, Japan



CDP A LIST 2017 CLIMATE
CDP A LIST 2017 WATER
MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM

Our capital-allocation priorities:

Striking a balance between the interests of the business, our financial creditors and shareholders, and supporting our progressive dividend policy

Financial Review from page 66.

Distributions to shareholders	Dividends	Proceeds from issue of shares	Total
	$3,519m	$(43)m	$3,476m
	2016: $3,561m	2016: $(47)m	2016: $3,514m
	2015: $3,486m	2015: $(43)m	2015: $3,443m

Dividend per Ordinary Share for 2017	1st interim dividend	2nd interim dividend	Total
	$0.90	$1.90	$2.80
	Pence: 68.9	Pence: 133.6	Pence: 202.5
	SEK: 7.40	SEK: 14.97	SEK: 22.37
	Payment date: 11 September 2017	Payment date: 19 March 2018	2016: $2.80
			2015: $2.80

Chairman's Statement

Your Board of Directors is focused on ensuring that AstraZeneca returns to growth.

"I share Pascal's excitement about AstraZeneca's prospects as a science-led innovator..."

One of the Board's basic responsibilities is to set our strategy and monitor progress towards meeting our objectives, so that we bring our science to patients, create value for society, and reward you, our shareholders.

Executing our strategy

In 2017, we made encouraging progress across all our therapy areas, as well as in commercial execution and cost discipline. After a number of years of falling revenue, I am pleased we were able to report a growth in Product Sales in the final quarter of 2017. We are now positioned for Product Sales growth from 2018.

I firmly believe that the significant progress we have made against each of our three strategic pillars vindicates the strategy we set in 2013. As a Board, we have reviewed and confirmed that strategy each year. We also regularly review the supporting business performance reports, including pipeline updates and the results of key clinical trials.

Continued global uncertainty

The progress made by AstraZeneca in executing its strategy is all the more impressive given the continued challenges we face. These include strong competition from both branded and generic medicines around the world. Pricing and reimbursement also remains challenging in many markets – including the US and Europe.

In Europe, there is the added uncertainty of Brexit, the UK's announcement under Article 50 of its intention to leave the EU, which has potential implications for both the UK and the remaining EU27. We are engaging with stakeholders and taking actions to mitigate potential risks arising from all possible outcomes.

Medicines for the long term

The long-term prospects for the pharmaceutical sector, however, remain encouraging. AstraZeneca too is focused on the long term and we are committed to operating in a way that recognises the interconnection between business growth, the needs of society and the limitations of the planet. Our listing, for another year, in the Dow Jones Sustainability World and European Indices bears testament to our continued achievements in this regard. We are also one of only 25 companies to be recognised by investor benchmarking organisation, CDP, for both our climate change and water stewardship programmes.

Returns to shareholders and outlook

In 2017, and against this background, Reported earnings per share (EPS) of $2.37 represented a decline of 14% (15% at CER). The performance was driven by a decline in Total Revenue and increased SG&A costs, partly offset by a net tax benefit, continued progress on R&D cost control and an increase in Other Operating Income and Expense. Core EPS declined by 1% (2% at CER) to $4.28. Given this performance, the Board has declared a second interim dividend of $1.90 per share (133.6 pence, 14.97 SEK) bringing the dividend per share for the full year to $2.80 (202.5 pence, 22.37 SEK). At the same time, the Board reaffirmed its continued commitment to our progressive dividend policy.

I share Pascal's excitement about AstraZeneca's prospects as a science-led innovator and its ability to deliver value for patients and shareholders.

Leif Johansson
Chairman

CVMD:
Stem cell differentiating into heart muscle (cardiac regeneration)

Chief Executive Officer's Review

While Total Revenue declined over the year, it rose in the last quarter of 2017, a sign of how we are steadily turning a corner.

"2017 represented a defining year for AstraZeneca. 2018 will be equally important..."

After experiencing the falling revenues of recent years, as some of our best-selling medicines lost exclusivity, our revenues improved over the course of 2017. Strong commercial execution helped us bring our science to more patients, making the most of our exciting pipeline. We made encouraging progress in all main therapy areas and delivered strong growth in China, our second largest market.

Strategic progress

In my Review for 2017, I would therefore like to pay tribute to our achievements and look more closely at five medicines we launched during the year that bring both very real benefits to patients and underpin our future growth. I also want to consider some of the challenges we face as we work to realise the full potential of our medicines and ensure we deliver our science to patients around the world.

The strategy we set ourselves in 2013 was based on three pillars. We wanted to:

> Achieve Scientific Leadership
> Return to Growth
> Be a Great Place to Work

Achieving scientific leadership

In the five years since then, we have launched 13 new molecular entities (NMEs), including four alone in 2017. And, in 2017, we brought those medicines to more people with 19 major regional approvals – a new AstraZeneca record. It is an indicator of our scientific leadership in our three chosen therapy areas that we published 82 manuscripts in 'high-impact' scientific publications compared to 75 in 2016, and just seven in 2010. We are well on our way to meeting our longer-term goals of delivering one or more NMEs annually and sustainably delivering two NMEs annually by 2020.

Returning to growth

Between 2011 and 2017, Product Sales in Established Markets of our very successful older products that have lost exclusivity reduced by more than $13 billion (after taking into account currency movements). We expect to lose a further $1 billion of Product Sales in 2018, in particular through the loss of exclusivity for *Crestor* in Europe and Japan. Overall, Total Revenue declined by 2% in 2017. As shown in the table overleaf, Product Sales declined by 5% from $21,319 million to $20,152 million, including a decline in *Crestor* sales of $1,036 million and *Seroquel XR* sales of $403 million.

But now, a new AstraZeneca is emerging from those headwinds, helped by our Growth Platforms, which gathered momentum during the year and grew by 5% (6% at CER). They now represent 68% of Total Revenue.

As well as launching five medicines last year, we continued to unlock more uses for existing treatments, including for *Lynparza* and *Tagrisso*. In addition, *Brilinta*/*Brilique* and *Farxiga*/*Forxiga*, by bringing benefits to millions of patients, each exceeded $1 billion in annual sales for the first time.

Externalisation Revenue in 2017 increased by 37% (38% at CER) to $2,313 million. Particularly significant was our global strategic oncology collaboration with MSD to co-develop and co-commercialise *Lynparza* for multiple cancer types. We will also jointly with MSD develop and seek to commercialise our MEK inhibitor selumetinib, currently being developed for multiple indications, including thyroid cancer.

Chief Executive Officer's Review *continued*

19

19 NME and major LCM regional approvals

68%

Five Growth Platforms represent 68% of Total Revenue

5

Five significant launches from each of our three therapy areas

"Our future depends, however, not only on the number of projects but the quality of our science…"

Global Product Sales by therapy area

	2017			2016			2015		
	Sales $m	**Actual growth %**	**CER growth %**	Sales $m	Actual growth %	CER growth %	Sales $m	Actual growth %	CER growth %
Oncology	**4,024**	**19**	**19**	3,383	20	20	2,825	(7)	7
Cardiovascular & Metabolic Diseases	**7,266**	**(10)**	**(10)**	8,116	(14)	(13)	9,489	(3)	4
Respiratory	**4,706**	**(1)**	**(1)**	4,753	(5)	(3)	4,987	(2)	7
Other Disease Areas	**4,156**	**(18)**	**(17)**	5,067	(20)	(19)	6,340	(23)	(16)
Total	**20,152**	**(5)**	**(5)**	21,319	(10)	(8)	23,641	(9)	(1)

Being a great place to work

As I talk to our employees around the world, whether in our labs, offices or on the road with our sales teams, I am constantly reminded that our achievements are only made possible by a skilled and talented team who live our Values and are true to our Purpose.

It is they who are transforming AstraZeneca: exploring new ways of working; improving productivity; and embracing new technology. The culture we are creating is aimed at releasing the talents of our people and enabling science to thrive. We know there is more we can do but we are simplifying how we work; improving diversity to reflect the world and societies in which we work; and increasing our focus on sustainability. Like the Chairman, I am particularly pleased to see the external recognition we are receiving for our sustainability activities. We also have cause to celebrate the start of our Healthy Lung Asia Programme, the third anniversary of our Healthy Heart Africa Programme and the seventh year of our Young Health Programme – a global disease prevention programme.

People at AstraZeneca know that scientific progress is best made when we take smart risks in following the science. We also know that sometimes means we experience setbacks. For example, in July, the initial results of the MYSTIC trial showed that *Imfinzi* in combination with tremelimumab for 1st line non-small cell lung cancer (NSCLC) did not meet the primary endpoint of progression-free survival (PFS). The study for overall survival (OS) continues. Following the Phase III programme results, we decided to discontinue the development of tralokinumab, an antibody in severe, uncontrolled asthma. Earlier in the year, we received a second Complete Response Letter from the FDA for ZS-9, a potential new medicine for hyperkalaemia, an important area of unmet medical need, and we continue to work towards its approval. Overall, however, the number of successes far outweighed the disappointments.

Delivering for patients

By way of example, five significant launches from each of our three main therapy areas in 2017 showed how our rebuilt pipeline is starting to deliver our science to patients.

Imfinzi (durvalumab) received accelerated approval from the FDA in May for the treatment of advanced bladder cancer. It was a significant moment both for patients who had limited treatment options and for us as it was our first immuno-oncology (IO) approval. *Imfinzi* is the cornerstone of our extensive IO programme, in development across many tumour types, both as monotherapy and with other medicines. Later in May, we announced positive top-line results for the Phase III PACIFIC trial as *Imfinzi* demonstrated superior PFS in patients with locally-advanced, unresectable NSCLC.

In October, the FDA granted accelerated approval of ***Calquence*** (acalabrutinib) as a treatment for relapsed or refractory mantle cell lymphoma (MCL). This represented another landmark for us as it was our first approval in blood cancer and was approved less than five months after its regulatory submission. With a development programme including more than 35 clinical trials in multiple blood cancers, the promise of *Calquence* is significant.

In February, the FDA approved ***Qtern*** (*Forxiga* 10mg and *Onglyza* 5mg fixed-dose combination) as an adjunct to diet and exercise to improve glycaemic control in adults with Type 2 diabetes who have inadequate control with *Forxiga* (10mg) or who are already treated with *Forxiga* and *Onglyza*.

Finally, in our Respiratory therapy area, ***Bevespi Aerosphere*** (glycopyrrolate and formoterol fumarate) was launched in the US for COPD, using, for the first time, our *Aerosphere* delivery technology that uses a pressurised metered-dose inhaler (pMDI).

Fasenra (benralizumab) was approved in November in the US for patients with severe asthma with an eosinophilic phenotype and is our first approved respiratory biologic medicine. It is a new anti-eosinophilic monoclonal antibody which has demonstrated efficacy versus placebo in pivotal clinical trials and is the first respiratory biologic with an eight-week maintenance dosing regimen.

Sustainable delivery

If our launches are delivering benefits to patients now, our pipeline is intended to ensure we deliver those benefits sustainably in the years to come. During 2017, we made 18 NME or life-cycle management regulatory submissions in major markets and approved nine Phase III investment decisions. These will provide plenty of news in 2018 as we await regulatory decisions and data read outs from clinical trials. Looking further ahead, we approved 14 NME Phase II starts or progressions in 2017 which will shape our future in the years to come.

Our future depends, however, not only on the number of projects in our pipeline but the quality of our science. In that regard, we are relentless in our search for the best science – whether it is in our own labs or those of others with whom we collaborate. For example, we are harnessing the power of genomics through global collaborations and scientific innovation with the aim of transforming drug discovery and development. Additionally, by focusing on quality rather than quantity, our IMED Biotech Unit has seen a four-fold increase in productivity, while costs have remained broadly unchanged.

A great team

Great science needs great people, and great people need great teams if they are going to deliver their best work. I am therefore grateful to all my colleagues at AstraZeneca for their tremendous efforts in 2017. These efforts made it a defining year and continued to transform the organisation. I would also like to welcome three new members to the Senior Executive Team who joined during the year. Leon Wang joined us in January with responsibility for our International Region. Iskra Reic joined in April with responsibility for Europe and David Fredrickson took over from Jamie Freedman in charge of the Oncology Business Unit in October. I welcome the skills, experience and diversity they bring to our discussions. All three were internal appointments and speak to the strength of our pipeline of talent.

Looking ahead

2017 saw two more of our medicines each exceed $1 billion in annual sales, five significant launches and more potential uses found for existing medicines. We remain committed to our progressive dividend policy. Our strategy is working, propelled by a strong pipeline, good sales performance and continued cost discipline.

2017 represented a defining year for AstraZeneca. 2018 will be equally important as we seek to deliver the full potential of our medicines and ensure we deliver our science to patients around the world.

I am excited about AstraZeneca's prospects as a science-led innovator as I believe we will deliver value for patients and shareholders in the long term.

Pascal Soriot
Chief Executive Officer

***Imfinzi* PACIFIC trial**

Lung cancer accounts for about one quarter of all cancer deaths, more than any other cancer. With the emergence of new targeted small molecules and immunotherapies, significant progress is being made in the treatment of patients for whom the disease has already spread through the body (metastatic). But for patients with an earlier stage disease, known as locally advanced unresectable non-small cell lung cancer (NSCLC), treatment options have been limited and clinical outcomes remain poor.

Aiming to provide solutions to those unmet medical needs, we have initiated a broad immuno-oncology development programme in NSCLC, using the immune system to treat the cancer, both in the locally advanced and metastatic settings. For patients with locally advanced NSCLC, where the tumour cannot be surgically removed, the current standard of care is concurrent chemoradiation therapy (CRT), followed by a period of active surveillance during which patients are monitored closely for progression. Although most patients with locally advanced disease initially respond to CRT, the vast majority will advance to metastatic disease within 12 months. In the Phase III PACIFIC clinical trial, *Imfinzi* demonstrated a statistically significant and clinically meaningful improvement in progression-free survival following CRT, and reduced the rate of distant metastasis formation. No other Phase III trial has demonstrated these results in more than two decades.

Marketplace

Despite global economic, political and social challenges, the pharmaceutical industry is expected to enjoy long-term growth. This is due to favourable demographic trends and significant unmet medical needs.

"Pricing and reimbursement remain challenging in many markets."

The global context

> Global cyclical economic upswing continues, however:
  – Political and economic uncertainty resulting from the UK Brexit vote and US election of Donald Trump persists
  – Global recovery vulnerable and may not be sustainable

The October 2017 World Economic Outlook of the International Monetary Fund (IMF) highlighted that the global cyclical upswing that had begun during 2016 was continuing to gather strength, with accelerating growth in Europe, Japan, China and the United States.

However, both political and economic uncertainty continues following the Brexit vote in the UK and the election of Donald Trump to president of the US. The IMF goes on to suggest that the global recovery might not be sustainable and is also vulnerable to serious risks.

The pharmaceutical sector

> Demand for healthcare continues to increase, but challenges remain
> US is the largest global market, with 45% of global sales
> Strong growth in 2017, primarily from emerging markets
> Emerging market growth predicted to remain strong to 2021

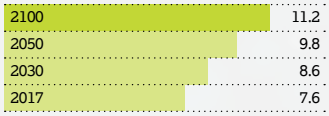
Against this uncertain background, however, the demand for healthcare continues to increase. While this is a favourable trend for long-term industry growth, challenges remain. These include expiring patents, competition from and growing use of generic medicines, obtaining regulatory approval, securing reimbursement for new medicines, improving R&D productivity, and attaining pricing and sales sufficient to generate revenue and sustain the cycle of innovation.

As shown in the table overleaf, global pharmaceutical sales grew by 2.9% in 2017. Established Markets saw average revenue decline of 2.7% and Emerging Markets revenue grew at 7.7%. The US, Japan, China, Germany and France are the world's top five pharmaceutical markets. In 2017, the US had 45.5% of global sales (2016: 45.9%; 2015: 46.0%).

Looking ahead, and as shown on the page opposite, expanding patient populations and continuing unmet medical need are expected to contribute to growth in pharmaceutical sales. The table on estimated pharmaceutical sales and market growth to 2021 overleaf also illustrates that we expect the developing markets, including Africa, Middle East, CIS, Indian subcontinent, South East and East Asia, and Latin America, to continue to fuel pharmaceutical growth.

Expanding patient populations

Estimated world population (UN, bn)



Estimated population over the age of 60 (WHO, bn)

80%
By 2050, 80% of all older people will live in low- and middle-income countries.

Unmet medical need

Prevalence of NCDs

40m

The prevalence of non-communicable diseases (NCDs), such as cancer and cardiovascular, metabolic and respiratory diseases, is increasing worldwide. NCDs are often associated with ageing populations and lifestyle choices, including smoking, diet and lack of exercise. The WHO estimates that NCDs kill 40 million people each year and disproportionately affect low- and middle-income countries where nearly three quarters of these deaths occur.

Oncology

Estimated annual cancer cases (m)

8.8m
Cancer is a leading cause of death worldwide and accounted for 8.8 million deaths in 2015.

70%
Approximately 70% of the world's cancer deaths occur in low- and middle-income countries.

CVMD

17.5m
More than 17.5 million people worldwide die from cardiovascular (CV) disease every year.

$3.76tn
From 2011 to 2025, the cumulative economic losses in low- and middle-income countries from CV disease are projected to be $3.76 trillion.

$2.5tn
The total economic burden of CV disease in upper middle-income countries through 2025 is estimated to be $2.52 trillion.

Respiratory

315m
Some 315 million adults in the world have asthma, with prevalence expected to rise. It causes some 346,000 deaths annually. Severe asthma accounts for ~10% of patients but ~50% of the economic burden of asthma.

329m
Globally, some 329 million people have chronic obstructive pulmonary disease (COPD), and this number is expected to rise. At initial diagnosis, ~31% of COPD patients have severe or very severe forms of this disease.

New approaches in the treatment of asthma
AstraZeneca is developing a therapy aimed at producing long-term benefit in asthma by addressing imbalances in the immune system that may be an underlying cause of the disease.

Rather than simply treating symptoms by relaxing airway constriction and dampening inflammation in the lung, this therapy aims to target toll-like receptor 9 in dendritic cells in the lung.

This could potentially change the way immune cells communicate with each other and restore a healthy balance to the immune system.

Global pharmaceutical sales

World ($bn)

2017	**996**
2016	968
2015	906

$996bn (2.9%)

US ($bn)

2017	**453**
2016	444
2015	416

$453bn (2.2%)

Europe ($bn)

2017	**214**
2016	209
2015	197

$214bn (2.8%)

Established ROW ($bn)

2017	**112**
2016	115
2015	109

$112bn (-2.7%)

Emerging Markets ($bn)

2017	**216**
2016	201
2015	183

$216bn (7.7%)

Data based on world market sales using AstraZeneca market definitions as set out in the Market definitions on page 235. Source: IQVIA, IQVIA Midas Quantum Q3 2017 (including US data). Reported values and growth are based at CER. Value figures are rounded to the nearest billion and growth percentages are rounded to the nearest tenth.

Estimated pharmaceutical sales and market growth – 2021

North America

$596bn	
4.3%	

EU

$237bn	
2.8%	

Other Europe (Non-EU countries)

$23bn	
8.5%	

Japan

$80bn	
-1.4%	

Oceania

$16bn	
0.9%	

South East Asia and East Asia

$207bn	
6.0%	

Latin America

$83bn	
6.2%	

Africa

$26bn	
6.4%	

CIS

$28bn	
8.0%	

Middle East

$25bn	
4.2%	

Indian subcontinent

$41bn	
10.1%	

Estimated pharmaceutical sales – 2021. Data is based on ex-manufacturer prices at CER. Source: IQVIA.

Estimated pharmaceutical market growth. Data is based on the compound annual growth rate from 2016 to 2021. Source: IQVIA.

The pharmaceutical sector: opportunities and challenges

Advances in science and technology

Scientific innovation is critical to addressing unmet medical need and the delivery of new medicines will rely on a more advanced understanding of disease and the use of new technology and approaches. These include precision medicines, genomics and digital healthcare. Scientific and technological breakthroughs in small molecules and in biologics are also helping accelerate innovation. Innovation might also be accelerated through the use of large volumes of biological data from disease biology and genomics. Such advances have resulted in increased numbers of FDA Priority Reviews and Breakthrough Designations.

The cost of developing new medicines continues to rise with global R&D investment expected to reach more than $160 billion in 2017. Regulators and payers are demanding greater evidence of the comparative effectiveness of medicines. On the other hand, a greater emphasis on Proof of Concept is helping to improve productivity and reduce costs by showing the potential efficacy of drugs earlier in the development process. Against this background, the FDA approved 46 novel drugs in 2017 compared with 22 in 2016 and 45 in 2015. Nevertheless, the risk of any products failing at the development or launch stages, or not securing regulatory approvals continues.

Our strategic response

> Continue to focus on innovative science in our chosen therapy areas – secured 19 approvals of NMEs or major LCM projects in major markets in 2017.
> Work to develop a diverse range of drug modalities such as modified RNA, antisense oligonucleotides and bi-specific monoclonal antibodies (mAbs).
> Maintain scientific work on pioneering technologies including genome editing with CRISPR/Cas9, and machine learning and artificial intelligence.
> Our Precision Medicine and Genomics team is strengthening our ability to match targeted medicines to patients who need them most.
> Partner with academia, governments, industry and scientific organisations to allow us to access the best and most advanced science and technology.
> Commitment to science is reflected in our co-location near bio-science clusters in Cambridge, UK; Gaithersburg, MD, US; and Gothenburg, Sweden.
> Keep up our track record of high-impact publications with 82 in 2017 – compared with 75 in 2016.

For more information, please see Risk from page 210 and Achieve Scientific Leadership from page 23.

Regulatory environment

The public's expectation of safe, effective and high-quality medicines is reflected in a highly regulated biopharmaceutical industry. At the same time, we are seeing instances of government policy and regulation being introduced to stimulate innovation in drug development, and of regulatory health authorities implementing programmes intended to speed up patient access to transformative medicines. In the US, for example, the 21st Century Cures Act of 2016 and the FDA Reauthorization Act of 2017 focus on accelerating the discovery, development and delivery of innovative new treatments for patients, and modernising the US regulatory environment.

In Japan, the PMDA has adopted a new conditional early approval system to speed patient access to medicines addressing unmet medical needs requiring the conduct of confirmatory clinical studies. In China, recent proposed changes in regulations focus on improving the ability of pharmaceutical companies to deliver innovative medicines to the marketplace in a more timely manner and providing treatments for diseases where there is an unmet medical need.

Furthermore, international harmonisation of regulatory requirements is being advanced in many areas through organisations such as the International Council for Harmonization (ICH), the Pharmaceutical Inspection Cooperation Scheme (PIC/S), the Pan American Network for Drug Regulatory Harmonization (PANDRH), and the International Conference of Drug Regulatory Authorities (ICDRA).

There are also uncertainties. In Europe, they include how the UK will work with the EU regulatory system following its exit from the EU, and the relocation of the EMA from London to Amsterdam in the Netherlands (and the likely disruption this will cause to regulatory processes). The impact of the implementation of the EU Clinical Trials Regulation on UK-based clinical trials needs to be assessed in the context of Brexit outcomes. The EMA has just over a year to prepare for the move and take up operations in Amsterdam on 30 March 2019 at the latest.

In the area of biosimilar development, regulatory requirements for the registration of biosimilar products continue to evolve and become better defined. However, significant areas of regulatory policy are still evolving. Among these are transparency of data regarding level of evidence to support approval of claims for biosimilarity in labelling, standards for interchangeability and pharmaceutical substitution, and traceability of pharmacovigilance reports through naming conventions that permit differentiation of products.

Increased transparency of data used for regulatory decision-making continues to be an area of interest to regulatory authorities in the EU and the US. We believe that transparency enhances the scientific understanding of how our medicines work and is in the medical interest of our patients.

For more information about biosimilars, please see Loss of exclusivity and genericisation on page 12.

Our strategic response

> Engage in responsible testing, manufacturing and marketing in compliance with regulations.
> Maintain effective working relationships with health authorities worldwide, including the FDA in the US, the EMA in the EU, the PMDA in Japan, and the CFDA in China.
> Continue to monitor the situation in the EU, as well as the broader global regulatory landscape, to ensure that we meet current and future drug approval requirements.
> Consistent with a long-standing commitment to making information about our clinical research publicly available, we continue to work with regulators and other stakeholders to ensure the appropriate level of data transparency.
> Continue to collaborate with industry, academia and government bodies to drive innovation, streamline regulatory processes, and define and clarify approval requirements for innovative drug and biologic products.

Marketplace
continued

Pricing of medicines

Pricing and reimbursement remain challenging in many markets. We continue to see examples where healthcare services (including pharmaceuticals) are highly regulated by governments, insurers and other private payers through various controls on pricing and reimbursement. Implementation of cost containment reforms and shifting market dynamics are further constraining healthcare providers, while difficult economic conditions burden patients who have out-of-pocket expenses relating to their medicines. Pharmaceutical companies are now expending significant resources to demonstrate the economic as well as the therapeutic value of their medicines.

These efforts are all the more relevant given the shift in the industry over the last decade from primary care to a specialty care focus. Specialty drugs are used for the treatment of complex, chronic, or rare conditions such as cancers and hepatitis C. Pricing for these products reflects the higher value they bring to patients and payers, as well as the smaller patient numbers as a result of targeted treatment options. These higher drug costs have heightened the desire and need for payers to manage their expenditure and drug utilisation.

Pricing controls and transparency measures remain a priority in key markets such as China, where the National Reimbursement Drug List (NRDL) was updated in 2017. In Europe, governments continue to implement and expand price control measures for medicines and, in other markets, there has been a trend towards rigorous and consistent application of pricing regulations, including reference pricing. For example, in Saudi Arabia prices are set according to the lowest of a basket of reference market prices.

We are also experiencing pressure on pricing in the US from a number of quarters. For example, political leadership is considering drug pricing controls and transparency measures at the national and local levels. Changes to the Affordable Care Act (ACA) and ongoing efforts to reform the healthcare system continue to create uncertainty in the market. While policymakers in the US have advocated for repeal and replacement of the ACA, full repeal appears unlikely. Thus, the administration has taken steps to significantly change ACA regulations, including repealing the individual mandate provision of the ACA which requires citizens to have insurance or pay a penalty. Changes to ACA regulations may have downstream implications for coverage and access. With respect to healthcare reform more broadly, modifications to Medicare and other government programmes including changes aimed at reducing drug prices, such as importation schemes, are possible. Further, the healthcare industry may be used as a means to offset government spending. US federal agencies continue to propose and implement policies and programmes with the goal of expanding access and coverage, reducing costs, increasing transparency, transforming the delivery system, and improving quality and patient outcomes.

For more information about pricing and price controls in the US and other major markets, please see Return to Growth from page 26 and Risk from page 210.

Our strategic response

- Internal pricing policy based on four principles: value, sustainability, access and flexibility.
- Aim to enable our Emerging Markets to deliver better and broader patient access through innovative and targeted equitable pricing strategies and practices.
- Partner with industry, government and academia to find ways to bring new medicines to market more quickly and efficiently, as well as foster an environment that facilitates medical and scientific innovation.
- Engage with policymakers to support improvements in access, coverage, care delivery, quality of care and patient care outcomes.
- Consider innovative outcomes contracts with payers as a mechanism to pay for value.
- Evaluate the use of real-world evidence to further bolster the evidence base around therapeutic and economic value.

Loss of exclusivity and genericisation

Patent protection for pharmaceutical products is finite and, after protection expires, payers, physicians and patients gain greater access to generic alternatives (both substitutable and analogue) in many important drug classes. These generic alternatives are primarily lower priced because generic manufacturers are largely spared the costs of R&D and market development. As a result, demand for generics is high. For prescriptions dispensed in the US in 2017, generics constituted 84.9% of the market by volume (2016: 84.4%).

Generic competition can also result from patent disputes or challenges before patent expiry. Increasingly, generics companies are launching products ‘at risk’, for example, before resolution of the relevant patent litigation. This trend, which is likely to continue, creates significant market presence for the generic version while the litigation remains unresolved. Given the unpredictable nature of patent litigation, some companies have settled such challenges on terms acceptable to the innovator and generic manufacturer. While competition authorities generally accept such agreements as a legitimate way to settle these disputes, they have questioned some settlements as being anti-competitive.

Biologics typically retain exclusivity for longer than traditional small molecule pharmaceuticals, with less generic competition. With limited experience to date, the substitution of biosimilars for the original branded product has not followed the same pattern as generic substitution in small molecule products and, as a result, erosion of the original biologic’s branded market share has not been as rapid. This is due to biologics’ complex manufacturing processes and the inherent difficulties in producing a biosimilar, which could require additional clinical trials. However, with regulatory authorities in Europe and the US continuing to implement abbreviated approval pathways for biosimilar versions, innovative biologics are likely to face increased competition. Similar to biologics, some small molecule pharmaceutical products are in complex formulations and/or require technically challenging manufacturing and thus may not follow the pattern of generic market erosion seen with traditional, tableted pharmaceuticals. For those products, the introduction of generic alternatives (both substitutable and analogue) can be slower.

For more information, please see Intellectual Property from page 32.

Our strategic response

- Investment in innovative research and development, both internally and with partners, to advance novel therapeutics through the pipeline.
- A strong patent strategy – from building robust patent estates that protect our pipeline and products to defending and enforcing our patent rights.

Trust

The pharmaceutical industry faces challenges in building and maintaining its reputation and the trust of its stakeholders. This reflects past sales and marketing practices, pricing practices by some, as well as legal disputes between pharmaceutical companies and governmental and regulatory authorities. To address these challenges, companies are seeking to strengthen a culture of ethics and integrity, adopt higher governance standards and improve relationships with employees, shareholders and other stakeholders.

Numerous companies, including those in the pharmaceutical industry, have been investigated by the China Public Security Bureau following allegations of bribery, and criminal and financial penalties have been imposed. In the US, investigations by the DOJ and SEC under the Foreign Corrupt Practices Act are continuing across the industry, as are investigations by the UK Serious Fraud Office under the UK Bribery Act. During 2017, there were also Congressional hearings in the US related to pricing while, in the UK, the Competition and Markets Authority has been investigating allegations of excessive charging.

Sustainability programmes, particularly focused on access to healthcare, seek to build trust in pharmaceutical companies as providers of medicines for the long term.

More generally, if we want to be trusted by our stakeholders, we need to operate in a way that meets their expectations, thereby maintaining and building our reputation with them.

The reputation of the sector can be undermined by counterfeit medicines which can fail to provide effective treatment and sometimes cause direct harm to patients. They represent a global challenge and companies work with health authorities, industry bodies and law enforcement agencies to bring those involved to justice.

Our strategic response

> Furthering ethics and transparency, and broadening access to healthcare are two of our sustainability priorities.
> Launched an updated Code of Ethics built on a refusal to tolerate bribery or any other form of corruption.
> Enhanced programme to protect patients from dangers of illegally traded medicines.

For more information about ethics, please see Ethical sales and marketing from page 40.

Competition

Our competitors include large, research-based pharmaceutical companies (similar to AstraZeneca) that discover, develop and sell innovative, patent-protected prescription medicines and vaccines, smaller biotechnology and vaccine businesses, and companies that produce generic medicines. However, the pharmaceutical market is highly competitive. For example, our Diabetes and Respiratory franchises continue to see pricing pressure. In immuno-oncology, the large number of clinical trials being carried out highlight the competitive nature of this area.

While our peers face similar challenges, they tackle them in different ways. Some companies have pursued a strategy focused on branded prescription pharmaceuticals. Others have diversified by acquiring or building branded generics businesses or consumer portfolios, or have looked to geographic expansion, especially in Emerging Markets. Companies are also focused on improving R&D productivity and operational efficiency. Across the industry, business development deals (including licensing and collaborations) and competition for business development opportunities have continued.

The speed of technological change, including digital health, and the development of artificial intelligence also threatens to disrupt existing technologies and undermine current business models.

Our strategic response

> To be a 'pure-play', global, science-led biopharmaceutical company that focuses on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of unmet medical need in three therapy areas.
> Establishing priorities that reflect our focus on innovative science, emerging drug platforms and new technologies.

For more information, please see Strategy and Key Performance Indicators from page 17 and Risk from page 210.

"Scientific innovation is critical to addressing unmet medical need."

Business model and life-cycle of a medicine

AstraZeneca at a glance summarises our business. In this section, we review our business model – how we create financial value and the resources we need in order to bring benefits to patients.

Why AstraZeneca?

We are a global biopharmaceutical business which has:

> A science-led innovation strategy
> An R&D platform across small molecules and biologics
> Three main therapy areas: Oncology, Cardiovascular & Metabolic Diseases, Respiratory
> A portfolio of specialty care and primary care medicines
> A global footprint

Nucleotide therapies: antiMRNA

Who we are

Our Purpose

We push the boundaries of science to deliver life-changing medicines.

Our Purpose underpins everything we do. It gives us a reason to come to work every day. It reminds us why we exist as a Company. It helps us deliver benefits to patients and create value for shareholders.

Our Values

We follow the science.
We put patients first.
We play to win.
We do the right thing.
We are entrepreneurial.

Our Values determine how we work together and the behaviours that drive our success. Our Values guide our decision making, define our beliefs and foster a strong AstraZeneca culture.

Our Sustainability

We want to be valued and trusted by our stakeholders as a source of great medicines over the long term.

Our sustainability priorities – broadening access to healthcare, furthering ethics and transparency, and protecting the environment – underpin our business model and support the delivery of our business strategy.

Business Review from page 22.

What we do

Our business activities span the entire life-cycle of a medicine.

How we create financial value

Investment

We invest in the discovery, development, manufacturing and commercialisation of our pipeline of innovative small molecule and biologic prescription medicines, including targeted business development through collaboration, in-licensing and acquisitions.

Revenue generation

We generate revenue from Product Sales of our existing medicines and Growth Platform launches, as well as from our externalisation activities. Our focus is on creating products that facilitate profitable future revenue generation, while bringing benefits to patients.

Reinvestment

We reinvest in developing the next generation of innovative medicines and in our Growth Platforms that provide the platform for future sources of revenue in the face of recent losses of key product patents.

Life-cycle of a medicine

Research and development phases 5–15 years

1. Find potential medicine
> Identify unmet medical need aligned with our three therapy areas and undertake scientific research to identify potential new medicines.
> Initiate process of seeking patent protection.

2. Pre-clinical studies
> Conduct laboratory and animal studies to understand if the potential medicine is safe to introduce into humans and in what quantities.
> Determine likely efficacy, side effect profile and maximum dose estimates.

3. Phase I studies
> Begin clinical studies with small groups of healthy human volunteers (small molecules) or patients (biologics) to understand how the potential medicine is absorbed into the body, distributed around it and excreted.
> Determine approximate dosage and identify side effects.

4. Phase II studies
> Conduct studies on small- to medium-sized groups of patients to test effectiveness and tolerability of the medicine and determine optimal dose.
> Design Phase III studies to generate data needed for regulatory approvals and pricing/reimbursement globally.

5. Phase III studies
> Engage in studies in a larger group of patients to gather information about effectiveness and safety of the medicine and evaluate the overall benefit/risk profile.
> Initiate branding for the new medicine in preparation for its launch.

6. Regulatory submission and pricing
> Seek regulatory approvals for manufacturing, marketing and selling the medicine.
> Submit clinical data to regulatory authorities (and, if requested, generate further data increasingly in real-world settings) to demonstrate the safety and efficacy of the medicine to enable them to decide on whether to grant regulatory approvals.

Launch phase 5–15 years

7. Launch new medicine
> Raise awareness of patient benefit and appropriate use, market and sell medicine.
> Clinicians begin to prescribe medicines and patients begin to benefit.
> Continuously monitor, record and analyse reported side effects. Review need to update the side effect warnings to ensure that patients' wellbeing is maintained.
> Assess real-world effectiveness, and opportunities to support patients and prescribers, to achieve maximum benefit from the medicine.

8. Post-launch research and development
> Conduct studies to further understand the benefit/risk profile of the medicine in larger and/or additional patient populations.
> Life-cycle management activities to broaden understanding of a medicine's full potential.
> Consider additional diseases or aspects of disease to be treated by or better ways of administering the medicine.
> Submit data packages with requests for life-cycle management to regulatory authorities for review and approval.

Post-exclusivity 20+ years

9. Post-exclusivity
> Patent expiry and generic entry.
> Reinvestment of returns.

Note: This is a high-level overview of a medicine's life-cycle and is illustrative only. It is neither intended to, nor does it, represent the life-cycle of any particular medicine or of every medicine discovered and/or developed by AstraZeneca, or the probability of success or approval of any AstraZeneca medicine.

Business model and life-cycle of a medicine *continued*

What does our business model require to be successful?

A talented and diverse workforce
We need to acquire, retain and develop a talented and diverse workforce united in pursuit of our Purpose and Values and fostering a strong AstraZeneca culture.

See Employees from page 35.

61,100
employees

A leadership position in science
We need to achieve scientific leadership if we are to deliver life-changing medicines. To that end, we need to focus on innovative science, prioritise and accelerate our pipeline and transform our innovation and culture model.

See Achieve Scientific Leadership from page 23.

$5.8bn
invested in our science

Effective partnerships
We need business development, specifically partnering, which is an important element of our business model. It supplements and strengthens our pipeline and our efforts to achieve scientific leadership.

See Partnering on page 31.

>600
collaborations worldwide

Commercialisation skills
We need a strong global commercial presence and skilled people to ensure that we can successfully launch our medicines, that they are available when needed and that patients have access to them.

See Return to Growth from page 26.

>100
countries in which we are active

Intellectual property (IP)
We need to create and protect our IP rights. Developing a new medicine requires significant investment over many years, with no guarantee of success. For our investments to be viable, we seek to protect new medicines from being copied for a reasonable period of time through patent protection.

See Intellectual Property from page 32.

>100
countries where we obtain patent protection

A robust supply chain
We need a supply of high-quality medicines, whether from one of the 31 Operations sites in 18 countries in which we manufacture or the $13 billion we spend on the purchase of goods, services and active pharmaceutical ingredients (APIs).

See Operations from page 30 and Supply chain management on page 42.

$13bn
spent with suppliers

Financial strength
We need to be financially strong, including having access to equity and debt finance, to bear the financial risk of investing in the entire life-cycle of a medicine.

See Financial Review from page 66.

$4bn
net cash flow from operating activities

How we add value

Improved health
Continuous scientific innovation is vital to achieving sustainable healthcare which creates value by:

- improving health outcomes and transforming patients' lives
- enabling healthcare systems to reduce costs and increase efficiency
- improving access to healthcare and healthcare infrastructure
- helping develop the communities in which we operate through local employment and partnering.

Financial value
Revenue from our Product Sales and externalisation activities generates cash flow, which helps us:

- fund our investment in science and Growth Platforms to drive long-term value
- follow our progressive dividend policy
- meet our debt service obligations.

This involves balancing the interests of our business, financial creditors and shareholders.

See Financial Review from page 66.

Strategy and Key Performance Indicators

Strategy

We announced our strategy for returning to growth in 2013. We moved on from the first phase in our journey, focused on rebuilding our pipeline, in 2015. The second stage is crucial as we drive our Growth Platforms forward, continue to launch new medicines and make them available to patients. As we look ahead to 2020 and beyond, continued investment in our pipeline will keep us on track to return to sustainable growth in line with our targets.

In 2017, our strategic priorities were focused under the following three pillars:

1. Achieve Scientific Leadership

We are focusing our science on three therapy areas and accelerating our pipeline. We are also transforming our way of working.

2. Return to Growth

We are focusing on our Growth Platforms and transforming the business through specialty care, devices and biologic medicines. Targeted business development reinforces our efforts.

3. Be a Great Place to Work

We are evolving our culture and simplifying our business. We want to attract and retain the best talent.

We also want to do business sustainably.

Achieve Group Financial Targets

Effective delivery of our three strategic pillars will help us achieve our financial targets. We aim to deliver great medicines to patients while maintaining cost discipline and a flexible cost base. We wish to maintain a progressive dividend policy and a strong balance sheet.

Progress

The following pages present our Key Performance Indicators (KPIs) for 2017. Our KPIs are aligned to our three strategic priorities and are the indicators against which we measure our productivity and success. We also monitor financial targets, which indicate whether we have delivered our strategy in a way that allows us to continue to operate as a successful business.

Our remuneration arrangements are also aligned to our strategic priorities as set out in our Group scorecard and reflected in our KPIs. Achieve Scientific Leadership, Return to Growth and Achieve Group Financial Targets are included in the annual bonus targets.

For more information, see the Directors' Remuneration Report from page 105.

Strategic Report

Our operating model comprises key business functions that are aligned to delivery of our strategy. In addition, our therapy areas provide strategic direction for each of our disease areas all the way from early-stage development to commercialisation. Our Strategic Report therefore encompasses two types of review:

Business Review

Provides information on key activities and progress within each of the three strategic pillars. Within this section we report on our pipeline, the key business functions that are integral to delivering our strategy (R&D and Commercial), as well as those that we see as vital strategic enablers (Partnering and Operations) or underpin our business model (Intellectual Property). We also report on our employees and how we do business sustainably.

Therapy Area Review

Looks at each of our therapy areas, their developments and focus for 2017, as well as what is in the pipeline.

We also review the risks that might challenge the delivery of our strategy.

For more information:
Business Review from page 22;
Therapy Area Review from page 46;
Risk from page 210.

Messenger RNA being read by a ribosome to produce signalling proteins

Strategy and Key Performance Indicators *continued*

Strategic priorities

Achieve Scientific Leadership

Focus on innovative science in three main therapy areas
Focus on Oncology, Cardiovascular & Metabolic Diseases, and Respiratory. We are also selectively active in autoimmunity, infection and neuroscience.

Work across small molecules, oligonucleotides and other emerging drug platforms, as well as biologic medicines, including immunotherapies, and innovative delivery devices that can offer choice to patients.

Prioritise and accelerate our pipeline
Accelerate and invest in key R&D programmes. At the end of 2017, 11 NMEs were in Phase III or under regulatory review, covering 19 indications.

Four NMEs were approved in 2017. Having met the targets for 2016 we had set ourselves in 2013, we are now on target to meet our longer-term goals of delivering one or more NMEs annually and sustainably delivering two NMEs annually by 2020.

Strengthen our early-stage pipeline through novel science and technology.

Transform our innovation and culture model
Focus on novel science, such as immune-mediated therapy combinations and precision medicine.

Co-location near bioscience clusters at three strategic centres in Cambridge, UK; Gaithersburg, MD, US; and Gothenburg, Sweden helps to leverage our capabilities and foster collaboration with leading scientists and research organisations.

Accelerate through business development
Work to reinforce our therapy areas and strengthen our portfolio and pipeline through targeted business development, including collaborations, in-licensing and acquisitions.

Collaborate strategically to broaden and accelerate the development of pipeline assets (externalisation) and divest non-core assets to realise value.

Key Performance Indicators

NME Phase II starts/progressions

14

2017	**14**
2016	16[1]
2015	11

[1] 15 for determining annual bonus.
See page 112.

Phase III investment decisions

9

2017	**9**
2016	7
2015	6

NME or LCM project regulatory submissions in major markets

18

2017	**18[1]**
2016	14[2]
2015	12

[1] 13 for determining annual bonus.
[2] 13 for determining annual bonus.
See page 112.

NME and major LCM regional approvals

19

2017	**19**
2016	11
2015	6

Clinical-stage strategic transactions

7

2017	**7**
2016	10
2015	10

Achieve Scientific Leadership from page 23;
Therapy Area Review from page 46;
Development Pipeline from page 202.

"We delivered four new molecular entities (NMEs) in 2017 and are on target to meet our goals of delivering one or more NMEs annually and sustainable delivery of two NMEs annually by 2020."

Strategic priorities

Key Performance Indicators

Return to Growth

Focus on Growth Platforms

Emerging Markets – Focus on delivering innovative medicines by investing in Emerging Markets capabilities, with a focus on China and other leading markets, such as Brazil and Russia. The ongoing transformation of our capabilities is supporting new medicines and improving access and affordability.

Respiratory – Work to maximise pipeline value, devices and medicines to fulfil unmet medical need and improve patient outcomes in asthma and COPD.

New CVMD – From 2017, New CVMD Growth Platform combined our broad and innovative Diabetes franchise, our cardiovascular medicine, *Brilinta/ Brilique*, and any new launches within renal disease treatment.

Japan – Strengthen our Oncology franchise and work to maximise the success of our Diabetes medicines and established medicines: *Symbicort*, *Nexium* and *Crestor*.

New Oncology – Aim to deliver six new cancer medicines to patients by 2020. We have delivered four New Oncology medicines to date: *Lynparza*, *Tagrisso*, *Imfinzi* and *Calquence* that make a meaningful difference to patients. New Oncology also includes *Iressa* (US).

Transform through specialty care, devices and biologics

Biologic medicines now account for about half of our NMEs in development, potentially enhancing asset longevity. A greater focus on innovative and differentiated delivery devices affords patients choice while ensuring product durability. Our new specialty care portfolio is expected to balance our strength in primary care medicines.

Emerging Markets

$6,149m
Product Sales

2017	**$6,149m**
2016	$5,794m
2015	$5,822m

Actual growth	CER growth
2017 +6%	2017 +8%
2016 0%	2016 +6%
2015 0%	2015 +12%

Respiratory

$4,706m
Product Sales

2017	**$4,706m**
2016	$4,753m
2015	$4,987m

Actual growth	CER growth
2017 -1%	2017 -1%
2016 -5%	2016 -3%
2015 -2%	2015 +7%

New CVMD

$3,567m
Product Sales

2017	**$3,567m**
2016	$3,266m
2015	$2,843m

Actual growth	CER growth
2017 +9%	2017 +9%
2016 +15%	2016 +17%
2015 +17%	2015 +21%

Japan

$2,208m
Product Sales

2017	**$2,208m**
2016	$2,184m
2015	$2,020m

Actual growth	CER growth
2017 +1%	2017 +4%
2016 +8%	2016 -3%
2015 -9%	2015 +4%

New Oncology

$1,313m
Product Sales

2017	**$1,313m**
2016	$664m
2015	$119m

Actual growth	CER growth
2017 +98%	2017 +98%
2016 n/a	2016 n/a
2015 n/a	2015 n/a

Return to Growth from page 26;
Therapy Area Review from page 46;
Geographical Review from page 221.

"Our Growth Platforms grew by 5% in 2017 (6% at CER) and now represent 68% of Total Revenue."

Strategy and Key Performance Indicators *continued*

Strategic priorities | Key Performance Indicators

Be a Great Place to Work

Evolve our culture
Work to improve our employees' identification with our Purpose and Values and promote greater understanding of, and belief in, our strategy.

Invest in and implement tailored leadership development programmes.

Simplify our business
Develop simpler, more efficient processes and flatten our organisational structure to improve productivity, encourage accountability and improve decision making and communication.

Attract and retain the best talent
Accelerate efforts to attract diverse, top talent with new capabilities.

Be a Great Place to Work from page 34.

Employee belief in our strategy

88%

2017	**88%[1]**
2016	80%[2]
2015	89%[3]

[1] Source: December 2017 Pulse survey across a sample of the organisation.
[2] Source: December 2016 Pulse survey across a sample of the organisation.
[3] Source: January 2016 Pulse survey across a sample of the organisation.

Organisational structure – % of employees within six management steps of the CEO

70%

2017	**70%**
2016	82%
2015	71%

Employees who would recommend AstraZeneca as a great place to work

81%

2017	**81%[1]**
2016	74%[2]
2015	83%[3]

[1] Source: December 2017 Pulse survey across a sample of the organisation.
[2] Source: December 2016 Pulse survey across a sample of the organisation.
[3] Source: January 2016 Pulse survey across a sample of the organisation.

Do business sustainably

Secure our future
Deliver our business strategy in a way that delivers wider benefits to society and the planet.

Focus on:

- increasing access to healthcare for more people
- furthering ethics and transparency in everything we do
- environmental protection.

Connect our work with the UN Sustainable Development Goals and integrate our commitments into day-to-day business activities.

Sustainability from page 38.

Dow Jones Sustainability Index rating

84%

2017	**84%**
2016	86%
2015	84%

Maintained listing in the Dow Jones Sustainability World and Europe Indices comprising the top 10% of the largest 2,500 companies. The decline to 84% places us within two percentage points of the industry's best score.

Access to healthcare: Healthy Heart Africa programme

5.7m people

2017	**5.7m**
2016	2m
2015	1m

Healthy Heart Africa is a signature access to healthcare programme providing screenings, diagnosis and treatment of hypertension to nearly six million people since launching.

Environmental protection: Operational carbon footprint[1]

1,659 kt CO_2e

2017	**1,659 kt CO_2e**
2016	1,659 kt CO_2e
2015	1,777 kt CO_2e

[1] Operational carbon footprint is emissions from all Scope 1, 2 and selected Scope 3 sources. See page 227.

Our 2017 operational carbon footprint met our target of progressing our Science Based Targets and represents a 7% reduction from our 2015 baseline.

Note: We will review the Be a Great Place to Work and Do business sustainably key performance indicators in 2018 to evaluate appropriate representation of the strategy. We will continue to make updates on current indicators publicly available.

"Our achievements are only made possible by a skilled and talented team who live our Values and are true to our Purpose."

Strategic priorities | Key Performance Indicators

Achieve Group Financial Targets

Cost discipline
Our aim is to deliver great medicines for patients while maintaining cost discipline and a flexible cost base.

Maintain a progressive dividend
Policy is to maintain or grow dividend per share.

Maintain a strong balance sheet
Target a strong, investment-grade credit rating and optimal cash generation.

Total Revenue[1]

$22,465m

2017	**$22,465m**
2016	$23,002m
2015	$24,708m

Actual growth	CER growth
2017 -2%	2017 -2%
2016 -7%	2016 -5%
2015 -7%	2015 +1%

[1] As detailed on page 70, Total Revenue consists of Product Sales and Externalisation Revenue.

Net cash flow from operating activities

$3,578m

2017	**$3,578m**
2016	$4,145m
2015	$3,324m

Actual growth
2017 -14%
2016 +25%
2015 -53%

Reported EPS

$2.37

2017	**$2.37**
2016	$2.77
2015	$2.23

Actual growth	CER growth
2017 -14%	2017 -15%
2016 +24%	2016 +9%
2015 +128%	2015 +137%

Core EPS

$4.28

2017	**$4.28**
2016	$4.31
2015	$4.26

Actual growth	CER growth
2017 -1%	2017 -2%
2016 +1%	2016 -5%
2015 0%	2015 +7%

Dividend per share[1]

$2.80

2017	**$2.80**
2016	$2.80
2015	$2.80

[1] First and second interim dividend for the year.

Financial Review from page 66.

"The Board reaffirms its commitment to the progressive dividend policy."

Business Review

The first phase in AstraZeneca's strategy focused on strengthening and accelerating our product pipeline. In the second phase, our focus has been on driving our Growth Platforms and launching new products. This effort is driven by a business that is organised to deliver our return to sustainable growth.

Minute pieces of tumour DNA circulating in the bloodstream

In this Business Review, we report on how the elements of our business are delivering against our strategic priorities which are to:

1. Achieve Scientific Leadership
2. Return to Growth
3. Be a Great Place to Work

As outlined below, our operating model includes our R&D, Commercial and Operations functions, together with our therapy areas.

Since 2007, we have made significant efforts to restructure and reshape our business to control costs and improve long-term competitiveness.

Full details are provided in the Financial Review from page 66.

We are working to create a lean and simple organisation, focused on driving distinctive science in our main therapy areas.

Research & Development (R&D)

Our R&D activities are focused on three strategic R&D centres, Gaithersburg, MD, US, Gothenburg, Sweden and Cambridge, UK, which is also our global HQ.

Phase I and II – discovery and early-stage development

IMED
The Innovative Medicines and Early Development (IMED) Biotech Unit focuses on scientific advances in small molecules, oligonucleotides and emerging drug platforms.

MedImmune
MedImmune is responsible for global biologics R&D.

Phase III (late-stage development) and life-cycle management

Both IMED and MedImmune are responsible for delivering projects to our Global Medicines Development (GMD) unit for late-stage development.

Commercial

We group our sales and marketing functions into regions: North America (US and Canada); Europe; and International (China, Hong Kong, Asia Area, Australia & New Zealand, Russia & Eurasia, Middle East & Africa, Latin America and Brazil). Japan is categorised separately and is one of our Growth Platforms.

Operations

Our Operations function plays a key role in development, manufacturing, testing and delivery of our medicines to our customers.

Therapy areas

Our Global Product and Portfolio Strategy group (GPPS) leads our therapy area activities for two of our three main therapy areas – CVMD and Respiratory, as well as our portfolio of medicines in Other Disease Areas. GPPS also serves as the bridge between our R&D and Commercial functions and works to provide strategic direction from early-stage research to commercialisation.

GPPS works closely with healthcare providers, regulatory authorities and those who pay for our medicines, seeking to ensure those medicines help to fulfil unmet medical needs and provide economic as well as therapeutic benefits.

In addition to this Group-wide role, our Oncology Business Unit, formed in April 2017, has direct responsibility for sales, marketing and medical affairs activities in the US and in a number of European markets, including France, Germany, Italy, Spain and the UK. Responsibility for Oncology in other markets remains with the Commercial functions.

See Therapy Area Review from page 46.

1. Achieve Scientific Leadership

We are using our distinctive scientific capabilities, as well as investing in key programmes and focused business development, to deliver life-changing medicines.

Overview

- 19 approvals of NMEs or major LCM projects in major markets
  - 9 Oncology approvals for *Imfinzi*, *Calquence*, *Faslodex*, *Lynparza* and *Tagrisso*
  - 6 CVMD approvals for *Bydureon*, *Bydureon BCise*, *Forxiga* and *Qtern*
  - 1 Respiratory approval for *Fasenra*
  - 3 Other approvals for *Duzallo*, *Kyntheum/Siliq*
- 18 NME or major LCM regulatory submissions in major markets
- 9 Phase III NME investment decisions
- 14 Phase II starts
- Accelerated reviews included
  - 3 Breakthrough Therapy Designations
  - 2 Orphan Drug Designations
  - 2 Accelerated approvals
  - 6 Priority Review Designations
- 10 projects discontinued

Scientific leadership and collaboration

AstraZeneca's Purpose is to push the boundaries of science to deliver life-changing medicines. It underpins everything we do. However, as we seek to achieve scientific leadership, we know that we cannot do so alone. We want the way we work to be inclusive, open and collaborative. We believe our biotech-style operating model gives us access to the best science, both internal and external, and we are open to exploring new and different kinds of collaborations.

One of the measures of our success in achieving scientific leadership and demonstrating the quality of research conducted in our laboratories is the number of publications in high-quality and 'high-impact' journals. It is also critical for recruiting and retaining the best scientists from around the world. Scientists from IMED, MedImmune and GMD have published 82 manuscripts (a record number) in 'high-impact' peer-reviewed journals, each with an impact factor exceeding 15 (Thomson Reuters 5yr IF score) and a score exceeding 1,054 in total. This represents a twelve-fold improvement since our drive to publish in 'high-impact' journals began in 2010.

Early science

We want to push the boundaries of science to strengthen our early-stage product portfolio. That means exploring novel biology and using more diverse drug platforms. For example, our partnership with Moderna is exploring the use of modified ribonucleic acid (RNA) for cardiac regeneration in patients undergoing coronary artery bypass graft surgery (AZD8601). With Ionis Therapeutics, we are investigating an antisense oligonucleotide in immuno-oncology (AZD9150), in combination with *Imfinzi*. Also in 2017, we formed partnerships with APT Therapeutics to access their therapeutic protein platform; with Pieris to develop novel inhaled drugs; and with Bicycle Therapeutics, in support of both our Respiratory and New CVMD Growth Platforms, to develop a new class of therapeutics based on its proprietary bicyclic peptide product platforms.

We also identify collaborations that allow us to out-license our own technology platforms. For instance, we continued to expand the utilisation of our antibody-drug conjugates (ADC) technology platform through an agreement with GamaMabs Pharma to produce an ADC as a potential cancer therapy.

Working collaboratively and fostering open innovation

Our collaborative approach to science was exemplified in 2017 by our partnerships with Imperial College, Crick Institute, and the MRC Laboratory of Molecular Biology to further our understanding of the underlying biology of disease. Additionally, since the start of our joint blue-skies programme with the MRC Laboratory of Molecular Biology in 2014, we have funded 22 research projects. We have also continued to pioneer new approaches to open innovation, enabling our scientists to share their ideas more freely and collaborate on projects with external scientists. The IMED Open Innovation portal allows external researchers to access the full range of open innovation programmes. By the end of 2017, our teams had reviewed more than 500 proposals for new drug projects. Of these, 32 have progressed as far as clinical trials, while more than 294 are at pre-clinical trial stage.

During 2017, MedImmune continued to support its internal development efforts with collaborations. These included a research collaboration with Michigan Medicine to identify potential new therapies for the prevention and treatment of diabetes, obesity and related metabolic disorders. We also announced a collaboration with Washington University School of Medicine to advance next generation personalised cancer immunotherapy with neoantigen vaccines. We also renewed our collaboration with a subsidiary of the French National Institute of Health and Medical Research conducting research into translational biology and new disease mechanisms across a range of therapeutic areas.

Precision medicine and genomics

Precision medicine, our new name for personalised healthcare, reflects the broad range of cutting-edge diagnostic technologies we use, including molecular diagnostics, tissue diagnostics, next-generation sequencing and point-of-care diagnostics. Building on our historical focus on Oncology, we now cover all three main therapy areas. Today, 90% of our clinical pipeline follows a precision medicine approach – 10 percentage points more than in 2016. We are industry leading in this field with 19 diagnostic tests launched, linked to four of our medicines (*Iressa*, *Lynparza*, *Tagrisso* and *Imfinzi*) and one linked to a drug we have just externalised (*Zurampic*); joint first for the number of FDA approvals of precision medicines; and the highest number of biomarker-related publications in scientific journals since 2014.

In 2017, we delivered four diagnostic tests. These included one diagnostic to detect PD-L1 protein expression on both tumour and immune cells for *Imfinzi* (bladder cancer); one blood-based laboratory assay for BRCA genes for *Lynparza* (ovarian cancer); one point of care diagnostic for uric acid in blood that can be used for *Zurampic* (gout) and one tumour tissue next-generation sequencing diagnostic for *Tagrisso* (NSCLC). In Respiratory disease, we are now developing our first point-of-care test for eosinophilic respiratory disease with ChemBio Diagnostics. In total, we invested over $185 million in strategic partnerships with leading diagnostic companies in 2017, including Ventana (Roche Tissue Diagnostics), Illumina, Roche Molecular Systems and Myriad Genetics. We have an in-house Centre for Genomics Research which analyses genomes and enables us to identify more effectively novel genetic causes of diseases and integrate this knowledge across our entire drug discovery and development platform. We are also partnering with experts in genomics to enhance our expertise in this field.

Science *can* help target medicines to those most likely to benefit from them

Transformative approaches to drug discovery and development

Within our early science units, we are exploring emerging technologies to accelerate the design and testing of tomorrow's medicines. Since 2013, many of the discoveries and recommendations made by the IMED Futures programmes have been integrated into the way we operate today. Machine learning and artificial intelligence are helping us to transform our medicinal chemistry, and informatics are converting 'big data' into valuable knowledge. For example, our in-house gene-editing group has identified novel targets and drug combinations using CRISPR screens, and the teams published papers in 2017 that have advanced these technologies. Critical to improving target validation is the development of better predictive models of disease. We are collaborating with experts in organ-on-a-chip design, technology and biology from biotech and academia such as TissUse, Nortis and Emulate and, in 2017, five organ-chips were under development with our collaborators. In development, the 'iDecide' suite of digital platforms is enabling the Digital Experimental Cancer Medicine Team at The Christie in Manchester, UK to put into practice technology which will help to increase the access to real-time clinical data.

Late-stage development

During 2017, GMD delivered clinical trial data and submissions that resulted in 19 approvals for new medicines in the US, EU, China and Japan. As shown in the table opposite, our pipeline includes 144 projects, of which 132 are in the clinical phase of development, and we are making significant progress in advancing our late-stage programmes through regulatory approval with 18 NME or major LCM regulatory submissions during 2017.

Imfinzi diagnostic test

Imfinzi's diagnostic test in bladder cancer, which was essential to the approval of the medicine, uses a novel patient selection approach by establishing PD-L1 status via immune cell or tumour cell staining. It not only provides clinicians with information that may guide immunotherapy decisions in 2nd line bladder cancer, but also enables AstraZeneca and diagnostic partner Ventana to drive up testing rates before *Imfinzi*'s launch in 1st line bladder cancer.

At the end of the year, we had 11 NME projects in pivotal studies or under regulatory review (covering 19 indications), compared with 12 at the end of 2016.

Also in 2017, 12 NMEs progressed to their next phase of development and 10 projects were discontinued: six for poorer than anticipated safety and efficacy results; and four as a result of a strategic shift in the environment or portfolio prioritisation.

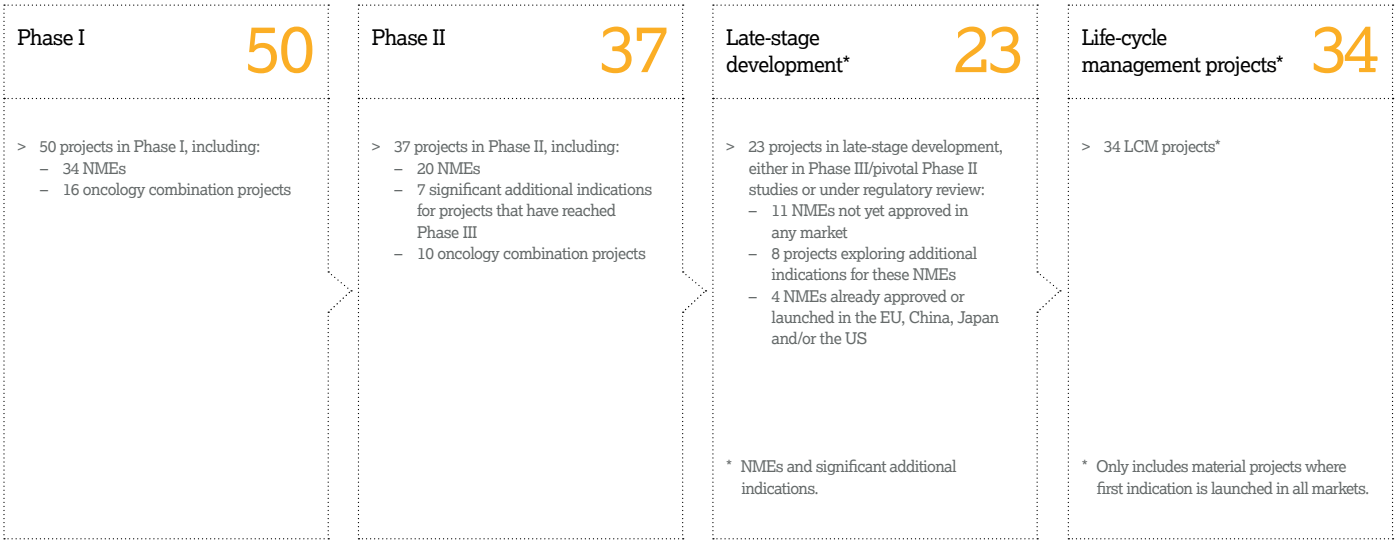
As is to be expected when we are investigating treatments for diseases that are hard to treat, we also had some setbacks during the year. These included disappointing Phase III data results. For example, the initial results of the MYSTIC trial showed that *Imfinzi* in combination with tremelimumab for 1st line NSCLC did not meet the primary endpoint of progression-free survival – please see Oncology from page 48 for more information. Also, the Phase III programme for tralokinumab did not achieve the desired outcomes of significantly reducing exacerbation rates for patients with severe, uncontrolled asthma or in reducing the use of oral corticosteroids. See Respiratory from page 56 for more information.

Accelerating the pipeline

GMD is prioritising its investment in specific programmes in order to accelerate them, so that new treatments get to patients more quickly but still safely. As a result, we had numerous study read-outs in 2017, including key oncology trial outcomes for *Tagrisso* in 1st line EGFR-mutated NSCLC (FLAURA) and for *Imfinzi* in stage 3, locally-advanced unresectable NSCLC (PACIFIC), and we expect a continued flow of new data throughout 2018. Our teams have also been quick to turn positive clinical trial data into regulatory submissions. In 2017, we made submissions in the US, EU and Japan for both *Imfinzi* and *Tagrisso* for the indications noted above and, in the US, we made a submission and received approval for our first haematological cancer drug, *Calquence*, for relapsed/refractory mantle cell lymphoma. Furthermore, *Lynparza* was submitted in the US, EU and Japan for use by patients with platinum-sensitive recurrent ovarian cancer regardless of BRCA-mutation status, and has already received US approval. We also received approval in the US and EU for our first respiratory biologic treatment, *Fasenra*, for severe asthma, and in the EU for combination use of *Forxiga* and *Bydureon* for the treatment of Type 2 diabetes.

In 2017, we presented scientific rationale that resulted in nine regulatory designations for Breakthrough Therapy or Priority Review for new medicines which offer the potential to address unmet medical need in certain diseases, and we also secured Orphan Drug status for the development of three medicines to treat very rare diseases. For more information on our pipeline and regulatory designations made during 2017, please see the Therapy Area Review from page 46 and the Development Pipeline from page 202.

Development pipeline overview (as at 31 December 2017)



We also work in partnership to advance our clinical research – from strategic alliances with contract research organisations (CROs) for the delivery of clinical trials, to academic collaborations.

Life-cycle management

GMD also drives an extensive life-cycle management programme for already-approved medicines to pursue further indications and label updates to expand the potential for our products to help more patients. For example, this year we made regulatory submissions for *Lynparza* to extend treatment into breast cancer; we received US approval for a new auto-injector *Bydureon BCise* for Type 2 diabetes; and we secured US approval for *Faslodex* for earlier treatment of patients with advanced breast cancer.

To ensure we can deliver as many new medicines programmes as we can with our budgets and resources, we continuously seek opportunities to enhance our ways of working and, during 2017, we adopted new operating models – for example within our clinical supply chain – to drive further efficiencies and cost effectiveness.

R&D resources

We have approximately 8,400 employees in our R&D organisation, working in various sites around the world. We have three strategic R&D centres: Gaithersburg, MD, US; Gothenburg, Sweden; and Cambridge, UK.

Cambridge, UK, is a world-leading academic and life sciences hub, and is where we are building our new strategic R&D centre and global corporate headquarters. More than 2,000 staff are already in the City and they will begin to move into the new strategic R&D centre from the end of 2018. The site will be fully operational from 2019. This is later than originally planned and reflects the additional innovation introduced into the development programme, combined with its scale and ambition. The overall investment in the project will be higher than initially planned and now stands at more than £500 million ($700 million), reflecting increased investment in new technologies and equipment (for example genomics, screening lab) as part of our ongoing investment in R&D in the UK.

Other R&D centres are located in the UK (Alderley Park and Macclesfield), the US (Waltham, MA and California), Japan (Osaka) and China (Shanghai). We also have a site in Warsaw, Poland that focuses on late-stage development.

In 2017, R&D expenditure was $5,757 million (2016: $5,890 million; 2015: $5,997 million), including core R&D costs of $5,412 million (2016: $5,631 million; 2015: $5,603 million). In addition, we spent $404 million on acquiring product rights (such as in-licensing) (2016: $821 million; 2015: $1,341 million). We also invested $201 million on the implementation of our R&D restructuring strategy (2016: $178 million; 2015: $258 million). The allocations of spend by early-stage and late-stage development are presented in the R&D spend analysis table below.

R&D spend analysis

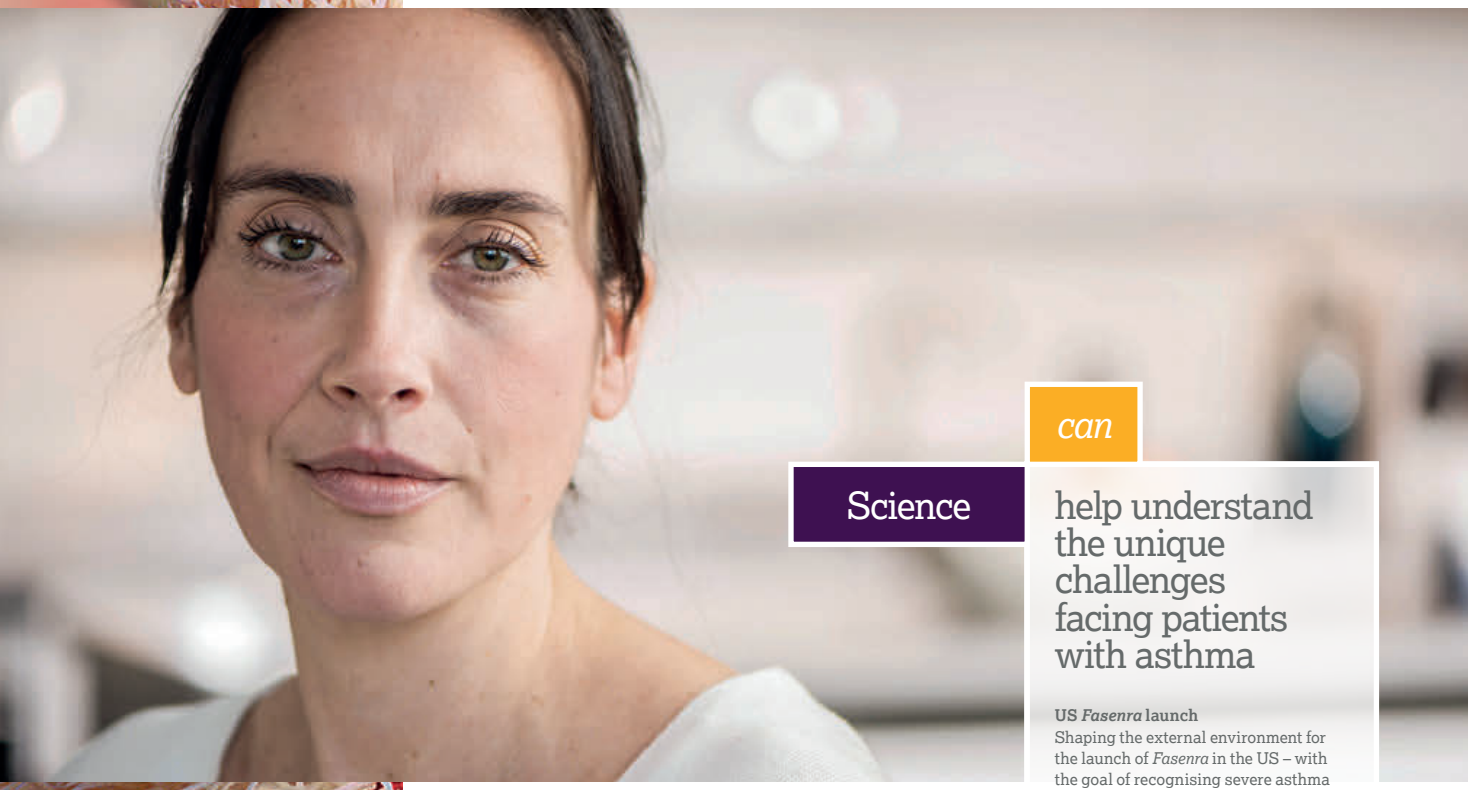
	2017	2016	2015
Discovery and early-stage development	**36%**	36%	39%
Late-stage development	**64%**	64%	61%

$5.8bn

$5,757 million invested in our science

82

82 manuscripts published in 'high-impact' scientific publications – a record number



Science *can* help understand the unique challenges facing patients with asthma

US *Fasenra* launch
Shaping the external environment for the launch of *Fasenra* in the US – with the goal of recognising severe asthma as a public health issue and highlighting the unique challenges facing patients with severe asthma, a cross-functional team engaged with decision makers and influencers, including state and federal policymakers, patients, providers, professional societies and advocacy groups. The result was the updating of how these stakeholders understand, acknowledge, and communicate around asthma as a heterogenous disease requiring an individualised treatment approach. This helped ensure that external stakeholders understand severe asthma and appreciate the need for personalised treatment plans with more advanced treatment options including *Fasenra*.

Nanoparticles circulating in blood stream

2. Return to Growth

We seek to return to growth by focusing on our Growth Platforms and leveraging our strong global commercial presence, particularly in Emerging Markets, to ensure the right medicines are available and that patients have access to them.

Overview

> 2% decrease in Total Revenue to $22,465 million at actual rate of exchange (2% at CER); comprising Product Sales of $20,152 million (down 5%; 5% at CER) and Externalisation Revenue of $2,313 million (up 37%; 38% at CER)
> 5% increase in Growth Platforms revenue (6% at CER), contributing 68% of Total Revenue
  – Emerging Markets: Sales growth of 6% (8% at CER) to $6,149 million. China sales in the year grew by 12% (15% at CER), supported by the launches of new medicines
  – Respiratory: Sales declined by 1% (1% at CER). *Symbicort* sales declined by 6% (6% at CER) and *Pulmicort* sales rose by 11% (12% at CER)
  – New CVMD: Sales growth of 9% (9% at CER). Strong performances from *Farxiga* and *Brilinta*, with sales exceeding $1 billion in 2017
  – Japan: 1% growth in sales (4% at CER), underpinned by the growth of *Tagrisso* and *Forxiga*, partly mitigated by the impact of the entry of generic competition to *Crestor* in the second half of the year
  – New Oncology: Sales growth of 98% (98% at CER). Sales of *Tagrisso* reached $955 million to become AstraZeneca's largest-selling Oncology medicine
> US revenue was down by 16% to $6,169 million; Europe down by 6% (7% at CER) to $4,753 million; and Established ROW was static (up 1% at CER) to $3,081 million

Our plans for growth

Our Commercial teams, which comprised around 34,600 employees at the end of 2017, are active in more than 100 countries. In most countries, we sell our medicines through wholly-owned local marketing companies. We also sell through distributors and local representative offices and market our products largely to primary care and specialty care physicians.

Even as we continue to be impacted by the loss of exclusivity on some of our leading medicines, we have delivered increasing revenues from our growth brands and launches. This return to growth is being underpinned by the Growth Platforms. In 2017, continued declines in revenue, for example from the loss of exclusivity in 2016 of *Crestor* and *Seroquel XR*, were substantially offset by the strong performance of certain products from our Emerging Markets, New CVMD and New Oncology Growth Platforms, including *Farxiga*, *Brilinta* and *Tagrisso.* As our strategy has progressed, so our Growth Platforms have evolved, as shown in Strategy and Key Performance Indicators from page 17. Respiratory was joined by New Oncology from January 2015 and, from January 2017, New CVMD replaced Diabetes and *Brilinta*/*Brilique*. Our two remaining Growth Platforms, Emerging Markets and Japan, reflect the importance of these markets to growing future revenues. Overall, our Growth Platforms grew by 5% at actual exchange rates (6% at CER) in 2017 and now represent 68% of all Total Revenue.

However, the pharmaceutical market is highly competitive. For example, our Diabetes franchise continues to see pricing pressure. In immuno-oncology, the large number of clinical trials that are being carried out highlight the competitive nature of this area and renders speed to market critical.

More information on our performance around the world in 2017 can be found in the Geographical Review from page 221.

Pricing and delivering value

Our medicines help treat unmet medical need, improve health and create economic benefits. Effective treatments can lower healthcare costs by reducing the need for more expensive care, preventing more serious and costly diseases and increasing productivity. Nevertheless, and as outlined in Marketplace from page 8, we are acutely aware of the economic challenges faced by payers and remain committed to delivering value. We are committed to a pricing policy for our medicines based on four principles:

- We determine the price of our medicines while considering their full **value** for patients, payers and society. The agreement on price involves many national, regional and local stakeholders, reflecting factors such as clinical benefit, cost effectiveness, improvement to life expectancy and quality of life.
- We aim to ensure the **sustainability** of both the healthcare system and our research-led business model. We believe we share a collective responsibility with healthcare providers and other stakeholders to work together to enable an efficient healthcare system for patients today and support a pipeline of new medicines for patients tomorrow.
- We seek to ensure appropriate patient **access** to our medicines. We work closely with payers and providers to understand their priorities and requirements, and play a leading role in projects to align better the requirements of regulatory and health technology assessment (HTA) agencies or other organisations that provide value assessment of medicines. For example, we have a leading role in the European IMI ADAPT-SMART programme for exploring adaptive licensing.
- We pursue a **flexible** pricing approach that reflects the wide variation in global healthcare systems. We have developed patient access programmes that are aligned with the ability to pay of patients and healthcare systems. We are committed to the appropriate use of managed entry schemes and the development of real-world evidence and we are investigating innovative approaches to the pricing of medicines, such as payment for outcomes received by the patient and healthcare system.

US

As the sixteenth largest prescription-based pharmaceutical company in the US, we have a 2.5% market share of US pharmaceuticals by sales value. In 2017, Product Sales in the US decreased by 16% to $6,169 million (2016: $7,365 million).

The US healthcare system is complex with multiple payers and intermediaries exerting pressure on patient access to branded medicines through regulatory and voluntary rebates. Regulatory rebates are statutorily mandated chargebacks and discounts paid on government-funded programmes such as Medicaid, Department of Defense (including TRICARE) and Department of Veteran's Affairs. Voluntary rebates are paid to managed care organisations and pharmacy benefit managers for commercially insured patients, including Medicare Part D patients. In the Medicare Part D programme, in addition to voluntary negotiated rebates, branded pharmaceutical manufacturers are statutorily required to pay 50% of the patient's out-of-pocket costs during the 'coverage gap' portion of their benefit design. As part of the ACA, we also pay a portion of an overall industry Patient Protection and Affordable Care Act Branded Prescription Drug Fee.

In 2017, the overall measurable reduction in our profit before tax for the year due to discounts on branded pharmaceuticals in the Medicare Part D Coverage Gap and an industry-wide HealthCare Reform Fee was $119 million (2016: $471 million; 2015: $786 million).

In the US, there is significant pricing pressure driven by payer consolidation, restrictive reimbursement policies and cost control tools, such as exclusionary formularies and price protection clauses. Many formularies, which specify particular medicines that are approved to be prescribed in a healthcare system, or under a health insurance policy, employ 'generic first' strategies and/or require physicians to obtain prior approval for the use of a branded medicine where a generic alternative exists. These mechanisms can be used by intermediaries to limit the use of branded products and put pressure on manufacturers to reduce net prices. In 2017, 84.9% of prescriptions dispensed in the US were generic, compared with 84.4% in 2016. In addition, patients are seeing changes in the design of their health plan benefits and may experience variation, including increases, in both premiums and out-of-pocket payments for their branded medications. The patient out-of-pocket spend is generally in the form of a co-payment or co-insurance, but there is a growing trend towards high deductible health plans which require patients to pay the full list price until they meet certain out-of-pocket thresholds.

Ongoing scrutiny of the US pharmaceutical industry, focused largely on pricing, has been the basis of multiple policy proposals in the US. Proposed changes under consideration include varying approaches to price controls on medicines (including price transparency) as well as potential reforms to government regulated programmes (such as Medicare Part B, Medicare Part D, Medicaid or other provisions under the ACA). Repeal of the Medicare Part D non-interference clause that currently prohibits the government from negotiating directly with manufacturers on drug prices as well as allowing the importation of medicines into the US from other countries have been considered as a mechanism to reduce drug costs. In addition, lawmakers at both the federal and state level have sought increased drug pricing transparency and have proposed and implemented policies that include measures relating to the submission of proprietary manufacturer data, establishment of price parameters that are indexed to certain federal programmes, and reporting of changes in pricing beyond certain thresholds.

Though widespread adoption of a broad national price control scheme in the near future is unlikely, we continue to comply with new state-level regulations in this area and we recognise the sustained potential for substantial changes to laws and regulations regarding drug pricing that could have a significant impact on the pharmaceutical industry.

We understand that our medicines will not benefit patients if they are unable to afford them and that's why we offer a number of resources and programmes that can help increase patients' access to medication and reduce their out-of-pocket costs. We focus our formulary access on affordability for patients through rebate payments as well as savings cards for eligible patients when the out-of-pocket costs are not affordable. AstraZeneca has one of the longest-standing patient assistance programmes in the industry, AZ&Me, which provides eligible patients with AstraZeneca medicines at no cost. AstraZeneca has provided prescription savings to 4.5 million patients across the US and Puerto Rico over the past 10 years.

For more information, see Community Investment on page 45.

Europe

The total European pharmaceutical market was worth $214 billion in 2017. We are the fourteenth largest prescription-based pharmaceutical company in Europe (see Market definitions on page 235) with a 2.2% market share of pharmaceutical sales by value.

In 2017, our Product Sales in Europe decreased by 6% at actual rate of exchange (7% at CER) to $4,753 million (2016: $5,064 million). Key drivers of the decline, leaving aside the impact of divestments such as the anaesthetics portfolio, *Seloken* and *Zomig*, were continued competition from *Symbicort* analogues, ongoing volume erosion of *Pulmicort*, *Seroquel XR* and *Nexium* following loss of exclusivity, and the continued impact of early generic entry in certain markets for *Crestor* and *Faslodex*, which we expect to continue in 2018. The continued macroeconomic environment, pricing pressure from payers and parallel trade across markets also affected sales. Despite these conditions, we continued to launch innovative medicines across Europe and saw significant progress of certain products across our Growth Platforms, in particular with *Forxiga*, *Xigduo*, *Brilinta*, *Lynparza* and *Tagrisso*.

Following the presentation of the PACIFIC trial at ESMO in 2017, we have overseen a mobilisation of medical teams across Europe to be able to offer early access to *Imfinzi* for patients with unresectable stage 3 NSCLC.

The PACIFIC Early Access Programme (EAP) went live in September 2017 with the first patient included in October 2017. The PACIFIC EAP is now open in 16 EU countries with additional countries planned to be active. This is a great example of our ability to put the patient first and to offer life-changing medicine to patients in need.

Established Rest of World (ROW)*

In 2017, Product Sales in Japan increased by 1% at actual rate of exchange (increased 4% at CER) to $2,208 million (2016: $2,184 million), as a result of the strong growth from the brands in our Growth Platforms and *Nexium*. Particularly strong performances from *Tagrisso* and the Diabetes franchise helped to drive this volume growth, offsetting generic competition. *Crestor*, for example, is now facing significant generic competition. In September 2017, a *Crestor* authorised generic entered the market and in December 2017 we saw more than 20 generic companies enter the statin market with generic rosuvastatin. We now hold ninth position in the ranking of pharmaceutical companies by sales of medicines in Japan. Despite the mandated biennial government price cuts and increased intervention from the government to rapidly increase the volume share of generic products, Japan remains an attractive market for innovative pharmaceuticals. These price cuts are likely to continue as are experimental decisions by regulators based on cost effectiveness assessments.

Canada has a mixed public/private payer system for medicines that is funded by the provinces, insurers and individual patients. It has also now become common for public payers to negotiate lower non-transparent prices after they have gone through a review by the Canadian Agency for Drugs and Technology in Health, a health technology assessment body. Most private insurers pay full price, although there is increasing pressure to achieve lower pricing. Overall, the split for AstraZeneca's portfolio is 63% funded by private payers and 37% with public plans.

Our sales in Australia and New Zealand declined by 5% at actual rate of exchange (7% at CER) in 2017. This was primarily due to the continued erosion of *Crestor*, *Nexium* and *Seroquel* by generic medicines and price reductions on established brands. Sales declined less in 2017 than in 2016 as the pace of generic erosion has moderated while the sales growth from new products such as *Brilinta*, *Lynparza* and the Diabetes portfolio has continued. *Brilinta*, *Lynparza* and the Diabetes portfolio grew by 15% at actual rate of exchange (10% at CER), 100% (actual and CER) and 27% at actual rate of exchange (25% at CER) respectively.

* Established ROW comprises Australia, Canada, New Zealand and Japan.

Expansion in Emerging Markets

Emerging Markets, as defined in Market definitions on page 235, comprise various countries with dynamic, growing economies. As outlined in Marketplace from page 8, these countries represent a major growth opportunity for the pharmaceutical industry due to high unmet medical needs and sound economic fundamentals. Emerging Markets are not immune, however, to economic downturn. Market volatility is higher than in Established Markets and various political and economic challenges exist. These include regulatory and government interventions. In selected markets, governments are encouraging local manufacturing by offering more favourable pricing legislation and pricing is increasingly controlled by governments with price referencing regulations.

Growth drivers for Emerging Markets include new medicines across our Diabetes, Respiratory, Oncology and CV portfolios. To educate physicians about our broad portfolio, we are selectively investing in sales capabilities where opportunities from unmet medical needs exist. We are also expanding our reach through multi-channel marketing and external partnerships.

With revenues of $6,149 million, AstraZeneca was the sixth largest multinational pharmaceutical company, as measured by prescription sales, and the second fastest-growing top 10 multinational pharmaceutical company in Emerging Markets in 2017.

In China, AstraZeneca is the second largest pharmaceutical company by value in the hospital sector, as measured by sales. Sales in China in 2017 increased by 12% at actual rate of exchange (15% at CER) to $2,955 million (2016: $2,636 million). We delivered sales growth above the growth rate of the hospital market sector through strategic brand investment, systematic organisational capability improvements and long-term market expansion programmes in core therapy areas. In addition, five products including *Brilinta*, *Onglyza* and *Faslodex* were listed in the updated National Reimbursed Drug List (NRDL) and we launched two key products (*Tagrisso* and *Forxiga*) during 2017. Pricing practices remain a priority for regulators and new national regulations, in addition to provincial and hospital tenders, continue to put increasing pricing pressures on pharmaceutical companies in China. The industry-wide growth rate is expected to be a moderate single digit percentage, following the recent update of the NRDL and expanding health insurance coverage. Nevertheless, the healthcare environment in China remains dynamic. Opportunities are arising from incremental healthcare investment, strong underlying demand for our more established medicines and the emergence of innovative medicines.

Science *can* help more patients in China

China market development
Our business in China is able to expand only by meeting the needs of an increasing number of patients. In order to do this, we partner with stakeholders at the local, provincial and national level and we recognise that our ability to grow our business is directly related to even more patients being able to access quality healthcare.

One important way we do this is through our China Commercial Innovation Centre, where, with our partners, we develop ways to integrate technology into all parts of healthcare delivery, increasing the chance that the right treatment is delivered to the right patient at the right time. For example, by working with different stakeholders, our online nebulisation centres across certain parts of China are now up and running and their availability is updated in real time. Therefore, patients who need to access treatment have all the information they need to access care wherever they may need it.

Access to healthcare

We continue to make our medicines affordable to more people on a commercially and socially sustainable basis. As, on average, almost half of medicine funding in emerging countries is paid for by the patient or their families, we base our approach in these markets on an understanding of their economic circumstances and the burden placed on them by health costs. We are aiming to enable our Emerging Markets to deliver better and broader patient access through innovative and targeted equitable pricing strategies and practices.

We have a variety of access programmes around the world, each tailored to meet the needs of the local community, which include a patient's ability to pay. These include patient assistance programmes, such as Terapia Plus in Ukraine, Karte Zdorovia in Russia and FazBem in Brazil.

We also run donation programmes, such as in Cambodia, where we celebrated the ninth year of our partnership with Americares in support of the Cambodia Breast Cancer Initiative. In 2017, it provided approximately 700 screenings, more than 8,000 education sessions, and diagnosed 59 cases of breast cancer.

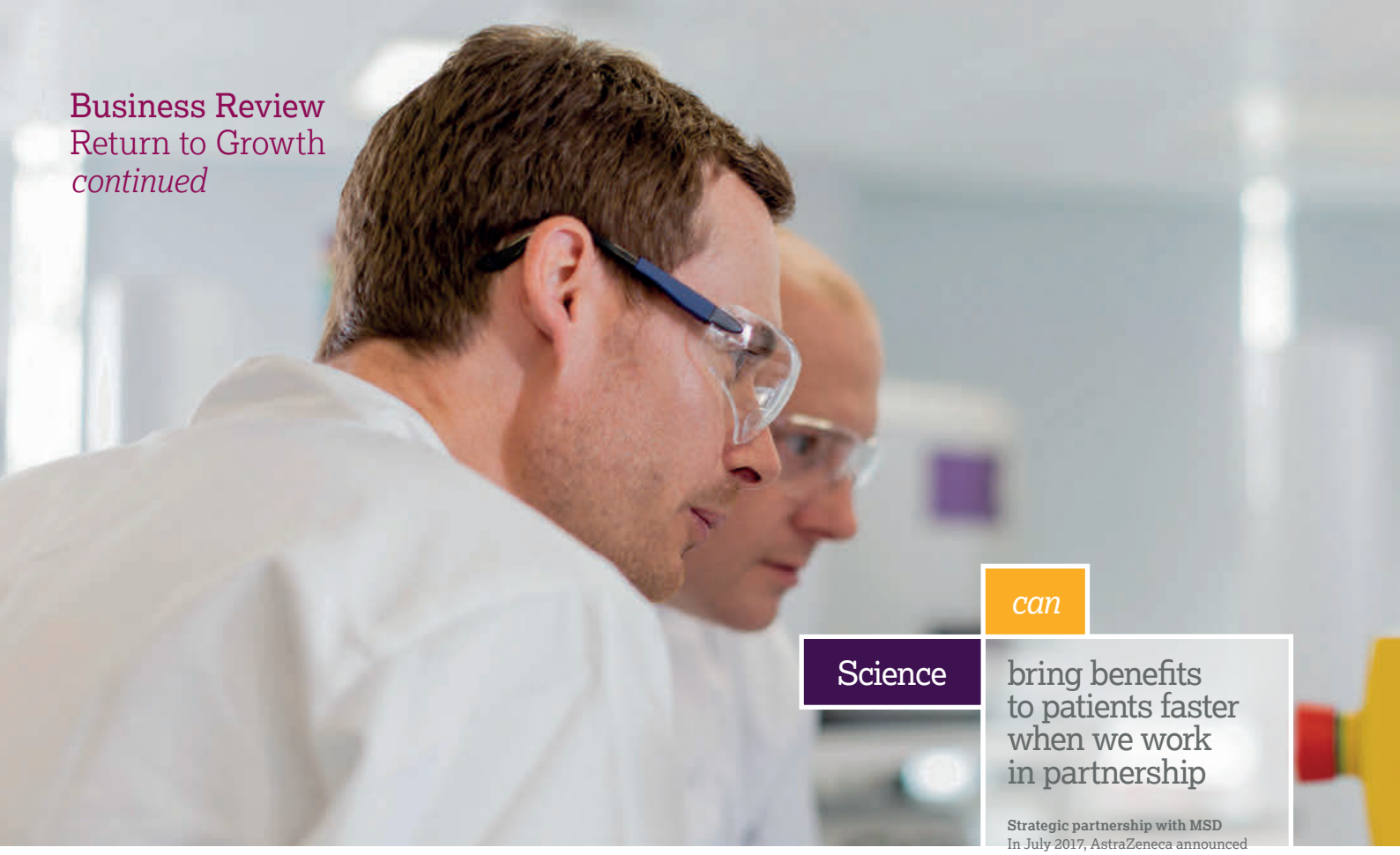
For more information on product donations, see Community investment on page 45.

Other programmes are focused on developing healthcare system infrastructure. For example, Phakamisa supports the South African healthcare system by bringing together different organisations to strengthen healthcare capabilities and improve access to treatment and support networks. It aims to reduce the burden of breast and prostate cancer and lung disease through the promotion of primary prevention, early detection and access to affordable medicines. Launched in September 2017, Healthy Lung Asia is a region-wide initiative, with programmes being tailored and developed in nine countries across Asia in collaboration with local partners. The overall objective of Healthy Lung Asia is to raise the profile of respiratory disease with policy makers and build health system capacity to support future access. It started with programmes in Vietnam and Indonesia.

For more information, see page 39.

Healthy Heart Africa (HHA) was launched in Kenya in October 2014 in collaboration with the Ministry of Health in support of its commitment to combat NCDs. Following the success of HHA in Kenya, we developed a partnership with the Federal Ministry of Health in Ethiopia in 2016 to integrate HHA programming into the Ethiopian healthcare system, in support of the Government National Strategic Action Plan for NCDs. HHA aims to reach 10 million people with high blood pressure across Africa by 2025, supporting WHO's global target of a 25% reduction in hypertension prevalence by 2025, and on page 40 you can see the progress we have made.

For more information on Broadening access to healthcare as one of our sustainability priorities, please see page 39.



Strategic partnership with MSD
In July 2017, AstraZeneca announced a strategic collaboration with MSD to maximise the potential of *Lynparza* as a monotherapy and as the backbone for oncology combinations, as well as explore the potential of selumetinib, an inhibitor of MEK, part of the mitogen-activated protein kinase (MAPK) pathway. The collaboration was driven by our commitment to following the science: PARP inhibition is increasingly recognised as a foundation for mono and combination therapies. For example, blocking PD-L1 can potentiate the effect of PARP inhibition in tumour suppression and MEK inhibitors can make a tumour more responsive to immunotherapy. The collaboration enables us to work hand-in-hand with another leading oncology company and one of the key players in immuno-oncology to accelerate new and existing ideas. The increased resources and focus bring potential benefit to more patients in need faster than we can do alone. Together, we are building an even broader clinical programme and we are working hard to deliver it as quickly as possible.

Operations

Our manufacturing and supply function supports our Return to Growth, and our Operations 2020 plan provides a focus for our investments. They will help ensure we are able to respond to patient and market needs for our medicines.

Operations 2020 was launched in 2015 to enhance supply capabilities in order to respond better to patient and market needs. It focuses on supporting the delivery of our new product launches, strengthening our science and technology capabilities across the globe, creating a more agile and flexible supply chain, and embedding Lean principles throughout our network. Our goal is to be recognised as a leader in the biopharmaceutical supply chain by 2020.

Quality, regulation and compliance

We are committed to high product quality, which underpins the safety and efficacy of our medicines. We maintain a comprehensive quality management system to assure compliance and quality. Similarly, we set strict standards for safety, health and environment at each of our sites. Manufacturing facilities and processes are subject to rigorous and continuously evolving regulatory standards. They are subject to inspections by regulatory authorities, who are authorised to mandate improvements to facilities and processes, halt production and impose conditions for production to resume.

In 2017, we hosted 56 independent inspections from 21 regulatory authorities. We reviewed observations from these inspections together with the outcomes of internal audits and, where necessary, implemented improvement actions.

Following the second CRL received at ZS Pharma for ZS-9, the site has completed manufacturing process validation and the NDA was refiled with the FDA in December. For further details please see the CVMD section from page 52.

We are committed to maintaining the highest ethical standards and compliance with internal policies, laws and regulations. We review and comment upon evolving national and international compliance regulations through our membership of industry associations, including IFPMA, EFPIA and PhRMA.

Pharmaceutical Technology & Development (PT&D)

The integration of PT&D into our Operations organisation since 2016 has driven greater collaboration between our technical groups and manufacturing sites, allowing substantial manufacturing and scientific expertise and leadership to inform decisions for the discovery, development and commercialisation of small molecule portfolios.

We are actively working on over 150 drug projects across our R&D and Commercial portfolios, streamlining over 400 innovation ideas from concept to business case, and supporting more than 250 AstraZeneca clinical studies worldwide. We also support over 100 in-line brands and small molecule marketed products through our new global Manufacturing Science and Technology organisation and manufacturing site Centers of Excellence.

Our continued innovation in science and technology allows us to enable and differentiate products including *Lynparza*, *Qtern*, *Bevespi*, *Calquence*, *Brilinta* and potential new products such as PT010 as they are introduced into the marketplace and ultimately into the hands of patients globally. In 2017, we also launched the Turbo+ programme, our digital Integrated Patient Solution for *Symbicort Turbuhaler.*

For more information, please see Respiratory on page 56.

Manufacturing capabilities

Our principal tablet and capsule formulation sites are in the UK, Sweden, China, Puerto Rico and the US, with local/regional supply sites in Russia, Japan, Indonesia, Egypt, India, Germany, Mexico, Brazil, Argentina and Algeria. We also have major formulation sites for the global supply of parenteral and/or inhalation products in the US, Sweden, France, Australia and the UK. Most of the manufacture of API is delivered through the efficient use of external sourcing that is complemented by internal capability in Sweden.

For biologics, our principal commercial manufacturing facilities are in the US (Frederick, MD; Greater Philadelphia, PA; Boulder and Longmont, CO), the UK (Speke), and the Netherlands (Nijmegen) with capabilities in process development, manufacturing and distribution of biologics, including global supply of mAbs and influenza vaccines.

In 2017, we launched our first two new biologics medicines, *Imfinzi* and *Fasenra*, using our large-scale drug substance manufacturing facility in Frederick, MD, US. We continue to develop additional manufacturing capacity for both drug substance and drug product production. Our new small-scale/high-titre drug substance manufacturing facility, also in Frederick, began producing clinical supply material in 2017. Our recently acquired facility in Longmont, CO, US has been integrated into our Colorado Biologics operations to provide cold chain logistics support to our Boulder, CO, US drug substance manufacturing facility. In Sweden, we expect our new biologics drug product manufacturing facility to be available for clinical trial programmes by the end of 2018.

For small molecules we are constructing a new small-scale development and launch facility alongside our existing manufacturing facility in Wuxi, China. This investment will support the acceleration of delivery of our new innovative medicines to patients in China. Completion of this high-potential facility, expected in 2018, will complete our ability to execute in China across the whole life-cycle of a medicine from discovery to commercialisation.

At the end of 2017, approximately 12,600 people were employed at 31 Operations sites in 18 countries.

For more information on Supply chain management, please see page 42.

Partnering

Business development, specifically partnering, is an important element of our business. It supplements and strengthens our pipeline and our efforts to achieve scientific leadership. We partner with others around the world, including academia, governments, industry, scientific organisations and patient groups, as well as other biopharmaceutical companies, to access the best science to stimulate innovation and accelerate the delivery of new medicines to target unmet medical need. We currently have more than 600 collaborations around the world.

More generally, our business development activity takes many forms and can be broadly grouped into:

- alliances, collaborations and acquisitions to enhance our portfolio and pipeline in our main therapy areas
- externalisation activity to maximise the value of our assets
- divestments of non-priority medicines.

We continue to assess opportunities to make strategic, value-enhancing additions to our portfolio and pipeline in our main therapy areas, including through in-licensing and acquisitions. No acquisitions were completed in 2017.

Over the past three years, we have completed more than 250 major or strategically important business development transactions, including some 54 in 2017. Of these transactions, 17 were related to pre-clinical assets or programmes and nine to precision medicine and biomarkers. Twenty transactions helped expand our biologics capabilities.

Externalisation is a core component of our strategy and has an important role to play in the delivery of our ambition as we continue to sharpen our focus on developing key assets within our main therapy areas. This activity creates additional value from our existing medicines as well as recurring Externalisation Revenue and falls broadly into two categories: (a) collaborations that help us access therapy area expertise and (b) collaborations that help us increase the number of patients and the reach of medicines in which we maintain an ongoing interest, but which typically sit outside our main therapy areas.

Examples of collaborations entered into in 2017 that help us access therapy area expertise or generate sustainable and ongoing income include:

- our partnership with MSD regarding *Lynparza* and selumetinib in Oncology
- our collaboration with Sanofi Pasteur for MEDI8897
- our agreement with TerSera for *Zoladex* in the US and Canada.

In each case, we are optimising the long-term value of each medicine through the collaboration.

Examples of collaborations that help us increase our reach to a greater number of patients include the strategic partnership with Circassia regarding the promotion of *Tudorza* and the development and commercialisation of *Duaklir* in the US. *Tudorza* and *Duaklir* are important components of AstraZeneca's Respiratory franchise globally and this collaboration will support their commercialisation in the US for the benefit of millions of COPD patients. It also further sharpens our focus on *Symbicort*, *Bevespi Aerosphere*, *Fasenra* and other respiratory development programmes.

Alongside these externalisation opportunities, we also divest medicines that typically sit outside our main therapy areas and that can be deployed better by a partner, in order to redirect investment and resource in our main areas of focus while ensuring continued or expanded patient access. For example, in 2017, we sold to Aspen our remaining rights in the anaesthetic portfolio, we divested commercial rights to *Seloken/Seloken ZOK* in Europe to Recordati and divested to Grünenthal the global, ex-Japan, rights to *Zomig*. These agreements will enable us to concentrate our resources on bringing multiple new medicines to patients.

The resulting revenue from these activities supports our R&D investments in our main therapy areas. Thirteen transactions that contribute to Externalisation Revenue and a further 10 divestments or out-licences were completed in 2017.

More information on our partnering activity in 2017 can be found in the Financial Review from page 66 and Notes 1 and 2 to the Financial Statements from page 145.

31

We have 31 Operations sites in 18 countries

250

Completed more than 250 major or strategically important business transactions in the last three years

600

We have more than 600 collaborations worldwide

"Our industry's principal economic safeguard is a well-functioning system of patent and related protection."

Intellectual Property

Our industry's principal economic safeguard is a well-functioning system of patent and related protection that recognises our efforts and rewards innovation with appropriate protection – and allows time to generate the revenue we need to reinvest in pharmaceutical innovation. Patent rights are limited by territory and duration.

A significant portion of a patent's duration can be spent during R&D, before it is possible to launch the protected product. Therefore, we commit significant resources to establishing and defending our patent and related IP protections for inventions.

Patent process

We file patent protection applications for our inventions to safeguard the large investment required to obtain marketing approvals for potential new drugs. As we further develop a product and its uses, these new developments may necessitate new patent filings. We apply for patents through government patent offices around the world. These assess whether our inventions meet the strict legal requirements for a patent to be granted. Our competitors can challenge our patents in patent offices and/or courts. We may face challenges early in the patent application process and throughout a patent's life. The grounds for these challenges could be the validity of a patent and/or its effective scope and are based on ever-evolving legal precedents. We are experiencing increased challenges in the US and elsewhere in the world (such as in Australia, Brazil, Canada, China, Europe and Japan) and there can be no guarantee of success for either party in patent proceedings. For information about third party challenges to patents protecting our products, see Note 28 to the Financial Statements from page 182. For more information on the risks relating to patent litigation and early loss and expiry of patents, please see Risk from page 210.

The basic term of a patent is typically 20 years from the filing of the patent application with the relevant patent office. However, a product protected by a pharmaceutical patent may not be marketed for several years after filing, due to the duration of clinical trials and regulatory approval processes. Patent Term Extensions (PTE) are available in certain major markets, including the EU and the US, to compensate for these delays. The term of the PTE can vary from zero to five years, depending on the time taken to obtain any marketing approval. The maximum patent term, when including PTE, cannot exceed 15 years (EU) or 14 years (US) from the first marketing authorisation.

Patent expiries

The table on pages 208 and 209 sets out certain patent expiry dates and sales for our key marketed products.

Other exclusivities

Regulatory data protection (RDP or 'data exclusivity') is an important additional form of exclusivity which is separate from, but runs in parallel to, patent exclusivity. RDP arises in respect of data which is required to be submitted to regulatory authorities to obtain marketing approvals for our medicines. Significant investment is required to generate such data (for example, through conducting global clinical trials) and this proprietary data is protected from use by third parties (such as generic manufacturers) for a number of years in a limited number of countries. The period of such protection, and the extent to which it is respected, differs significantly among countries and varies depending on whether an approved drug is a small or large molecule compound. RDP is an important protection for our products, and we strive to enforce our rights to it, particularly as patent rights are increasingly being challenged.

The RDP period starts from the date of the first marketing approval from the relevant regulatory authority and runs parallel to any patent protection. For small molecule drugs, RDP generally expires prior to patent expiry in all major markets.

If a product takes an unusually long time to secure marketing approval, or if patent protection has not been secured, has expired or has been lost, then RDP may be the sole IP right protecting a product from copying. Generic manufacturers, we believe, should not be allowed to rely on AstraZeneca's data to support the generic product's approval or marketing until the RDP right has expired. In the EU, the RDP period is eight years followed by two years' marketing exclusivity.

In the US, new chemical entities (NCEs) are entitled to a period of five years' RDP under the Federal Food, Drug and Cosmetic Act. This period of RDP runs parallel to any pending or granted patent protection and starts at the approval of the new application. There are circumstances where RDP could be the sole layer of exclusivity protecting a product from being copied. Further, under the Biologics License Application process, the FDA will grant 12 years' data RDP for a new biologic to an innovator manufacturer.

Science *can* improve R&D productivity

5Rs
In a research paper published in *Nature Reviews Drug Discovery* in January 2018, our IMED Biotech Unit documents a more than four-fold improvement in R&D productivity following significant revision of its approach and adoption of a '5R framework' – right target, right patient, right tissue, right safety, right commercial potential. The framework has guided successful, efficient drug discovery and development while financial investment in R&D has remained unchanged.

The IMED Biotech Unit's 5R framework focuses on quality rather than quantity at all stages of drug discovery and development. Hence, the number of projects in discovery has decreased while their likelihood of success has increased. Other key factors include investment in state-of-the-art technologies, such as CRISPR (see page 126), and next-generation sequencing, to produce better quality drug candidates for development, as well as a change in culture to focus on the science. As a result, its success rate in discovering new compounds, which then progress through the pipeline to completion of Phase III clinical trials, increased from 4% in the period 2005-2010 to 19% in the period 2012-2016. This places R&D productivity well above the pharmaceutical industry average of 6% for small molecules in the period 2013-2015.

Under Orphan Drug laws in the EU and US, market exclusivity is granted to an innovator who gains approval for a pharmaceutical product developed to treat a rare disease. What qualifies as a rare disease differs between the EU and US. Qualifying Orphan Drugs are granted 10 years' market exclusivity in the EU and seven years' market exclusivity in the US.

Compulsory licensing

Compulsory licensing (where a Patent Authority imposes a licence on the Patentee) is on the increase in certain markets in which we operate. We recognise the right of developing countries to use the flexibilities in the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (including the Doha amendment) in certain circumstances, such as a public health emergency. We believe this should apply only when all other ways of meeting the emergency needs have been considered and where healthcare frameworks and safeguards exist to ensure the medicines reach those who need them.

Information technology and information services resources

In 2017, we embarked on the second phase of our IT journey, taking what we successfully delivered in our three-year transformation to the next level. The foundation of our future focus is based on improved cost efficiency, systems performance and better support for the business priorities. Our focus for the next three years is to optimise and enable accelerated revenue growth and profitability through digitisation and innovation.

Leveraging the operating model implemented during the transformation, we will build on business productivity and ensure targeted outcomes that accelerate drug developments, help us bring products to market faster and support tools required for specialised medicines. We will also harness our internal capabilities to develop robust strategies on data and analytics, software engineering and cloud technology – all of which will support the business and its various transformation programmes.

Protecting our IT systems, IP and confidential information against cyber attacks is a key concern. Our IT organisation seeks continuous improvement of our IT protection by developing and implementing robust, effective and agile risk-based approaches to protect our resources and keep pace with the rapidly evolving cyber security risk landscape. To help guard against cyber threats, we have adopted a comprehensive cyber security process and policy, which we regularly review and update. We monitor our systems and data with sophisticated technology to identify and address potential weaknesses in the management of cyber security risk. Over 54,000 employees have also completed internal cyber awareness training in 2017. We recognise that cyber security is a rapidly evolving landscape and attacks display ever-increasing levels of sophistication. The risk of a cyber security event cannot be discounted despite these preventative actions.

For more details, please see Risk from page 210.

At the end of 2017, our IT organisation comprised approximately 3,715 people across our sites in the UK, Sweden, the US, and our global technology centres in India (Chennai) and Mexico (Guadalajara).

Selective crystal structure traps potassium and removes it from the body

"To foster innovation, we seek to ensure that our employees reflect the diversity of the communities in which we operate."

3. Be a Great Place to Work

Great people are central to our success and being a great place to work is at the heart of our efforts to release the talents of our people. We promote a culture, both for employees and those third parties with whom we work, that delivers sustainable good performance and long-term business success.

Overview

- Encouraging improvements in scores in our employee survey (Pulse)
- Continued development of women and increase in the representation of women in senior roles
- Employee retention remains challenging in specific areas of the business
- Maintained listing in Pharmaceuticals, Biotechnology and Life Sciences industry group of Dow Jones Sustainability Index
- Launched Code of Ethics based on our Values
- Continued progress towards our target to source 100% renewable power by 2025
- Launched Healthy Lung Asia to raise profile of respiratory disease and build health system capacity

Employees

To achieve our strategic priorities, we continue to acquire, retain and develop a talented and diverse workforce united in the pursuit of our Purpose and living our Values.

We value the talents and skills of our employees and our people strategy supports our strategic priority of being a great place to work.

Build and develop organisations and capabilities

We are committed to hiring and promoting talent ethically and in compliance with applicable laws. Our current Global People Policy sets out how we will meet our commitment to promoting and maintaining a culture of diversity and equal opportunity, in which individual success depends solely on personal ability and contribution. It describes the principles of our commitment and provides a framework for developing and implementing the people plans needed to ensure we deliver these principles consistently worldwide. The Global People Policy and its supporting Standards are designed to help protect against discrimination on any grounds (including disability) and cover recruitment and selection, performance management, career development and promotion, transfer, training, retraining (including retraining, if needed, for people who have become disabled), and reward. More information on our Global Policy framework can be found on page 40, our Code of Ethics on page 98 and our Global Policies can be found on our website, www.astrazeneca.com/sustainability.

To help deliver our strategic priorities, we are identifying and recruiting emerging talent, as well as investing in internships and recruitment opportunities globally. For example, we conduct a global programme to hire recent graduates for our pharmaceutical technical development, procurement, quality, engineering, IT, supply chain, and biometrics and information sciences functions. We also have a graduate programme for IMED, which complements our established IMED Post Doctorate Programme for researcher recruitment. Additionally, we offer a 12-week internship opportunity for business school students to contribute to key initiatives in our Oncology therapeutic area.

Hiring over recent years means that employees with less than two years' service now represent 31% of our global workforce (up from 20% in 2012). This provides a greater balance in terms of refreshing talent and retaining organisational experience. 2017 saw an increase in hiring to support our strategic objectives. Our data indicates that these recent hires are performing strongly, although in some areas of the business retention of this population is challenging. During 2017, we hired 11,000 permanent employees. Voluntary employee turnover remained stable at 9.7% in 2017.

The voluntary employee turnover rate among our high performers increased in 2017 to 7.1% (from 6.1% in 2016), while the voluntary employee turnover of recent hires decreased to 12.2% (from 12.7% in 2016). We seek to reduce regretted turnover through more effective hiring and induction, exit interviews, risk assessments and retention plans.

The uncertainty faced by individuals and their families following the UK's decision to leave the EU in the referendum in June 2016 could have an impact on hiring and retaining staff in some business-critical areas. Consequently, we are considering ways in which we might support existing staff who might be impacted and, through our hiring process, ways of supporting potential staff.

Develop a strong and diverse pipeline of leaders

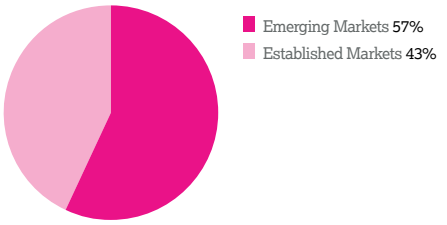
To foster innovation, we seek to harness different perspectives, talents and ideas as well as ensuring that our employees reflect the diversity of the communities in which we operate.

As part of our commitment to diversity and inclusion we have implemented numerous initiatives across the globe, such as unconscious bias training, the formation of various employee resource groups (such as an LGBT network) and, in some parts of the business, the creation of a People Manager objective to ensure all recruitment includes diverse applicant slates and diverse interview panels.

Our commitments include a goal to increase the number of women on our leadership teams. As shown in the gender diversity figure on page 37, women comprise 50.1% of our global workforce. There are currently five women on our Board (42% of the total). Below Board level, the representation of women in senior roles (ie roles at Career Level F or above which constitute the six highest bands of our employee population) increased to 44.4% in 2017 (from 43.2% in 2016), which exceeded our scorecard target of 43.5% for this measure and compares favourably to external benchmarks. Women are also currently promoted at a higher rate than men across all levels of seniority, positively impacting the gender balance. In 2017, AstraZeneca was ranked 15th in the FTSE 100 for Women on Boards and 9th for Women on Executive Committees and Direct Reports. Our progress has been recognised externally with Bahija Jallal (Executive Vice-President, MedImmune) being named 2017 Woman of the Year by the Healthcare Businesswomen's Association.

In 2017, we extended our Women as Leaders experience to support the accelerated development of high-potential women in AstraZeneca. In addition, we have developed women's networks in most countries, held a womens' summit in the UK, US and Sweden, and continued to support mentoring relationships, for example introducing mentoring by senior females for emerging talent in Operations.

Sales and Marketing workforce composition (%)



In 2017, 88% of vacancies across the top three levels of our organisation were filled internally, reflecting our long-term commitment to develop high-quality leaders. To ensure our senior leadership reflects our diverse geographic footprint, we track the country of origin of senior leaders and reflect this in our diversity targets. In 2017, 13.4% of leadership roles that report to our senior leadership team have a country of origin that is an Emerging Market or Japan (an increase from 5% in 2012, but below our 2017 target of 16%).

Diversity is integrated across our new Code of Ethics and associated workforce policy. In addition to the two diversity metrics tracked in the AstraZeneca scorecard, on an annual basis the SET and Board are provided with a comprehensive overview of the AstraZeneca workforce, covering a wide range of metrics and measures (including trends around gender diversity, leadership ethnic diversity and age profile). The SET is also provided with a quarterly summary of key workforce metrics, including gender diversity and leadership ethnic diversity. Within the US, we track overall ethnic minority representation, ethnic minority representation in senior roles, and ethnic minority representation in succession plans.

Drive a vibrant, high-performing culture

Continuing our emphasis on high performance, in 2017 our high performers were promoted at twice the rate of the wider employee population. We require every employee to have high-quality objectives, aligned to our strategy, which we monitor closely. Managers are accountable for working with their employees to develop individual and team performance targets, and for ensuring employees understand how they contribute to our overall business objectives. Through increased investment in technology, we have also extended our global annual salary and incentive review process to cover 87% of the population (60% in 2016). We encourage participation in various employee share plans, some of which are described in the Directors' Remuneration Report from page 105, and also in Note 27 to the Financial Statements, from page 179.

Our salary and bonus budgets are distributed in line with our principles, allowing us to clearly differentiate reward according to performance.

Employee opinion surveys help us measure employee satisfaction and engagement, and progress in our aim of being a great place to work. Our most recent survey, carried out in December 2017, showed an improvement compared to the survey at the start of the year in scores for all 11 items common to both surveys. Importantly, we saw good progress in employee understanding and belief in our strategy, perception of AstraZeneca as a great place to work and questions related to personal development. Despite progress in the latest survey, there remains further opportunity for improvement around leadership communication.

Generate a passion for people development

We encourage employees to take ownership of their own development and encourage leaders to spend time supporting their employees' development. To support this, we have implemented a global platform to increase the visibility and accessibility of job opportunities and received over 18,500 applications from internal candidates through this platform in 2017.

As part of our ambition to transform the learning culture in AstraZeneca, we have implemented a best-practice cloud-based global learning management system that will provide a platform to ensure development opportunities are available to all employees.

In 2017, we launched 'Leading People', a social online learning platform, with over 4,000 managers enrolling on the course. We saw a significant increase in the score in a number of key Pulse survey items among this cohort, in particular those around engagement and personal development. This work was recognised with a significant external award. Furthermore, in 2017, we also launched a pilot for over 200 employees for the related programme 'Leading Self', which will be rolled out to all employees globally in 2018.

Human rights

Our Global People Policy and Human Rights Statement commit us to respecting and promoting international human rights – not only in our own operations, but also in our wider spheres of influence, such as our third-party providers. To that end, we integrate human rights considerations into our processes and practices. We are also committed to ensuring that there is no modern slavery or human trafficking in our supply chains or any part of our business. Our full statement required under section 54 of the UK Modern Slavery Act is available on our website, www.astrazeneca.com.

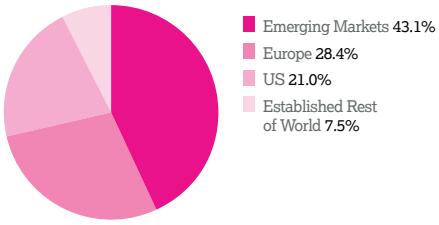
We support the principles set out in the United Nations Universal Declaration of Human Rights and the International Labour Organization's (ILO) standards on child labour and minimum wages. We are also members of the United Nations Global Compact on Human Rights.

We measure human rights by means of a labour review survey every two years in all countries where we have a presence. The review focuses on ILO core themes, including freedom of association and collective bargaining, child labour, discrimination, working hours and wages, including questions on the Living Wage. Where local gaps to ILO minimum standards are identified, such as maternity leave or grievance procedures, we put in place local plans to close those gaps where allowed by relevant national legislation. Our reporting in this area is assured by Bureau Veritas.

For more information, please see page 227.

A global business

Employees by reporting region (%)



All numbers as at 31 December 2017.

61,100
employees

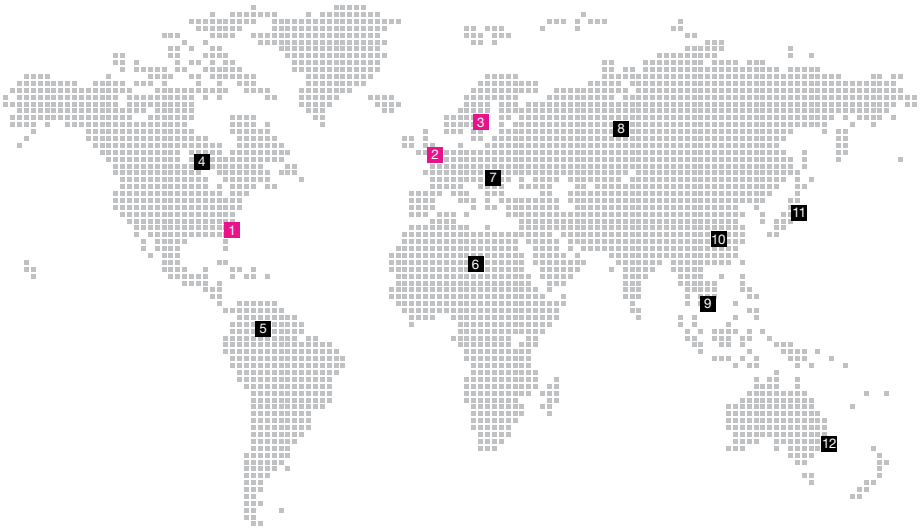
Co-locating around three strategic R&D centres

1. Gaithersburg, MD, US
2,900

2. Cambridge, UK
2,200

3. Gothenburg, Sweden
2,200

By geographical area



1. US
12,800
(21.0%)

2. UK
6,600
(10.7%)

3. Sweden
5,800
(9.4%)

4. Canada
700
(1.2%)

5. Central and South America
3,000
(4.9%)

6. Middle East and Africa
1,600
(2.6%)

7. Other Europe
7,500
(12.4%)

8. Russia
1,300
(2.1%)

9. Other Asia Pacific
6,300
(10.3%)

10. China
11,600
(19.0%)

11. Japan
2,900
(4.7%)

12. Australia and New Zealand
1,000
(1.6%)

In 2017, we signed up to the 'Fair Wage' database and will use this data to measure and monitor performance and issue directions on the Living Wage.

Managing change

We continue to implement plans to invest in our three strategic R&D centres in the US, UK and Sweden. We encourage and support employees to relocate and have made good progress. For example, as at 31 December 2017, 2,200 employees were working in Cambridge and, of these employees, 560 have relocated from other sites in the UK. In addition to the 750 employees hired in 2015 and 2016, we hired a further 350 permanent employees in Cambridge in 2017. We are using interim infrastructure in and around Cambridge to house these employees until our new site is ready. For employees who do not accept offers to relocate to Cambridge, we provide career support, outplacement support and competitive severance packages. For more information on our move to Cambridge, please see R&D resources on page 25.

For more information on our restructuring programme, please see the Financial Review from page 66.

Employee relations

We seek to follow a global approach to employee relations guided by global employment principles and standards, local laws and good practice. We work to develop and maintain good relations with local workforces and work closely with our recognised national trade unions. We also regularly consult with employee representatives or, where applicable, trade unions, who share our aim of retaining key skills and mitigating job losses. According to our internal Human Rights survey carried out in 2016, 58% (106 countries surveyed) of countries in which AstraZeneca operates recognise and have a relationship with trade unions. Where trade unions do not exist in an area of operation, 99% of countries have established arrangements to engage similarly with their workforce.

Safety, health and wellbeing

We work to promote a safe, healthy and energising work environment for employees and partners. Our standards apply globally and are stated in our Global Safety, Health and Environment Policy located on www.astrazeneca.com/sustainability. Due diligence includes establishing and monitoring a set of safety, health and wellbeing targets aimed at supporting our people and keeping AstraZeneca among the sector leaders in performance. Our reporting in this area is assured by Bureau Veritas.

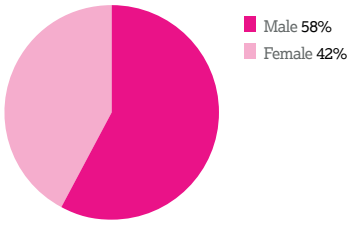
For more information, please see page 227.

As shown below, we made progress against our strategic targets in 2017, achieving a 17% reduction in the reportable injury rate and a 28% reduction in vehicle collision rate from the 2015 baseline. Building on our previous success in establishing a culture of health and wellbeing, we continue to focus on active health promotion. We have programmes to address all four essential health activities – healthy eating and drinking, physical activity, tobacco cessation and mental wellbeing – at 67% of our sites.

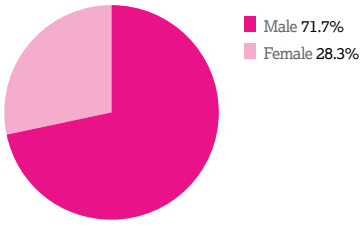
In 2017, we carried out several activities and initiatives focused on delivery of improvements in key risk areas, including driver safety (our highest risk for significant injury and fatalities), behavioural safety, ergonomics, fall prevention and industrial hygiene. We also increased focus on learning from incidents.

Gender diversity

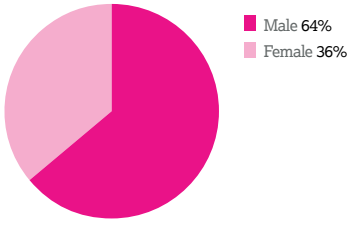
Board of Directors of the Company



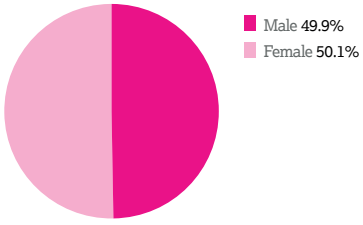
Directors of the Company's subsidiaries*



SET*



AstraZeneca employees



* For the purposes of section 414C(8)(c)(ii) of the Companies Act 2006, 'Senior Managers' are the SET, the directors of all of the subsidiaries of the Company and other individuals holding named positions within those subsidiaries.

Safety

Vehicle collisions

Year	Collisions per million km	Target
2017	**2.97**	**3.76**
2016†	3.60	4.00
2015 baseline 4.13		

Reportable injuries

Year	Reportable injury rate per million hours worked	Target
2017	**1.44**	**1.56**
2016†	1.52	1.64
2015 baseline 1.73		

† 2016 data re-stated.

Sustainability

We want to be valued and trusted by our stakeholders as a source of great medicines over the long term. That is why we are committed to operating in a way that recognises the interconnection between business growth, the needs of society and the limitations of our planet. This means delivering our business strategy in a way that broadens access to our medicines, minimises the environmental footprint of our products and processes, and ensures that ethics and transparency underpin everything we do.

Sustainability strategy

We have three priority areas aligned with our Purpose and business strategy that allow us to have the most impact on benefiting our patients, our business, broader society and the planet. We determined these priorities, along with a set of foundational areas, through a structured sustainability materiality assessment that engaged external and internal stakeholders. We measure our progress towards our objectives through annual and long-term targets.

Learn more in our 2017 Sustainability Report available on our website, www.astrazeneca.com/sustainability.

Priority areas and objectives

1. Broadening access to healthcare

Through collaboration and innovation we strive to expand access to our medicines.

See from page 39.

- Commitment 1: Promote awareness and prevention of non-communicable diseases (NCDs) to reduce their global burden and cost
- Commitment 2: Build capacity to help improve the underlying healthcare infrastructure and remove barriers to accessing medical treatment
- Commitment 3: Make our medicines available and more affordable to people on a commercially and socially sustainable basis

2. Furthering ethics and transparency

We commit to maintaining integrity in everything we do.

See from page 40.

- Commitment 1: Working to consistent global standards of ethical sales and marketing practices in all our markets
- Commitment 2: Working only with suppliers who have standards consistent with our own
- Commitment 3: Working on continued transparency with our data in clinical trials
- Commitment 4: Applying sound bioethics to all our work
- Commitment 5: Maintaining a strong focus on patient safety

3. Protecting the environment

We follow the science to protect the planet.

See from page 43.

- Commitment 1: Managing our impact on the environment, across all our activities, with a particular focus on greenhouse gas emissions, waste and water use
- Commitment 2: Ensuring the environmental safety of our products

Our focus on these three areas does not diminish our commitment to the foundational areas of our sustainability agenda.

See from page 35 and page 40.

- Ensuring that diversity in its broadest sense is reflected in our leadership and people strategies
- Embedding a consistent approach to human rights across our worldwide activities
- Promoting the safety, health and wellbeing of all our people worldwide
- Building a robust talent pipeline to support our future growth
- Investing in community growth

Benchmarking and assurance

Recognition of our work in sustainability

DJSI

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM

- Named in the Dow Jones Sustainability World and Europe Indices
- Attained industry best scores for: Codes of Business Conduct, Labour Practice Indicators, Climate Strategy, Policy Influence and Health Outcome Contribution

CDP

CDP DRIVING SUSTAINABLE ECONOMIES

- Climate A List – Among the top 5% of companies participating in CDP's climate change programme in recognition of our strategy and actions to reduce emissions and mitigate climate change
- Water A List – Among the top 10% of companies participating in CDP's water stewardship programme for our commitment to transparency around environmental risks and demonstration of pursuing best practice
- We are one of only 25 companies worldwide to be included on the A List for both climate and water in 2017. We are one of only 13 companies worldwide on both A lists for two consecutive years

ISAE3000 Assured

BUREAU VERITAS

- Bureau Veritas has provided independent external assurance to a limited level in accordance with the International Standard on Assurance Engagements 3000 (ISAE3000), and in accordance with ISAE3410 Assurance Engagements on Greenhouse Gas Statements for the sustainability information contained within this Annual Report and Form 20-F

For more information, please see Sustainability: supplementary information on page 227 and the letter of assurance on the Sustainability pages on our website, www.astrazeneca.com.

Science *can* help people with respiratory disease in Asia

Healthy Lung Asia
The overall objective of Healthy Lung Asia is to raise the profile of respiratory disease with policy makers and build health system capacity to support future access to healthcare. Our three-pillar approach includes:

- Partnerships and awareness: Convene national taskforces to raise awareness of/address health system changes needed to improve outcomes.
- Understanding and skills: Develop medical education materials with a clear objective of spreading evidence-based practice at scale.
- Capacity and access: Holistic, partnership-driven interventions in selected countries to resolve issues of infrastructure, education or access.

So far, we have signed three Memoranda of Understanding, including with Vietnam and Indonesia, formed 14 partnerships, educated some 2,000 GPs, screened more than 10,000 patients, and committed to create more than 500 respiratory centres.

Sustainability governance

Sustainability governance frames the way we operate. Geneviève Berger, a Non-Executive Director, oversees the implementation of our sustainability matters on behalf of the Board of Directors. Beginning in 2017, every member of the SET is accountable for a specific sustainability initiative.

Our Sustainability Advisory Board (SAB), is comprised of five SET members and four external sustainability experts. It met once in 2017 to guide strategic direction, recommend opportunities and provide external insight and feedback. Throughout the year, we engaged with employees and external stakeholders including investors, Ministries of Health, NGOs, patients and suppliers.

1. Broadening access to healthcare

Marketplace on page 8 demonstrates the burden of NCDs with 40 million deaths annually which disproportionately affects low- and middle-income countries where nearly three quarters of these deaths occur. In Return to Growth from page 26, we review how, as a business focused on medicines for NCDs, we aim to meet the challenges posed in each of our Regions, particularly for those patients in Emerging Markets who may need help to access our medicines and where barriers to healthcare are not always pricing related.

Our activities demonstrate how we are working to improve access to healthcare by making our medicines available and more affordable to people on a commercially and socially sustainable basis. We are also developing health systems infrastructure by building capacity to help improve the underlying healthcare infrastructure and access to medical treatment.

To address local needs, our programmes are typically governed by their respective commercial market leaders. Due diligence includes setting and measuring performance towards targets. We have internal targets and our annual Sustainability Report lists our external targets and progress. We undergo third-party assurance for these external targets and our reporting in this Annual Report is assured by Bureau Veritas – for more information please see page 227.

Young Health Programme

We also promote awareness and prevention of NCDs to reduce their burden and cost. To that end, we continue to develop our Young Health Programme (YHP), a global disease prevention programme with a focus on youth. Through YHP, we invest in on-the-ground programmes, advocacy, and research and evidence generation to address this global health issue. 2017 was the seventh year of our commitment to YHP and, during the year, we reached nearly 427,000 young people with health information on NCDs and risk behaviours and trained more than 2,800 peer educators. We launched a new three-year programme in Brazil and renewed multi-year commitments in Germany and Portugal. We also worked collaboratively with our advocacy partners, NCD Child and Rise Up Together, to ensure youth health needs were represented at the World Health Assembly, the UN and in national advocacy efforts.

Understanding our impact was a primary focus of activities in 2017, with publication of our first Social Return on Investment analysis. We looked at four YHP markets and calculated a social return of between approximately $6 and $9 for every dollar invested.

For more information on YHP, please see page 201.

Further information on YHP can be found on its website, www.younghealthprogrammeyhp.com.

Learn more in our 2017 Sustainability Report, on www.astrazeneca.com/sustainability.

Science *can* help people with hypertension in Africa

Healthy Heart Africa
Since launching in Kenya in October 2014 and in Ethiopia in 2016, Healthy Heart Africa (HHA) has:

- Conducted 5.7 million blood pressure screenings in the community and in healthcare facilities.
- Trained over 5,000 healthcare workers, including doctors, nurses, community health volunteers and pharmacists to provide education and awareness, screening and treatment services for hypertension.
- Activated 675 healthcare facilities in Africa to provide hypertension services, including the establishment of a secure supply chain for low-cost, high-quality antihypertensive medicines.
- Identified over one million people living with high blood pressure.

Following the announcement of our innovative public-private partnership with the US President's Emergency Plan for AIDS Relief (PEPFAR) in September 2016, we are working to optimise the HIV/hypertension integration and have extended our relationship with our implementing partner for a further 12 months. Together, we screened some 300,000 people over the year and observed an indicative growth in male engagement. In Ethiopia, we moved beyond the pilot phase and screened some 470,000 people in the course of 2017.

2. Ethics and transparency

Code of Ethics and policy framework

We are committed to employing high ethical standards when carrying out all aspects of our business globally. In 2017, we launched a Code of Ethics (the Code) which replaced our Code of Conduct. The Code is based on our company Values, expected behaviours and key policy principles. It empowers employees to make decisions in the best interests of the Group and the people we serve, now and in the long term, by outlining our commitments in simple terms and focusing on why these commitments matter. The Code also guides employees on how to make the best day-to-day choices and how to act in a consistent, responsible way, worldwide. There are two mandatory training courses dedicated to the Code: one is for new starters; the second is the annual training for all employees, reminding them of the key commitments. In 2017, 100% of all active employees completed the annual training on the new Code of Ethics.

The new Code includes four high-level Global Policies covering Science, Interactions, Workplace and Sustainability. During 2018, these new, high-level Global Policies will continue to be complemented by underlying Standards and will replace the current suite of 12 existing global policies which are published on our website, www.astrazeneca.com. Our policy framework also includes additional requirements at the global, local and business unit level to support employees in their daily work.

Ethical sales and marketing

We are committed to employing high ethical standards of sales and marketing practice worldwide, in line with our policy framework. We maintain a robust compliance programme in our efforts to ensure compliance with all applicable laws, regulations and adopted industry codes. As outlined in Global Compliance and Internal Audit Services on page 97, our compliance programme is delivered by dedicated compliance professionals who advise on and monitor adherence to our policy framework. These professionals also support our line managers locally in ensuring that their staff meet our standards. A network of nominated signatories reviews our promotional materials and activities against applicable requirements, and audit professionals in Internal Audit Services, in partnership with external audit experts, also conduct compliance audits on selected marketing companies. Our reporting in this area is assured by Bureau Veritas.

For more information, please see page 227.

Approximately 34,600 employees are engaged in our Commercial activities and, in 2017, we identified six confirmed breaches of external sales and marketing regulations or codes (2016: six). There were 1,431 instances, most of them minor, of non-compliance with the Code or supporting requirements in our Commercial Regions, including instances by employees and third parties (2016: 1,729). We removed a total of 176 employees and third parties from their roles as a result of these breaches (a single breach may involve more than one person). We also formally warned 477 others and provided further guidance or coaching on our policies to 1,157 more. The most serious breaches were raised with the Audit Committee.

Anti-bribery/anti-corruption

Anti-bribery/anti-corruption is a key element of our policy framework, with principles and requirements underpinning the Code commitment that we do not tolerate bribery or any other form of corruption. This commitment was conveyed in the 2017 annual Code training and is reinforced through anti-bribery/anti-corruption training materials made available to employees and relevant third parties.

Bribery and corruption remains a business risk as we launch new medicines in markets across the globe and enter into partnerships and collaborations. When working with third parties, we are committed to working with only those who embrace high standards of ethical behaviour consistent with our own. Bribery and corruption risk is a focus of our third-party risk management process, as well as our Business Development due diligence procedures. It is also a focus of our monitoring and audit programmes. Global Compliance monitors a range of Commercial activities associated with bribery and corruption risk, and the majority of marketing company audits include anti-bribery/anti-corruption work programmes.

Transparency reporting

AstraZeneca is committed to the highest standards of conduct in all our operations, including transparency in how we partner with physicians and medical institutions. In the US, Europe, Australia and Japan our external transparency reporting meets the requirements of the Physician Payments Sunshine Act (Open Payments), European Federation of Pharmaceutical Industries and Associations (EFPIA) Disclosure Code, Medicines Australia (MA) Code of Practice, and the Japanese Pharmaceutical Manufacturers Association (JPMA) Disclosure Code, as well as applicable local and state transparency requirements.

Bioethics and responsible research

Our commitment to working in a transparent and ethical manner is essential to achieving scientific leadership and delivering life-changing medicines. 'Bioethics' refers to the range of ethical issues that arise from the study and practice of biological and medical science, and our current Global Bioethics Policy sets out our global standards in key areas. These standards apply to all our research activity, whether conducted by us or by third parties acting on our behalf. The following sections summarise our activities in these areas, and our Bioethics Policy is available on our website, www.astrazeneca.com/sustainability.

Our Bioethics Advisory Group (BAG) is sponsored by the Chief Medical Officer, and exists to oversee the operation of the Bioethics Policy. It acts as a source of bioethical advice to the business, bringing together the subject matter leads for each of the key bioethical areas, supported by other experts and specialists. BAG receives reports on governance and practice from subject matter leads, including reports of non-compliance with the Bioethics Policy, and advises on whatever actions are necessary. BAG met five times in 2017 and, in this period, there were no cases of non-compliance with the Bioethics Policy. BAG also considers emerging trends and scientific advances that may have an impact, supporting the development of policy in relevant areas. Ethical discussions in 2017 included the potential impacts of advances in precision genome editing, consenting and privacy issues arising from the use of human biological samples, and the implications of research into human-animal chimaeras.

Clinical trials

We believe that transparency enhances the understanding of how our medicines work and benefit patients. At www.AstraZenecaClinicalTrials.com, we publish information about our clinical research, as well as the registration and results of our clinical trials – regardless of whether they are favourable – for all products and all phases, including marketed medicines, drugs in development and drugs where development has been discontinued.

In 2017, we conducted a range of clinical trials across regions as shown in the charts to the right. This broad span helps ensure that study participants reflect the diversity of patients for whom our medicines are intended and identifies the patients for whom the medicine may be most beneficial. Our global governance process provides the framework for ensuring a consistent, high-quality approach worldwide. Protecting participants throughout the trial process is a priority and we have strict procedures to help ensure participants are not exposed to unnecessary risks.

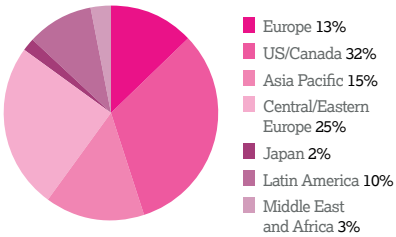
All our clinical studies are designed and finally interpreted in-house. Some are conducted by CROs on our behalf and we require these organisations to comply with our global standards.

As of 15 December 2017, we shared anonymised individual patient-level data from 149 studies with 25 research teams and responded to 74 requests from external researchers using our portal, http://astrazenecagroup-dt.pharmacm.com to request our clinical data and reports to support additional research. In 2017, we continued our commitment to be more transparent by expanding patient access to trial results summaries. We therefore participated in the launch of a new industry-wide portal at www.trialsummaries.com where we provide lay summaries in easy-to-understand language and translate these to the local language for all sites where a study is conducted. In 2017, we published trial results summaries for 34 AstraZeneca studies. This initiative led to the Clinical Trial Transparency Office receiving the 2017 Communication Award from TOPRA, a membership organisation for individuals working in healthcare regulatory affairs, for our patient-focused approach to delivering against the new EU Clinical Trial Regulations several years earlier than required.

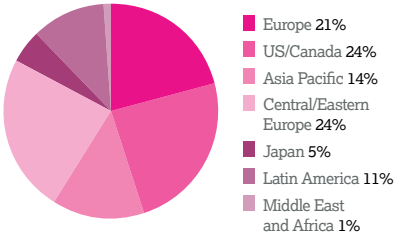
For more information, please see our website, www.astrazeneca.com, or our clinical trials website, www.astrazenecaclinicaltrials.com.

Clinical trials by region (%)

Small molecule studies (50%)



Biologics studies (35%)



Patient safety

One of our core values is to put patients first and, by detecting, assessing, understanding and preventing adverse effects or any other drug-related problems not identified during the development process, our pharmacovigilance processes and systems seek to minimise the risks and maximise the benefits of our medicines for patients.

For all our medicines, under development as well as on the market, we have systems in place for identifying and evaluating possible adverse drug effects. Information concerning the safety profile of our medicines is provided to regulators, healthcare professionals and, where appropriate, patients. Each medicine has a dedicated safety team, which includes a responsible global safety physician and one or more pharmacovigilance scientists. Marketing companies have assigned patient safety managers in place.

Our Chief Medical Officer is accountable for the benefit and risk profiles of our products, providing medical oversight and enforcing risk assessment processes that help us make efficient and informed decisions about patient safety. As part of our commitment to patient safety, in 2017, we developed a new safety signal management platform to provide consolidated risk oversight for all our products in use. The platform supports comprehensive awareness of the signals, intelligent analysis of their impact, and enables appropriate measures to reduce risks to patients.

Research use of human biological samples

The use of human biological samples, such as solid tissue, biofluids and their derivatives, plays a vital role in developing a deeper understanding of human diseases and their underlying mechanisms, which helps us develop effective, new and personalised medicines.

When we conduct this important research, we maintain policies and processes to ensure that we comply with the law, meet regulatory concerns and maintain ethical standards. We place an emphasis on informed consent that protects the rights and expectations of donors and families throughout the process of our acquisition, use, storage and disposal of the samples. Protecting the confidentiality of a donor's identity is of the utmost importance, and a key part of our process includes the coding of biological samples and associated data (including genetic data).

In rare circumstances, we may use human fetal tissue (hFT) or human embryonic stem cells (hESC). In these circumstances, an internal review of the scientific validity of the research proposal will be conducted and permission to use the tissue will be granted only when no other scientifically reasonable alternative is available. We also insist our third party vendors adopt the highest ethical standards and we rigorously assess the ability of tissue suppliers to meet our quality and ethical expectations. We are committed to minimising the use of fetal tissue by exploring technological alternatives.

In 2017, one research proposal that includes use of cells derived from hFT has been approved, resulting in two projects being in progress as at 31 December. In addition, three projects using three different hESC lines or derived cells have been approved.

Animal research

We are committed to helping the public understand the continuing need for animals in research, and our approach to replacing, reducing, and refining our use of animals (the 3Rs).

We share our 3Rs advances externally through presentations at international conferences and workshops, and contribute to the work of organisations and societies supporting the 3Rs around the world. Internally, our Council for Science and Animal Welfare (C-SAW) leads initiatives on the 3Rs, openness about our use of animals, and builds a culture of care in the way we conduct our research. For example, C-SAW runs a global awards scheme and also promotes global learning and continuing professional development opportunities for employees working with animals. C-SAW acts as the governance and oversight body for the use of animals in research and development, providing assurance to senior leaders on our responsible use of animals.

Animal research use varies depending on many interrelated factors, including our amount of pre-clinical research, the nature and complexity of the diseases under investigation and regulatory requirements. We believe that without our active commitment to the 3Rs, our animal use would be much greater. In 2017, animals were used for in-house studies 131,615 times (2016: 193,451). In addition, animals were used on our behalf for CRO studies 28,545 times, (2016: 25,651). In total, over 97% were rodents or fish.

Technology has not yet advanced to the stage where animal use can be eliminated and animal studies therefore remain a small, but necessary, part of the process of developing new drugs. We are alert to the issues around the use of animals, and are working constantly to improve the quality of our animal studies.

Supply chain management

Every employee and contractor who sources goods and services on behalf of AstraZeneca is expected to follow responsible business processes, which are embedded into our newly updated Global Standard for the Procurement of Goods and Services. All our procurement professionals receive detailed training on responsible procurement. With most of our API manufacturing outsourced, we need an uninterrupted supply of high-quality raw materials. We therefore place great importance on our global procurement policies and integrated risk management processes. We purchase materials from a wide range of suppliers and work to mitigate supply risks, such as natural or man-made disasters that disrupt supply chains or the unavailability of raw materials. Contingency plans include using dual or multiple suppliers where appropriate, maintaining adequate stock levels and working to mitigate the effect of pricing fluctuations in raw materials.

We also seek to manage reputational risk. Our ethical standards are integral to our procurement and partnering activities and we continuously monitor compliance through assessments and improvement programmes. We work only with those suppliers whose standards of ethical behaviour are consistent with our own. We will not use suppliers who are unable to meet our standards. Our Global Standard Expectation of Third Parties is published on our website, www.astrazeneca.com/sustainability.

To achieve this, we have an established process for third party risk management. This process assesses risk based upon defined criteria. These include risks related to bribery and corruption, data privacy, the environment and wages. Each step of the process provides an additional level of assessment, and we conduct more detailed assessments on those relationships identified as higher risk. Through this risk-mitigation process, we seek to better understand the partner's risk approach and seek to ensure the partner understands and can meet our standards. We conducted a total of 7,198 assessments in 2017, taking our total number of assessments to 25,493 since we established this process in May 2014. Of the 2017 assessments, 1,888 were in the Asia Pacific region, 2,227 in Europe and 2,038 in the Americas. The remaining 1,045 assessments relate to global suppliers and those based in the Middle East and Africa.

Renewable energy
In 2017, we began using sustainable heat pump technology at our Gothenburg, Sweden site. This technology is highly efficient and electrifies some of the site's heat demand, with the estimated potential to replace up to 60% of the site's natural gas consumption, thereby reducing the site's CO_2 footprint. Coupled with the site transitioning to renewable electricity in 2016, the investment is estimated to save approximately 2,500 tonnes of CO_2 equivalent per year.

In 2017, we conducted 41 audits on high-risk suppliers, seeking to ensure that they employ appropriate practices and controls. Ten percent of these suppliers met our expectations, with a further 90% implementing improvement plans to address minor instances of non-compliance. Through our due diligence process, we rejected 12 suppliers because of reputational concerns.

3. Protecting the environment

We follow the science to protect the planet by managing our impact on the environment across all our operations. Our current Global Safety, Health and Environment (SHE) Policy is the overarching document for our environmental management system. It applies to all functions and locations and is supported by global standards and procedures that establish mandatory requirements in key risk areas. We monitor and manage performance through comprehensive assurance programmes that include performance reporting, internal auditing and an annual management review. We are on track to deliver our 2016 to 2025 environment targets.

Managing our impact on natural resources

Our 2017 natural resource targets (against a 2015 baseline) included:

- reducing operational greenhouse gas footprint as approved by the Science Based Target initiative
- reducing energy consumption by 2% to 1,761,081 MWh
- reducing waste generation by 4% to 29,328 tonnes
- reducing water use by 4% to 4.16 million m^3.

The table overleaf provides data on our global greenhouse gas emissions, energy use, waste production and water consumption for 2017. The data coverage includes 100% of our owned and controlled sites globally. Regular review of the data is carried out to ensure accuracy and consistency. This has led to changes in the data for previous years. The data quoted in this Annual Report are generated from the revised data. To support the achievement of our targets, a resource efficiency capital fund has been in place since 2015 to invest in projects at sites. In 2017, approximately $19 million (2016: $25 million) was committed to resource efficiency projects at our manufacturing and R&D sites, and a further $20 million has been committed for 2018.

100%

100% of all active employees completed training on new Code of Ethics

Greenhouse gas reduction

We are working to reduce our greenhouse gas emissions by, among other things, investment in improving energy and fuel efficiency and pursuing lower-carbon alternatives to fossil fuels, utilising a hierarchy approach of Avoid-Reduce-Substitute. During 2017, we made progress towards our verified science-based targets for Scope 1 and Scope 2 emissions through increased fuel efficiency of our commercial sales fleet, reduced energy consumption at our sites, and procurement of electricity from certified renewable sources increasing to represent 63% of total electricity imports. Our total Scope 1 and Scope 2 emissions have been reduced by 29% from our 2015 baseline. We have continued to make progress on our science-based targets for Scope 3 emission sources through continued achievement in switching freighting of goods from air to sea, reduced business air travel, and improved accounting of our Scope 3 footprint that will lead to future efficiency improvements.

Our pMDI inhaler therapies rely on hydrofluoroalkane (HFA) propellants, which affects our Scope 3 greenhouse gas footprint. While HFAs have no ozone depletion potential and a third or less of the global warming potential than the chlorofluorocarbons they replace, they are still potent greenhouse gases. During 2017, we continued to explore practical opportunities to reduce the climate impact of these devices during production and use while continuing to fulfil patient needs, including the launch of a new pMDI device that uses an HFA propellant with less than half the global warming impact of our legacy portfolio. Including emissions from patient use of our inhaler therapies, our operational greenhouse gas footprint totalled 1,658,548 metric tonnes in 2017, a reduction of 7% from our 2015 baseline.

For more information on carbon reporting, please see Sustainability: supplementary information on page 227.

Energy use

We recognise the need to reduce our demand for energy in the first instance, maximise the efficiency of the energy we do use, and where feasible substitute our energy use with renewable sources. In 2017, we targeted a 3% reduction in total energy consumption from our 2015 baseline. In 2017, our energy use was 1,742 GWh, a reduction of 3%. We have made further progress on our target to source 100% renewable power by 2025. In 2017, we procured certified zero emission power equivalent to 63% of total consumption and generated a further 11,874 MWh of renewable energy on our sites.

Waste management

Waste management is another key aspect of our commitment to minimise environmental impact. In 2017, we targeted a 4% reduction in waste generation from our 2015 baseline. In 2017, our total waste was 31,222 metric tonnes, a 2% increase on 2015. Although large waste reduction projects came online in 2017, bringing savings of equivalent to 2.5% of our total waste footprint, our waste reduction target has been missed due to increasing activity across our site network. While waste prevention is an essential goal, we seek to maximise treatment by material recycling and avoiding landfill disposal when prevention is impractical.

Water use reduction

We recognise the need to use water responsibly and, where possible, to minimise water use in our facilities. In 2017, we targeted a 4% reduction from our 2015 water use. In 2017, our water footprint was 3.89 million m^3, a 10% reduction. Water reduction and reuse projects throughout our site network have improved the efficiency of water use across our operations. During 2017, our major sites and those in water-stressed areas maintained or completed Water Conservation Plans to ensure we are managing our water risks and to facilitate sharing of best practice in water stewardship around our site network.

Ensuring the environmental safety of our products

We are committed to ensuring effective environmental management of our products from pre-launch through to product end-of-life. We work at all stages of a medicine's life-cycle from the design of active pharmaceutical ingredient (API) production and formulation processes, devices and packaging through distribution, patient use and final disposal. We aim to lead our industry in understanding and mitigating the effects of pharmaceuticals in the environment (PIE).

As part of our progress towards our 2025 environmental targets, our 2017 product environmental safety targets included:

> Safe API discharges for AstraZeneca sites (100%) and globally managed first tier suppliers (>90%). Target met – safe API discharges confirmed.
> Management of PIE through our 'ecopharmacovigilance' programme. Target met – programme delivered.

Pharmaceuticals in the environment

An estimated 98% of pharmaceuticals get into the environment as a result of patient use (excretion or improper disposal). While API discharge from production is only a small proportion of the environmental burden, it is the part we as an industry can deal with directly. We manage the manufacturing discharge of our APIs in a responsible manner to ensure that we do not exceed the safe discharge standards set for our own manufacturing sites and those of key suppliers. We review compliance with these safe discharge standards annually. Using a concept called 'ecopharmacovigilance', we review emerging science and literature for new information that might change the way we assess and manage any environmental risks associated with our products through patient use and API production.

We also conduct collaborative research to understand the fate, behaviour and impact of pharmaceuticals on the environment. In 2017, we co-authored 14 peer-reviewed publications to enhance our knowledge of the risks associated with this emerging issue.

Further information on our efforts in this area, including environmental risk assessment data for our medicines, is available on our website, www.astrazeneca.com/sustainability/environmental-sustainability.

Operational greenhouse gas footprint emissions (tonnes CO_2e)

1,658,548 tonnes CO_2e

Energy consumption (MWh)

1,742,325 MWh

% certified renewable
2017 27%
2016 25%
2015 6%

Waste production (tonnes)

31,222 tonnes

Water use (million m^3)

3.89 million m^3

STEM learning and careers
Bahija Jallal, President, MedImmune and Executive Vice-President, AstraZeneca, works with a student on the MDBio Mobile eXploration lab, America's largest, most advanced mobile laboratory. MXLab is custom-designed to expand new technology and laboratory science experiences to pique students' interest in science, technology, engineering and mathematics (STEM) learning and careers.

Dr Jallal was the Healthcare Businesswomen's Association (HBA) 2017 Woman of the Year.

Community investment

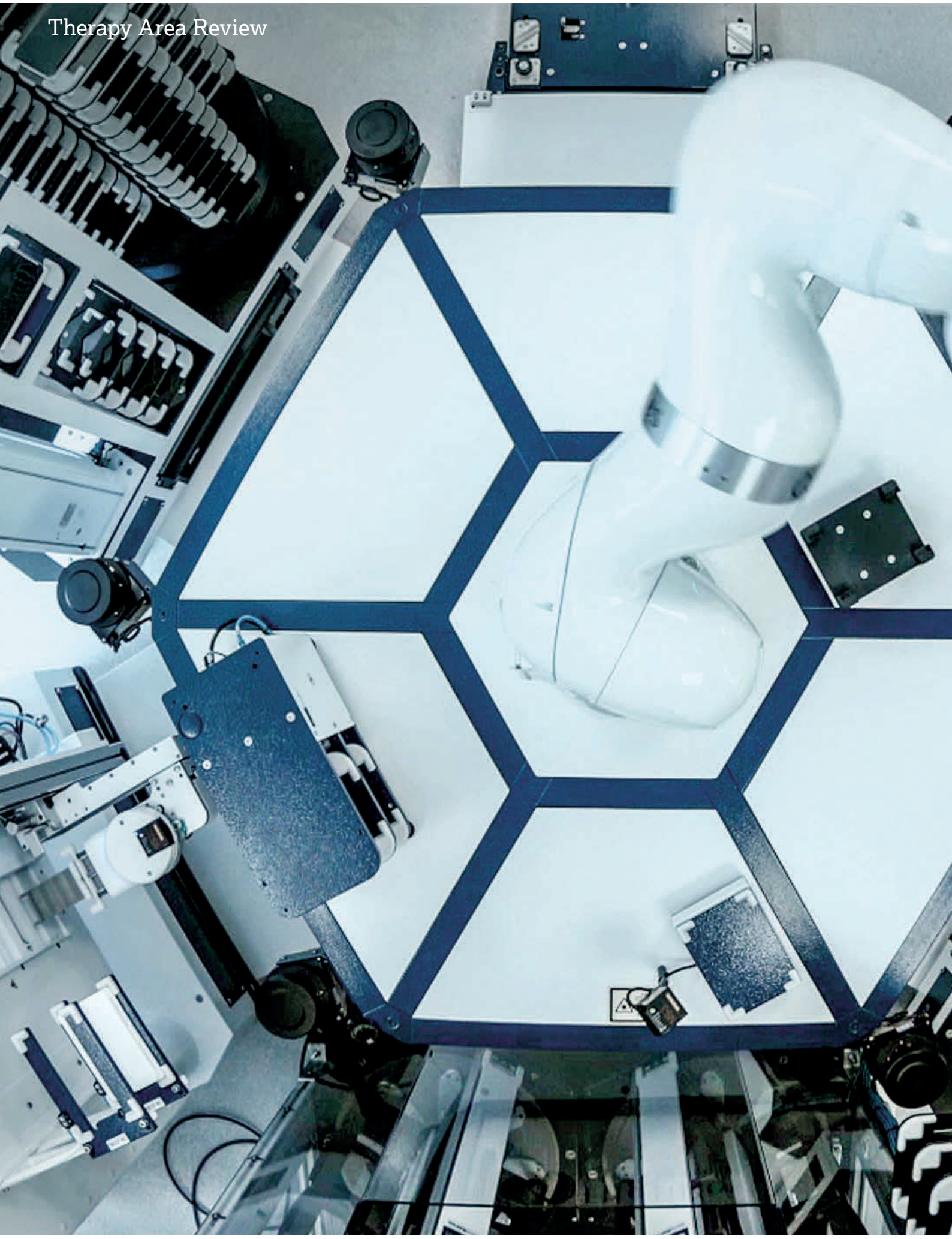
Wherever we work in the world, we aim to make a positive impact on our communities. Our Community Investment Contributions Standard outlines our global areas of focus and provides guidance to ensure a consistent, transparent and ethical approach around the world, based on local need. Our global community investment activities are focused on healthcare in the community and supporting science education. They include financial and non-financial community sponsorships, partnerships and charitable donations. In 2017, we gave more than $25 million (2016: $39 million) through our community investment activities to more than 900 non-profit organisations in 61 countries, which includes more than $4 million (2016: $20 million) for product donations that were given in support of public health needs and disaster relief. In addition to these community investments, we also donated more than $401 million (2016: $468 million) of medicines in connection with patient assistance programmes around the world, the largest of which is our AZ&Me programme in the US. For more information on our patient assistance programmes, please see from page 28, and on our Young Health Programme, a global disease prevention programme with a focus on youth, please see pages 39 and 201.

Our global disaster relief partners are the British Red Cross, Americares, Direct Relief International and Health Partners International of Canada. In 2017, we funded the deployment of the British Red Cross Mass Sanitation Unit to Northern Uganda where it provided more than 13,000 refugees with access to a safe latrine and reached more than 19,000 refugees with hygiene promotion activities. We also responded to appeals for the South Asian Floods and support for the Atlantic Hurricane Season.

In 2017, we donated products across multiple therapeutic areas to 17 countries to respond to public health needs and disaster relief. This includes pre-positioning products in partner warehouses to allow for quick deployment which was a critical part of our partner's response efforts during the Atlantic Hurricane Season.

Making a positive impact on our communities is also about volunteering. We encourage our employees to volunteer and support their efforts with one day's leave for volunteering. In 2017, our employees volunteered more than 29,000 hours on community projects in countries around the world.

Non-Financial Reporting Regulations
Under sections 414CA and 414CB of the Companies Act 2006, as introduced by the Companies, Partnerships and Groups (Accounts and Non-Financial Reporting) Regulations 2016, AstraZeneca is required to include, in its Strategic Report, a non-financial statement containing certain information. Information required by these Regulations is included in Business model and life-cycle of a medicine from page 14, Strategy and Key Performance Indicators from page 17, and the Business Review from page 34.



Science *can*

Expand treatment options

Oncology | From page 48

Understand disease

Cardiovascular & Metabolic Diseases | From page 52

Transform outcomes

Respiratory | From page 56

Develop best-in-class therapies

Other Disease Areas | From page 60

Smarter, faster and cheaper drug discovery
The world's most advanced drug discovery robot is working alongside our scientists to help make drug discovery smarter, faster and cheaper. Designed to work three times more quickly than previous drug discovery robots, NiCoLA-B can test up to 300,000 compounds a day and is also more scientist-friendly, flexible and responsive.

For more information, see www.astrazeneca.com/meet-NiCoLA-B.

Our products

While this Therapy Area Review concentrates on our key marketed products, many of our other products are crucial to our business in certain countries in Emerging Markets.

For more information on our potential new products and product life-cycle developments, please see the Therapy Area pipeline tables on pages 49, 53, 57 and 61 and the Development Pipeline table from page 202. For information on Patent Expiries of our Key Marketed Products, please see from page 208.

Indications for each product described in this Therapy Area Review may vary among countries. Please see local prescribing information for country-specific indications for any particular product.

For those of our products subject to litigation, information about material legal proceedings can be found in Note 28 to the Financial Statements from page 182.

Details of relevant risks are set out in Risk from page 210.

Oncology

Our ambition is to eliminate cancer as a cause of death through scientific discovery and collaborations. We seek to achieve this by means of exploiting the power of four scientific platforms.

Cancer is the second leading cause of death globally, claiming more than eight million lives every year. R&D continues to push boundaries in how we understand and fight cancer, but there is still more to do. At AstraZeneca, we are committed to advancing the science of oncology to deliver life-changing medicines to people most in need.

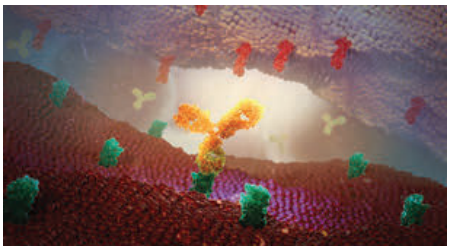
Our strategic priorities

In Oncology, our vision is to push the boundaries of science to respond to unmet medical need and ultimately redefine the cancer treatment paradigm. We are doing this through scientific innovation, accelerated clinical programmes and collaboration. We have a deep-rooted heritage in Oncology and offer a growing line of new medicines that has the potential to transform patients' lives and AstraZeneca's future. At least six oncology medicines are expected to be launched between 2014 and 2020, of which *Lynparza*, *Tagrisso*, *Imfinzi* and *Calquence* are already benefiting patients.

In 2015, we decided that all new Oncology launches would form a new Growth Platform, under the designation of New Oncology.

Our broad pipeline of next-generation medicines is aimed at expanding our treatment options for solid tumours and haematological cancers, using four key scientific platforms:

- **Immuno-oncology (IO):** IO is a promising therapeutic approach that harnesses the patient's own immune system to help fight cancer. We aim to become scientific leaders in IO by identifying novel approaches that enhance the immune system's ability to fight cancer, both with IO medicines on their own, and in conjunction with other medicines. Example: *Imfinzi*.
- **Tumour drivers and resistance mechanisms:** Potent inhibition of genetic disease drivers is a clinically validated approach to shrink tumours and improve progression-free survival and overall survival. Tumours, however, eventually develop resistance to these therapies. Our programmes seek to develop therapies that target resistance mechanisms and the mutations that cause cancer cells to proliferate. Examples: *Tagrisso*, *Calquence*.



Antibody that blocks inhibitory signals from the tumour to cells of the immune system resulting in enhanced anti-tumour immunity.

- **DNA damage response:** Exploiting mechanisms that selectively damage tumour cell DNA is another clinically validated approach to shrink tumours and improve progression-free and overall survival. Our market-leading programmes in DNA Damage Response focus on multiple ways to identify and exploit vulnerabilities to kill the tumour cells, while minimising toxicity to the patient. Example: *Lynparza*.
- **Antibody-drug conjugates (ADC):** The use of ADCs is a clinically validated, highly potent approach that selectively targets cancer cells. We seek to combine innovative antibody engineering capabilities with cytotoxic drug molecules to attack and kill the tumour while minimising toxicity to the patient. Example: moxetumomab.

At the heart of our Oncology strategy is a powerful combinations portfolio that leverages our four scientific platforms to simultaneously attack multiple mechanisms of tumour progression. In a very competitive and fast-moving environment, AstraZeneca has a broad development programme focused on first-in-class or best-in-disease opportunities across multiple tumour types.

Our 2017 commercial focus

In total, our marketed oncology medicines generated Product Sales of $4 billion worldwide in 2017. Sales from our New Oncology Growth Platform, totalled $1.3 billion in 2017, an increase of 98% at actual rate of exchange (98% at CER) over 2016 ($0.7 billion).

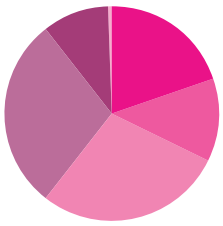
Faslodex 500mg is approved in more than 80 countries, including the EU, the US and Japan. In 2017, *Faslodex* received 1st line label

Therapy area world market

(MAT/Q3/17)

$96.2bn

Annual worldwide market value



- Chemotherapy $19.2bn
- Hormonal therapies $12.0bn
- Monoclonal antibodies (mAbs) $27.5bn
- Small molecule tyrosine kinase inhibitors (TKIs) $27.8bn
- Immune checkpoint inhibitors $9.7bn
- Other Oncology Therapies $0.05bn

AstraZeneca focuses on specific segments within this overall therapy area market.

extension for use as the treatment of oestrogen receptor positive, locally advanced or metastatic breast cancer in postmenopausal women not previously treated with endocrine therapy in Japan, Russia, the EU and the US. The approvals were based on positive results from the Phase III FALCON clinical trial comparing the efficacy and safety of *Faslodex* with *Arimidex* in the 1st line advanced breast cancer setting (hormone-naïve patients), which was presented in 2016.

In November 2017, the FDA approved a new indication for *Faslodex*, expanding the indication to include use with abemaciclib for the treatment of hormone receptor-positive (HR+), human epidermal growth factor receptor 2 negative (HER2-) advanced or metastatic breast cancer in women with disease progression. This approval, based upon the MONARCH2 study, further expands the growing body of evidence for using *Faslodex* in combination as a treatment for advanced breast cancer, as illustrated by the FDA-approved combination with palbociclib in March 2016. *Iressa* was the first epidermal growth factor receptor tyrosine kinase inhibitor (EGFR-TKI) to be approved for the treatment of advanced epidermal growth factor receptor (EGFR) mutation non-small cell lung cancer (NSCLC) and, as of 31 December 2017, had been approved in 90 countries. *Iressa* received approval in the US in July 2015.

Zoladex continues to be a significant asset in our on-market portfolio and a driver of our prostate cancer and breast cancer portfolios.

Oncology – pipeline progressions

Regional approvals	> *Imfinzi* 2nd line bladder cancer (US) > *Calquence* 2nd line mantle cell lymphoma (US) > *Faslodex* 1st line breast cancer (FALCON) (US, JP, EU) > *Lynparza* 2nd line ovarian cancer + (SOLO-2) (US, JP*); breast cancer (OlympiAD) (US*) > *Tagrisso* 2nd line lung cancer + (AURA3) (US, EU) > *Tagrisso* 2nd line lung cancer + (AURA17) (CN)
Expedited review	> Breakthrough Therapy Designation: *Calquence* blood cancers (US); *Imfinzi* 1st line lung cancer stage 3 (PACIFIC) (US); *Tagrisso* 1st line lung cancer (FLAURA) (US) > Orphan Drug Designation: *Lynparza* breast cancer (OlympiAD) (JP); *Lynparza* ovarian cancer (JP) > Priority Review Designation: *Calquence* blood cancers (US); *Imfinzi* lung cancer stage 3 (PACIFIC) (EU, JP); *Lynparza* 2nd line ovarian cancer (US); *Lynparza* breast cancer (OlympiAD) (US, JP); *Tagrisso* 1st line lung cancer (FLAURA) (US) > Accelerated approval: *Calquence* non-hodgkin's lymphoma (US); *Imfinzi* 2nd line bladder cancer (US)
Regulatory submissions	> *Calquence* mantle cell lymphoma (US) > *Imfinzi* lung cancer stage 3 (PACIFIC) (EU, US, JP) > *Lynparza* 2nd line ovarian cancer + (SOLO-2) (EU, US, JP) > *Lynparza* breast cancer (OlympiAD) (JP, US) > *Tagrisso* 1st line lung cancer (FLAURA) (US, EU, JP)
Phase III investment decisions	> *Imfinzi* non-muscle invasive bladder cancer > *Imfinzi* + tremelimumab + chemotherapy 1st line lung cancer > *Imfinzi* + chemo-radiation therapy lung cancer stage III > *Imfinzi* + epacadostat + chemo-radiation therapy lung cancer > *Lynparza* + *Imfinzi* + *Avastin* ovarian cancer > *Tagrisso* lung cancer stage 3 > *Forxiga* HF with a preserved ejection fraction*
Phase II starts/ progressions	AZD4635 + *Imfinzi* lung cancer; AZD8186 + abiraterone for castration-resistant prostate cancer; *Imfinzi* + AZD9150 head and neck squamous-cell carcinoma; *Imfinzi* + oleclumab (MEDI9447) solid tumours; *Imfinzi* + monalizumab solid tumours; *Imfinzi* + *Darzalex* for relapsed refractory multiple myeloma; *Imfinzi* + MEDI0457 head and neck squamous-cell carcinoma
Strategic transactions completed	A global strategic oncology collaboration was established with MSD to co-develop and co-commercialise *Lynparza* for multiple cancer types. We will also jointly seek to develop and commercialise selumetinib, an oral, potent, selective inhibitor of MEK, part of the mitogen-activated protein kinase (MAPK) pathway, currently being developed for multiple indications, including thyroid cancer. Licensing agreement for rights to *Zoladex* in the US and Canada with TerSera
Setbacks and terminated projects	The MYSTIC trial did not meet its primary endpoint of improving PFS compared to standard of care (SoC) in PD-L1 >25% in patients with 1st line NSCLC. In addition, *Imfinzi* monotherapy would not have met a pre-specified threshold of PFS benefit over SoC. With respect to safety, the *Imfinzi* plus tremelimumab profile was consistent with expectations based on prior clinical data. The MYSTIC trial continues as planned to assess the additional primary endpoints of overall survival for *Imfinzi* monotherapy and for the *Imfinzi* + tremelimumab combination. Discontinued: MEDI-573 for IGF metastatic breast cancer

* Approved in January 2018.

Lynparza is an oral poly ADP ribose polymerase (PARP) inhibitor available in more than 30 countries for the treatment of adult patients with BRCA-mutated high-grade serous epithelial ovarian, fallopian tube or primary peritoneal cancer. In August 2017, the FDA granted approval for new use of the tablet formulation of *Lynparza* as a maintenance treatment for patients with recurrent, epithelial ovarian, fallopian tube or primary peritoneal adult cancer who are in response to platinum-based chemotherapy, regardless of BRCA status based on results from two randomised trials, SOLO-2 and Study 19.

On 12 January 2018, based on data from the randomised, open-label, Phase III OlympiAD trial, the FDA approved *Lynparza* for use in patients with deleterious or suspected deleterious germline BRCA-mutated (gBRCAm), HER2- metastatic breast cancer who have been previously treated with chemotherapy in the neoadjuvant, adjuvant or metastatic

Our marketed products

- *Arimidex* (anastrozole)
- *Casodex/Cosudex* (bicalutamide)
- *Calquence* (acalabrutinib)
- *Faslodex* (fulvestrant)
- *Imfinzi* (durvalumab)
- *Iressa* (gefitinib)
- *Lynparza* (olaparib)
- *Nolvadex* (tamoxifen citrate)
- *Tagrisso* (osimertinib)
- *Zoladex* (goserelin acetate implant)

Full product information on page 208.

$4bn

Product Sales of $4,024 million, up 19% (19% at CER)

setting. This new approval for *Lynparza* makes it the first and only PARP inhibitor approved in metastatic breast cancer, and the only PARP inhibitor approved beyond ovarian cancer. *Tagrisso* is the first approved EGFR-TKI indicated for patients with metastatic EGFR T790M mutation-positive NSCLC. After receiving accelerated approval in several countries in 2015-2016, *Tagrisso* was granted full approval based on the Phase III AURA3 confirmatory trial in the US and EU in early 2017, and is now approved in more than 60 countries worldwide, including the US, EU, Japan and China, for patients with EGFR T790M mutation-positive advanced NSCLC. *Imfinzi* is a human mAb directed against PD-L1 and our first IO product on market. In May 2017, *Imfinzi* received its first accelerated approval in the US in previously treated patients with advanced bladder cancer.

Calquence is a selective inhibitor of Bruton tyrosine kinase (BTK). In October 2017, the medicine was granted accelerated approval by the FDA for the treatment of adult patients with mantle cell lymphoma (MCL) who have received at least one prior therapy.

Details of material patent litigation relating to *Calquence*, *Faslodex*, *Imfinzi* and *Tagrisso* are included in Note 28 to the Financial Statements from page 182.

In the pipeline

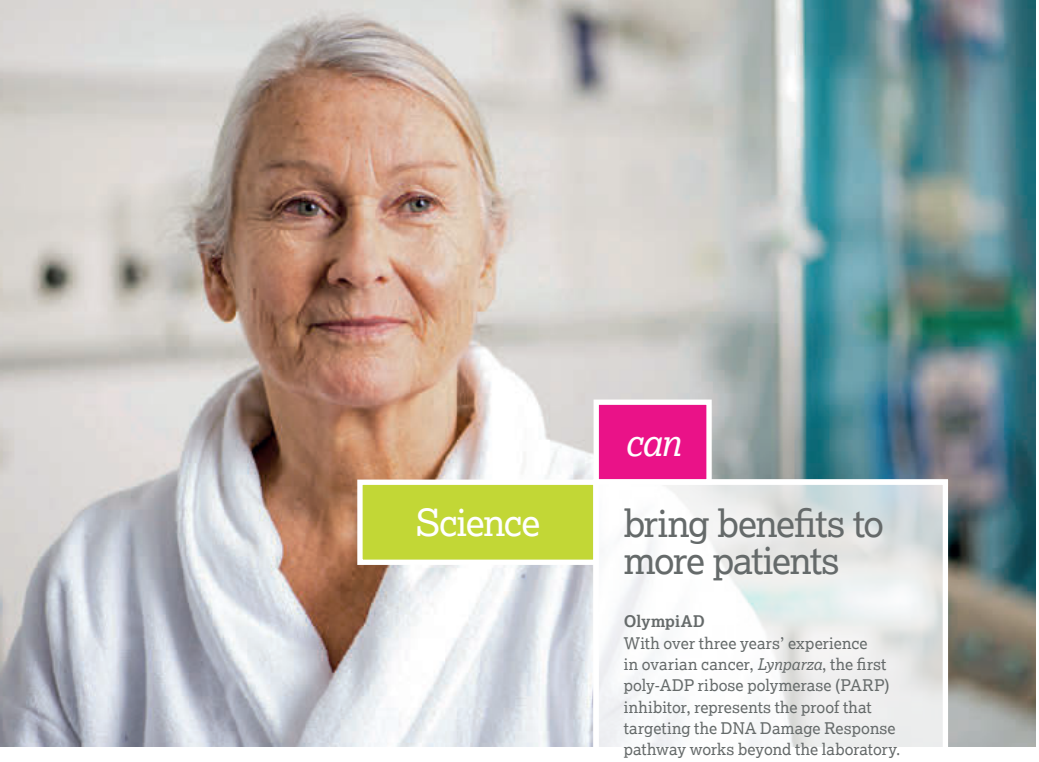
Our Oncology pipeline continues to progress. It now includes 32 NMEs in development. In October 2017, AstraZeneca received a sixth Breakthrough Therapy Designation for an oncology medicine from the FDA since 2014. During the year, we also expanded several of our projects to incorporate novel combinations and various types of cancer. Some of our key projects from each of our platforms are outlined below.

Immuno-oncology franchise

- *Imfinzi* is also being explored as a monotherapy and in combination with tremelimumab, an anti-cytotoxic T-lymphocyte-associated protein 4 antibody, across multiple tumour types and lines of therapy. This includes Phase III registrational trials in various stages of NSCLC, small-cell lung cancer, metastatic urothelial cancer, head and neck squamous cell carcinoma (HNSCC), and hepatocellular carcinoma (HCC). Our IO development programme also includes additional Phase I/II studies in a broad range of haematologic and solid tumours and an extensive range of combinations, including with small molecules, other biologics and chemotherapies.
- In May 2017, *Imfinzi* met a primary endpoint of statistically-significant and clinically-meaningful progression-free survival (PFS) in 'all-comer' patients with locally-advanced, unresectable (Stage 3) NSCLC whose disease has not progressed following chemo-radiation therapy in a planned interim analysis of the PACIFIC Phase III trial. The full data were presented at the European Society for Medical Oncology congress in September 2017. *Imfinzi* is the first medicine to show superior PFS in this setting. In July 2017, Breakthrough Therapy Designation was granted by the FDA for *Imfinzi* in this indication and it included Priority Review status in the US. The therapy is currently under regulatory review in the EU and US.
- In June 2017, the first patient was dosed with *Imfinzi* in POSEIDON, a Phase III 1st line NSCLC study of *Imfinzi* and *Imfinzi* + tremelimumab combined with chemotherapy. In November 2017, the first patient was also dosed in HIMALAYA, a Phase III study designed to assess *Imfinzi* and *Imfinzi* + tremelimumab in the treatment of patients with no prior systemic therapy for unresectable HCC.
- In July 2017, the Phase III MYSTIC trial, a 1st line NSCLC study of *Imfinzi* and *Imfinzi* + tremelimumab, failed to meet one of its primary endpoints – improving PFS – when comparing against the standard of care in patients whose tumours express PD-L1 on 25% or more of their cancer cells. The study is ongoing for its two other primary endpoints, overall survival (OS) in each of the monotherapy arm and the combination therapy arm.
- Other IO agents in early development include: MEDI9447, targeting ecto-5'-nucleotidase (CD73); AZD9150, an antisense oligonucleotide that downregulates STAT3 expression in the tumour microenvironment; AZD5069, a chemokine receptor 2 inhibitor; MEDI9197, a small molecule agonist targeting toll-like receptor 7/8; MEDI0562, a humanised agonistic mAb that targets OX40; MEDI1873, targeting glucocorticoid-induced tumour necrosis factor receptor-ligand; MEDI0457, a DNA vaccine against human papilloma virus 16/18; NKG2A, a checkpoint receptor inhibiting the anti-cancer functions of NK and cytotoxic T-cells; MEDI0680, an anti-programmed cell death protein 1 (PD1) mAb blocking interactions with PD1 and its ligands; and AZD4635, an adenosine 2A receptor inhibitor. These agents are in Phase I/II development for a range of solid tumours and have the potential for combination with other molecules in the portfolio, including *Imfinzi*.

Tumour drivers and resistance mechanisms franchise

- *Tagrisso* is a highly selective, irreversible inhibitor of the activating sensitising EGFR mutation and the resistance mutation T790M. The product is being investigated in Phase III studies in the adjuvant setting for the treatment of patients with EGFRm NSCLC and in the advanced setting as a 1st line treatment of EGFRm NSCLC and as a ≥2nd line treatment of EGFRm T790M NSCLC. Additionally, studies in combination with other small molecules are under investigation.
- In July 2017, AstraZeneca announced positive results from the Phase III FLAURA trial comparing the efficacy and safety of *Tagrisso* with current 1st line EGFR-TKIs in previously untreated patients with EGFRm NSCLC. The results were subsequently presented at the European Society for Medical Oncology congress in September 2017. In October 2017, the FDA granted Breakthrough Therapy Designation for *Tagrisso* for the 1st line treatment of patients with metastatic EGFRm NSCLC. The therapy is currently under regulatory review in the US, EU and Japan.
- *Calquence* is a BTK inhibitor in Phase III development in B-cell malignancies and solid tumours. In August 2017, the FDA granted Breakthrough Therapy Designation for *Calquence* for the treatment of patients with MCL who have received at least one prior therapy.
- Selumetinib is a mitogen-activated protein kinase inhibitor in Phase III development for adjuvant differentiated thyroid cancer. Selumetinib's development programme also includes trials in neurofibromatosis type 1 and solid tumours.
- Savolitinib is a selective inhibitor of c-MET (mesenchymal epithelial transition factor) receptor tyrosine kinase, an enzyme which has been shown to function abnormally in many types of solid tumours. It is in Phase III trials in papillary renal cell cancer in patients with a genetic aberration in the c-MET pathway and in Phase II trials in combination with *Tagrisso* and *Iressa* in EGFR mutated lung cancer with c-MET amplification.



Science *can* bring benefits to more patients

OlympiAD
With over three years' experience in ovarian cancer, *Lynparza*, the first poly-ADP ribose polymerase (PARP) inhibitor, represents the proof that targeting the DNA Damage Response pathway works beyond the laboratory. Following the initial approval of this new class of medicine, in June 2017, we presented the full results from the Phase III OlympiAD trial, the first positive randomised trial to evaluate the efficacy and safety of a PARP inhibitor beyond ovarian cancer. The OlympiAD results also marked the first time a targeted therapy showed benefit over the current standard of care for patients with germline BRCA-mutated HER2- metastatic breast cancer. On 12 January 2018, the FDA granted approval to *Lynparza* in this indication. *Lynparza* has the broadest clinical trial programme of any PARP inhibitor, and this milestone demonstrates how AstraZeneca followed the science to expand the potential of *Lynparza* to benefit many patients in multiple settings.

- Cediranib is an orally administered multi-vascular endothelial growth factor receptor (VEGFR) inhibitor which is currently being tested in combination with *Lynparza* in Phase III trials in patients with platinum-sensitive relapsed ovarian cancer and platinum-resistant/refractory ovarian cancer.
- AZD5363 is a protein kinase B inhibitor in Phase II development for breast and prostate cancer.
- Vistusertib is an inhibitor of the mammalian target of rapamycin serine/threonine kinase (TORC1, TORC2) and is in Phase II development for the treatment of solid and haematological tumours.
- AZD9496 is a selective oestrogen receptor down-regulator in Phase I development for the treatment of breast cancer.
- Other agents in early development include: AZD5991, an MCL1 inhibitor; AZD4753, a CDK9 inhibitor; AZD5153, a bromodomain 4 inhibitor; AZD4785, an antisense oligonucleotide targeting KRas; and AZD8186 an inhibitor of PI3 kinase β and δ.

DNA damage response franchise

- *Lynparza* is being evaluated in a broad range of Phase III trials, including BRCAm adjuvant and metastatic breast cancer, gBRCAm pancreatic cancer, gBRCAm ovarian cancer and prostate cancer.
- In February 2017, AstraZeneca announced positive results of OlympiAD, a Phase III randomised, open-label, multicentre study assessing the efficacy and safety of *Lynparza* tablets compared to 'physician's choice' chemotherapy in patients with HER2- metastatic breast cancer with germline BRCA1 or BRCA2 mutations, which are predicted or suspected to be deleterious. The results were subsequently presented at the American Society of Clinical Oncology congress in June 2017 and submitted to Health Authorities for regulatory review in the US, EU and Japan.
- AZD1775 is a Wee1 inhibitor in Phase II development for ovarian and other solid tumours in combination with *Lynparza*. It is also being evaluated in combination with chemotherapy and as monotherapy.
- AZD6738 is an ATR inhibitor in Phase II development in combination with *Lynparza* in triple negative breast cancer, gastric cancer and other solid tumours. It is also being investigated in combination with *Calquence* in chronic lymphocytic leukaemia and in combination with radiation therapy and chemotherapy as well as a monotherapy.
- Phase I clinical studies are progressing for the ATM inhibitor, AZD0156 (for the treatment of gastric and colorectal cancers) and the aurora B kinase inhibitor, AZD2811 in acute myeloid leukaemia and solid tumours. An ATM inhibitor designed to cross the blood brain barrier, AZD1390 is in Phase I development for the treatment of gliobastoma multiforme in combination with radiation.

Antibody-drug conjugates franchise

- Moxetumomab pasudotox, an anti-CD22 recombinant immunotoxin, is being investigated in a Phase III study for adult patients with hairy cell leukaemia who have relapsed after, or not responded to, standard therapy. In November 2017, AstraZeneca announced moxetumomab had met the primary endpoint of this study.
- MEDI4276 is an HER2 bispecific ADC, which entered clinical development for a range of solid tumours.
- MEDI3726 is a PSMA ADC and MEDI7247 is an ADC against an undisclosed target.

Key Oncology collaborations and transactions

In 2017, collaborations between AstraZeneca and various partners have continued to mature, with new data presented at medical congresses. We also concluded three new major agreements.

In February 2017, AstraZeneca entered into an agreement with TerSera for the commercial rights to *Zoladex* in the US and Canada. *Zoladex* is an injectable luteinising hormone-releasing hormone agonist, used to treat prostate cancer, breast cancer and certain benign gynaecological disorders.

In July 2017, AstraZeneca and MSD announced that they had entered into a global strategic oncology collaboration to co-develop and co-commercialise *Lynparza* for multiple cancer types. The companies will develop and commercialise *Lynparza* jointly, both as monotherapy and in combination with other potential medicines. Independently, the companies will develop and commercialise *Lynparza* in combination with their respective PD-L1 and PD-1 medicines, *Imfinzi* and pembrolizumab. The companies will also jointly develop and commercialise AstraZeneca's selumetinib, an oral, potent, selective inhibitor of MEK, part of the mitogen-activated protein kinase pathway, currently being developed for multiple indications, including thyroid cancer.

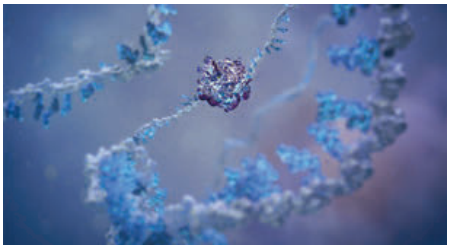
On 31 October 2017, AstraZeneca and Incyte announced the expansion of their clinical collaboration. As part of the agreement, the companies will evaluate the efficacy and safety of epacadostat, Incyte's investigational selective IDO1 enzyme inhibitor, in combination with *Imfinzi*, a human mAb directed against PD-L1, compared to *Imfinzi* alone. The exclusive collaboration for the study population allows for the two companies to conduct a Phase III trial in patients with locally-advanced (Stage 3), unresectable NSCLC whose disease has not progressed following platinum-based chemotherapy concurrent with radiation therapy.

Cardiovascular & Metabolic Diseases

AstraZeneca is following the science to transform how cardiovascular, renal and metabolic diseases are understood, interact and impact one another.

Our strategic priorities

Cardiovascular (CV) disease remains the number one cause of death globally and constitutes a burden on patients' overall health and wellbeing, as well as on society and healthcare systems. However, science is now uncovering commonalities between CV, renal and metabolic diseases (CVMD), explaining why reducing CV risk is so complex. We know there is clinical overlap between these diseases and their associated complications, yet, in many cases, each condition is managed in isolation.



Messenger RNA being read by a ribosome to produce signalling proteins.

Recognising that these conditions often co-exist, we are seeking to address unmet medical need by better understanding how our portfolio of medicines might be used to help tackle multiple risk factors or co-morbidities across CVMD, and whether combinations of these medicines might offer benefits for patients. As we begin to recognise the common underlying mechanisms behind CV, renal and metabolic diseases, we can use this knowledge to redefine the way these diseases are understood, how patients are treated, and how we can ultimately reduce CV risk.

A distinctive strategy

To address this 'extended' CVMD risk, we are focusing our efforts on the commonalities between diseases and their underlying mechanisms. We have a three-pronged science-driven strategy:

1. Today, we are delivering life-changing results in the core CV disease areas as we know them and their complications, with medicines already being used or in late-stage development:

- Metabolic disease: *Forxiga*, *Bydureon*, *Onglyza*
- Heart failure (HF): *Forxiga*
- Renal: ZS-9, roxadustat, *Forxiga*
- Atherosclerosis: *Brilinta*, *Epanova*, *Crestor.*

2. We are investing in science to demonstrate CV and mortality benefits by slowing the underlying progression of CV-related disease and protecting the organs of the CV system.

3. Ultimately, we are looking to do more than slow CV-related disease. We want to modify or even halt the natural course of the disease itself and regenerate organs.

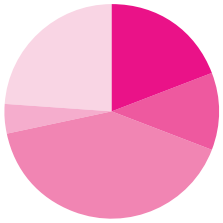
We have more than 25 potential medicines and medicine combinations in our pipeline, including small molecules and biologics, to address cardiac regeneration and conditions such as chronic kidney disease (CKD), acute coronary syndromes (ACS), HF and nonalcoholic steatohepatitis (NASH).

Our approach

We believe this strategy makes us different. For example, we are pioneering a new approach in the field of cardiac regeneration, while investing in rigorous clinical programmes evaluating the use of our medicines in large patient populations in both Established and Emerging Markets. These include global randomised clinical trials that are as close as possible to clinical practice, as well as real-world evidence research.

Therapy area world market
(MAT/Q3/17)

$186.4bn
Annual worldwide market value



- High blood pressure $36.2bn
- Abnormal levels of blood cholesterol $21.3bn
- Diabetes $76.2bn
- Thrombosis $8.5bn
- Other $44.1bn

AstraZeneca focuses on specific segments within this overall therapy area market.

We continue to strengthen our commitment to following the science through strategic partnerships, collaborations and new clinical studies.

We also develop programmes that seek to improve access to healthcare by providing education about these diseases. For example, Early Action in Diabetes is collecting and sharing better practices in policymaking from more than 35 countries, outlining how policymakers, payers and other decision-makers can best prevent, diagnose and control diabetes. Our Healthy Heart Africa Programme seeks to tackle hypertension and the increasing burden of CV disease in Africa. For more information on Healthy Heart Africa, see pages 29 and 40.

Cardiovascular disease
Our 2017 focus

Brilinta/Brilique is an oral antiplatelet treatment for ACS, an umbrella term for sudden chest pain and other symptoms due to ischaemia (insufficient blood supply) to the heart, and for the long-term prevention of CV death, heart attack and stroke for patients with a history of heart attack.

In its ACS indication, *Brilinta* 90mg is approved in over 100 countries, and is included in 12 major ACS treatment guidelines globally.

Cardiovascular & Metabolic Diseases – pipeline progressions

Regional approvals	> *Bydureon* Type 2 diabetes (DURATION-8) (US, EU) > *Bydureon BCise* Type 2 diabetes (US) > *Bydureon* Type 2 diabetes (DURATION-7) (EU) > *Forxiga* Type 2 diabetes (CN) > *Qtern* (saxagliptin + dapagliflozin FDC) Type 2 diabetes (US)
Expedited review	> Priority Review Designation: roxadustat CKD (CN)
Regulatory submissions	> *Bydureon* Type 2 diabetes (DURATION-7) (US, EU) > *Bydureon* weekly autoinjector Type 2 diabetes (EU) > roxadustat anaemia in CKD (CN)
Phase III investment decisions	> *Brilinta* paediatric programme
Phase II starts/ progressions	verinurad for CKD; AZD5718 FLAP coronary artery disease; MEDI0382 GLP-1/glucagon dual agonist Type 2 diabetes; MEDI5884 cholesterol modulation
Strategic transactions completed	Licensing agreement for rights to *Seloken* in Europe with Recordati
Setbacks and terminated projects	Discontinued: MEDI4166 (PCSK9/GLP-1) for diabetes/CV; AZD4076 (miR103/107) for NASH; MEDI8111 for trauma/bleeding

In its indication for the long-term prevention of CV death, heart attack and stroke for patients with a history of heart attack, *Brilinta* 60mg is approved in over 60 countries.

In May 2017, a new formulation of *Brilique* 90mg, an orally-dispersable tablet (ODT), was approved by the EMA, making *Brilique* the first and only P2Y12 receptor inhibitor to be made available in ODT form in Europe.

In June 2017, the CFDA in China approved *Brilinta* 60mg tablets for patients with a history of heart attack. Subsequently, in July 2017, the Ministry of Human Resources and Social Security agreed to add *Brilinta* 90mg to the National Reimbursable Drugs List (NRDL), following which provincial reimbursement listing (PRDL) was achieved in all 31 provinces by the end of 2017.

In August 2017, a new sub-analysis of Phase III trial data (PEGASUS-TIMI 54) was presented at the Annual Congress of the European Society of Cardiology (ESC) in Barcelona, Spain, demonstrating a 29% risk reduction in CV death from treatment with *Brilinta* 60mg twice daily, versus placebo, in patients taking low-dose aspirin but still at high risk of an atherothrombotic event – the specific patient population defined in the European label for *Brilinta*.

At the same congress, the ESC published two major new Guidelines – for the management of ST-segment elevation patients, and for dual antiplatelet therapy (DAPT). These were significant not only for their recommendation of *Brilinta* 90mg as the preferred oral antiplatelet therapy over clopidogrel for 12 months DAPT post-ACS, but also for the first time, preferentially recommending *Brilinta* 60mg for >12 months DAPT in high-risk post-heart attack patients.

Our marketed products:

Cardiovascular disease
- *Atacand*[1]/*Atacand* HCT/*Atacand* Plus (candesartan cilexetil)
- *Brilinta/Brilique* (ticagrelor)
- *Crestor*[2] (rosuvastatin calcium)
- *Plendil*[3] (felodipine)
- *Seloken/Toprol-XL*[4] (metoprolol succinate)
- *Tenormin*[5] (atenolol)
- *Zestril*[6] (lisinopril dihydrate)

Metabolic diseases
- *Bydureon* (exenatide XR injectable suspension)
- *Byetta* (exenatide injection)
- *Farxiga/Forxiga* (dapagliflozin)
- *Kombiglyze* XR (saxagliptin and metformin HCl)
- *Komboglyze* (saxagliptin and metformin HCl)
- *Onglyza* (saxagliptin)
- *Qtern* (saxagliptin/dapagliflozin)
- *Symlin* (pramlintide acetate)
- *Xigduo* (dapagliflozin and metformin HCl)
- *Xigduo* XR (dapagliflozin and metformin HCl)

Full product information on page 208.

1 Licensed from Takeda Chemicals Industries Ltd.
2 Licensed from Shionogi. The extension of the global licence agreement with Shionogi for *Crestor* and the modification of the royalty structure became effective 1 January 2014.
3 Divested China rights to China Medical Systems Holdings Ltd effective 29 February 2016.
4 Divested US rights to Aralez Pharmaceuticals Trading DAC effective 4 October 2016.
5 Divested US rights to *Tenormin* to Alvogen Pharma US Inc. effective 9 January 2015.
6 Licensed from Merck. Divested US rights to *Zestril* to Alvogen Pharma US Inc. effective 9 January 2015.

Therapy Area Review
Cardiovascular & Metabolic Diseases *continued*

In December 2017, we announced investment in THALES, a new randomised, placebo-controlled Phase III DAPT trial in stroke. This study forms part of PARTHENON, AstraZeneca's largest ever CV outcomes programme involving nearly 80,000 patients, within which THEMIS is the next major trial due to read out, studying the benefit of ticagrelor for the prevention of CV events among Type 2 diabetes patients.

Crestor is approved in over 115 countries for the treatment of dyslipidaemia and hypercholesterolaemia (elevated cholesterol). *Crestor* faces competition from generic products. The substance patent protecting *Crestor* in Japan expired in May 2017 followed by the launch of an authorised generic in September 2017 and subsequent generic entrants. The substance patent protecting *Crestor* in Europe expired on 30 June 2017 and the paediatric extension expired in December 2017.

In the pipeline

RhLCAT (MEDI6012) is an enzyme essential to high-density lipoproteins (HDL) maturation that is in Phase II development for reduction of CV events.

AZD8601 is an investigational modified mRNA-based therapy that encodes for vascular endothelial growth factor-A (VEGF-A) and is currently in Phase II for HF treatment.

AZD5718 is a target based on a genome-wide association study linking halotypes of FLAP gene. It is currently in Phase II with the first launch indication in ACS patients with treatment initiation within the first month from myocardial infarction.

Clinical studies

With *Epanova* (omega-3-carboxylic acids), we are evaluating patient groups where there is high unmet medical need. Therefore, AstraZeneca continues to advance its large-scale CV outcomes trial (STRENGTH) to evaluate the safety and efficacy of *Epanova* on CV outcomes in combination with statin therapy for the treatment of patients with mixed dyslipidaemia who are at increased risk of CV disease. STRENGTH is the largest CV outcomes trial of any prescription omega-3 and completed enrolment in April 2017, with approximately 13,000 patients. Results are anticipated in 2019.

Renal diseases

In the pipeline

We continue to develop roxadustat, a potential first-in-class oral hypoxia-inducible factor prolyl hydroxylase inhibitor (HIF-PHI). We are collaborating on the development and commercialisation of roxadustat in the US, China and other markets not covered by an agreement between FibroGen and Astellas. In October 2017, our partner FibroGen announced that the CFDA had accepted the NDA for roxadustat, based on positive top-line China results announced in January 2017.

We continue to progress ZS-9 (sodium zirconium cyclosilicate), a treatment for hyperkalaemia. In March 2017, the FDA issued a second Complete Response Letter (CRL). The CRL was related to an inspection by the FDA of the dedicated manufacturing facility in Texas, US and did not require the generation of new clinical data. Subsequently, AstraZeneca completed the manufacturing process validation and submitted an NDA for ZS-9, with a decision expected in the first half of 2018. In the EU, we announced in February 2017 that the CHMP of the EMA had issued a positive opinion recommending the approval of ZS-9 for the treatment of hyperkalaemia. After a pause in advancing the opinion, in light of the CRL, the CHMP re-adopted its positive opinion in January 2018 with a decision expected in the first half of 2018. The CRL and the CHMP pause have extended our originally-anticipated timelines for launch, but the long-term potential of the therapy has not been impacted by these short-term delays.

Verinurad (RDEA3170) is a potent selective uric acid reabsorption inhibitor that has been in Phase II development as a urate-lowering therapy. A Phase II trial was initiated in June 2017 and will now progress the development of verinurad for CKD.

Clinical studies

Roxadustat is in Phase III development for the treatment of anemia in patients with CKD, on dialysis and not on dialysis with a programme consisting of 15 studies which are expected to enrol more than 10,000 patients worldwide. The initial data read-out for our sponsored trials, ROCKIES and OLYMPUS, is anticipated to align with the availability of pooled safety data in co-ordination with our partners, expected in 2018, and we expect to present data read-outs from both trials in 2018.

$7.3bn

Product Sales of $7,266 million, down 10% (10% at CER)

$1bn

Annual sales of *Brilinta/Brilique* and *Farxiga/Forxiga* each exceeded $1 billion

Metabolic diseases

Our 2017 focus

We are focused on redefining the approach to treating Type 2 diabetes and harnessing complementary mechanisms of action by refining our R&D efforts to include diverse populations and patients with significant co-morbidities, such as CV disease, obesity, NASH, and CKD. Our global clinical research programmes seek to advance understanding of the treatment effects of our diabetes medicines in broad patient populations, as well as explore combination products to help more patients achieve treatment success earlier in their disease.

In February 2017, the FDA approved once-daily *Qtern* tablets (*Forxiga* 10mg and *Onglyza* 5mg fixed-dose combination) as an adjunct to diet and exercise to improve glycaemic control in adults with Type 2 diabetes who have inadequate control with *Forxiga* (10mg) or who are already treated with *Forxiga* and *Onglyza*. We are committed to making *Qtern* available to patients and, after securing the appropriate access, *Qtern* was launched in the US at the beginning of January 2018.

In March 2017, we received marketing authorisation from the CFDA for *Forxiga* 5mg and 10mg once-daily oral tablets. *Forxiga* was the first SGLT2 inhibitor to be approved in China. This is an important milestone for patients with Type 2 diabetes in China given its prevalence – it now impacts some 114 million patients in China, representing almost one third of diabetes cases worldwide.

Science *can* improve patient outcomes

The DapaCare programme
We have initiated the extensive DapaCare clinical programme aimed at better understanding the CV and renal profile of *Forxiga* across a spectrum of people with established CV disease, CV risk factors and varying stages of renal disease, both with and without Type 2 diabetes. We aim to provide healthcare providers with evidence needed to improve patient outcomes. The DapaCare programme will enrol nearly 30,000 patients in randomised clinical trials, supported by a multinational real-world evidence study. The DapaCare clinical programme currently comprises:

- DECLARE, DAPA-HF, DAPA-CKD: Three large outcomes trials.
- DELIGHT: An exploratory Phase II/III study evaluating efficacy, safety and pharmacodynamics of dapagliflozin alone and in combination with saxagliptin in CKD patients with Type 2 diabetes and albuminuria.
- DAPA-MECH: Series set of mechanistic studies of the SGLT2 inhibitor class.
- CVD-REAL: The first wave primary study evaluated the risk of hospitalisation for HF and mortality in patients with Type 2 diabetes and assessed data from more than 300,000 patients across six countries, 87% of whom did not have a history of CV disease.

Also in March, we shared results of the landmark CVD-REAL study. This first large real-world evidence study of its kind showed that treatment with SGLT2 inhibitors, versus other Type 2 diabetes medicines, significantly reduced rates of hospitalisation due to HF and mortality.

At the annual American Diabetes Association scientific sessions in June 2017, we presented updated safety data on the risk-benefit profile of *Forxiga* and data from the DURATION-8 trial evaluating the efficacy and safety of *Forxiga* in combination with *Bydureon*, supporting the established clinical profiles of these medicines. In the updated safety analysis of *Forxiga*, data pooled from 30 Phase IIb/III clinical trials showed no new safety signals and the incidence of adverse events was generally similar to that in the control groups.

In August 2017, the EMA approved the incorporation of DURATION-8 data into the *Bydureon* and *Forxiga* European label.

In September 2017, during the annual meeting of the European Association for the Study of Diabetes, we presented the full results from the EXSCEL (EXenatide Study of Cardiovascular Event Lowering) trial. The trial demonstrated CV safety with *Bydureon* in patients with Type 2 diabetes at a wide range of CV risk. *Bydureon* did not increase the incidence of major adverse CV events, a composite endpoint of CV death, non-fatal heart attack (myocardial infarction) or non-fatal stroke, compared to placebo. While there were fewer CV events observed in the *Bydureon* arm of the trial, the primary efficacy objective did not meet statistical significance.

The 24-week data from the DEPICT-1 trial showed that *Forxiga*, when given as an oral adjunct to adjustable insulin in patients with inadequately-controlled Type 1 diabetes, demonstrated significant and clinically-relevant reductions from baseline in HbA1c, weight reductions, and lowered total daily insulin dose at 24 weeks compared to placebo at both the 5mg and 10mg dose.

In October 2017, the FDA approved *Bydureon BCise* injectable suspension, a new formulation of *Bydureon* in an improved once-weekly, single-dose autoinjector device for adults with Type 2 diabetes whose blood sugar remains uncontrolled on one or more oral medicines in addition to diet and exercise to improve glycaemic control. A regulatory application for the new autoinjector device was accepted by the EMA. Also in October 2017, in a separate sNDA, the FDA approved the inclusion of data from the DURATION-8 clinical trial into the *Farxiga* and *Bydureon* labels.

In the pipeline

MEDI0382 is a novel dual GLP1-glucagon peptide, which was discovered in our MedImmune laboratories and which was inspired by our scientists studying the molecular mechanisms that drive the beneficial effects of bariatric surgery. The molecule completed a first Phase II study earlier in the year and we have seen promising data. We are currently evaluating MEDI0382 in a larger global Phase II study to understand dose-response and in a number of clinical pharmacology studies.

Clinical studies

The DECLARE study, a large CV outcomes trial to assess the impact of *Forxiga* on CV risk/benefit, when added to a patient's current diabetes therapy, continued in 2017. The trial was fully enrolled in 2015 with approximately 17,000 adult patients with Type 2 diabetes and is expected to be completed in the second half of 2018.

Two further international, multicentre, parallel group, event-driven, randomised, double-blind, placebo-controlled *Forxiga* studies are underway. One, DAPA-HF, is evaluating its effect on the incidence of worsening HF or CV death for patients with chronic HF while the second, DAPA-CKD, is evaluating its effect on renal outcomes and CV mortality in patients with CKD.

Respiratory

We aim to transform the treatment of respiratory disease for patients with our growing portfolio of inhaled and biologic medicines along with scientific research targeting the underlying causes of disease.

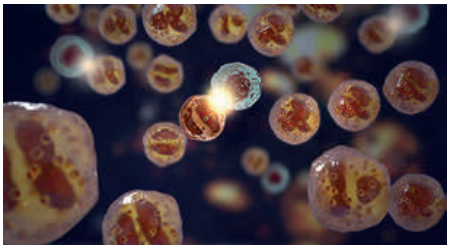
Breaking new ground with respiratory biologics

Building on our 40-year heritage in inhaled respiratory medicines, AstraZeneca is now positioned for leadership in respiratory biologics. The approval of *Fasenra* in the US, Europe and Japan is a positive step towards our ambition to transform care for severe asthma patients whose disease is driven by eosinophilic inflammation. *Fasenra* is a new anti-eosinophilic mAb which has demonstrated efficacy versus placebo in pivotal clinical trials and is the first approved respiratory biologic with an 8-week maintenance dosing regimen. Looking further ahead, the Phase IIb results for tezepelumab, published in the *New England Journal of Medicine* in September 2017, signalled its potential as 'the broadest and most promising biologic for the treatment of persistent uncontrolled asthma seen to date'*.

* Elisabeth H. Bel. Moving Upstream – Anti-TSLP in Persistent Uncontrolled Asthma. New England Journal of Medicine. 2017; 377:10.

Our strategic priorities

Today, more than 600 million individuals have asthma or chronic obstructive pulmonary disease (COPD) and significant opportunities remain to expand care. About 250 million of asthma and COPD patients are in AstraZeneca's top 12 commercial markets (US, Australia, Brazil, Canada, China, France, Germany, Italy, Japan, Russia, Spain and the UK), but more than 175 million of those patients today do not receive any maintenance treatment. Despite currently-available treatments, therapeutic advances are needed to reduce the morbidity and mortality of these chronic diseases. AstraZeneca estimates that these advances will help to drive 8% growth in the global respiratory medicine market over the next decade, reaching $52 billion by 2027.



Esonophil prior to apoptosis. Natural killer cell being recruited by a biologic.

Respiratory is one of AstraZeneca's main therapy areas, and our medicines reached more than 18 million patients in 2017. We have a strong pipeline with more than 33,000 patients participating in Phase I-IV respiratory clinical trials across the world. Our ambition is to transform outcomes for patients with respiratory diseases through:

- our strength in inhaled combination medicines including *Symbicort*, AstraZeneca's number one medicine in 2017 by Product Sales
- a leading biologics portfolio, initially for patients with severe respiratory disease
- a robust early pipeline where our goal is to achieve disease modification, early intervention and cure.

Asthma is one of the most common and chronic lung diseases worldwide and a serious global health problem, affecting airways in the lung. Inflammation and narrowing of the airways may cause wheezing, breathlessness, chest tightness and coughing. Combination therapy, given in a single-inhaler of an inhaled corticosteroid (ICS) with a long-acting beta2-agonist (LABA) such as *Symbicort*, is a cornerstone of treatment, helping to treat moderate-to-severe asthma. For patients with mild asthma, we are investigating the use of *Symbicort Turbuhaler*

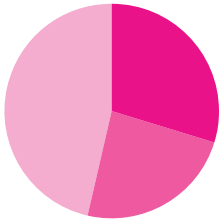
Respiratory – pipeline progressions

Regional approvals	> *Fasenra* (CALIMA, SIROCCO) severe asthma (US, EU*, JP*)
Expedited review	> None
Regulatory submissions	> *Fasenra* – severe asthma (JP) > *Bevespi Aerosphere* – COPD (EU)
Phase III investment decisions	> tezepelumab – asthma > Phase III investment decision
Phase II starts/ progressions	AZD8871 (MABA) for COPD; AZD7986 DPP1 COPD**; Phase II mild asthma study
Strategic transactions completed	None
Setbacks and terminated projects	tralokinumab STRATOS 1 and STRATOS 2 (asthma) trials failed to meet their primary endpoints, and the programme for asthma has been terminated. Also discontinued: *Symbicort* breath actuated inhaler development for asthma/COPD; AZD9412 (Inhaled βIFN) for asthma/COPD; AZD9898 for LTC4S asthma

* Approved in January 2018.
** Partnered with Insmed.

Therapy area world market
(MAT/Q3/17)

$67.3bn
Annual worldwide market value



- Asthma $20.2bn
- COPD $16.0bn
- Other $31.2bn

AstraZeneca focuses on specific segments within this overall therapy area market.

prescribed as an anti-inflammatory reliever as needed, recognising the variability and inflammatory nature of disease in these patients. This programme will demonstrate the impact of *Symbicort* as-needed on exacerbations and asthma control compared to standard of care in patients with mild asthma. Up to 10% of asthma patients have severe, uncontrolled asthma despite standard of care asthma controller medications. Such patients experience debilitating symptoms and face increased risk of hospitalisations, emergency room visits and even death, despite current treatments. Severe, uncontrolled asthma can lead to a dependence on oral corticosteroids (OCS), with systemic steroid exposure potentially leading to serious short- and long-term adverse effects, including weight gain, diabetes, osteoporosis, glaucoma, anxiety, depression, CV disease and immuno-suppression. There is also a significant physical and socioeconomic burden associated with severe, uncontrolled asthma with these patients accounting for 50% of asthma-related costs. For these difficult to treat patients, we are developing biologic medicines that address the underlying causes of their disease.

COPD is a chronic, progressive disease characterised by obstruction of airflow in the lungs that can result in debilitating bouts of breathlessness. Improving lung function, managing daily symptoms such as breathlessness, and reducing exacerbations are important to the management of COPD. Exacerbations are associated with mortality in COPD, with one study reporting that 50% of COPD patients will die within four years of their first hospital admission for a severe exacerbation. COPD is associated with significant economic burden, accounting for $32 billion of direct costs and $20 billion of indirect costs in the US, while in Europe, COPD accounts for 56% of the €39 billion cost of respiratory diseases. COPD remains underdiagnosed and often under-treated. AstraZeneca's current inhaled portfolio includes both ICS in combination with a long-acting bronchodilator and non-ICS-containing dual bronchodilator combinations to address patients with different needs across the spectrum of disease severity. AstraZeneca's current pipeline includes a triple combination of PT010 (budesonide/glycopyrronium/formoterol fumarate) in development for COPD patients.

Our 2017 focus

Inhaled combination medicines

We continue to invest in *Symbicort* which, in addition to being AstraZeneca's number one medicine in Product Sales in 2017, was also the number one ICS/LABA combination globally in volume terms in 2017. Pricing pressure was in line with expectations as prices rebase ahead of anticipated generic entries. This trend will continue to be offset by Emerging Market growth, led by demand for acute and maintenance care in China.

In January 2017, the FDA approved *Symbicort* Inhalation Aerosol 80/4.5 micrograms for the treatment of asthma in paediatric patients aged six to 12 years. The FDA approval was based on the CHASE (ChildHood Asthma Safety and Efficacy) clinical trial programme, which included the CHASE 3 Phase III trial. In addition, in January 2017, the FDA granted six months of paediatric exclusivity for *Symbicort* Inhalation Aerosol. *Symbicort* was already approved in the US to treat asthma in patients 12 years and older and for the maintenance treatment of airflow obstruction in COPD in adults.

Our marketed products:
- *Accolate* (zafirlukast)
- *Bevespi Aerosphere* (glycopyrrolate and formoterol fumarate)[1]
- *Bricanyl Respules* (terbutaline)[2]
- *Bricanyl Turbuhaler* (terbutaline)[3]
- *Daliresp/Daxas* (roflumilast)
- *Duaklir Genuair* (aclidinium/formoterol)[3]
- *Eklira Genuair/Tudorza Pressair* (aclidinium)[3]
- *Fasenra* (benralizumab)[4]
- *Oxis Turbuhaler* (formoterol)[3]
- *Pulmicort Turbuhaler/Pulmicort Flexhaler* (budesonide)[3]
- *Pulmicort Respules* (budesonide)[2]
- *Symbicort* pMDI (budesonide/formoterol)[5]
- *Symbicort Turbuhaler* (budesonide/formoterol)[3]
- *Tudorza Pressair* (aclidinium)[3]

Full product information on page 208.

[1] Inhalation aerosol.
[2] Inhalation solution.
[3] In a dry powder inhaler.
[4] Subcutaneous injection.
[5] Inhalation suspension.

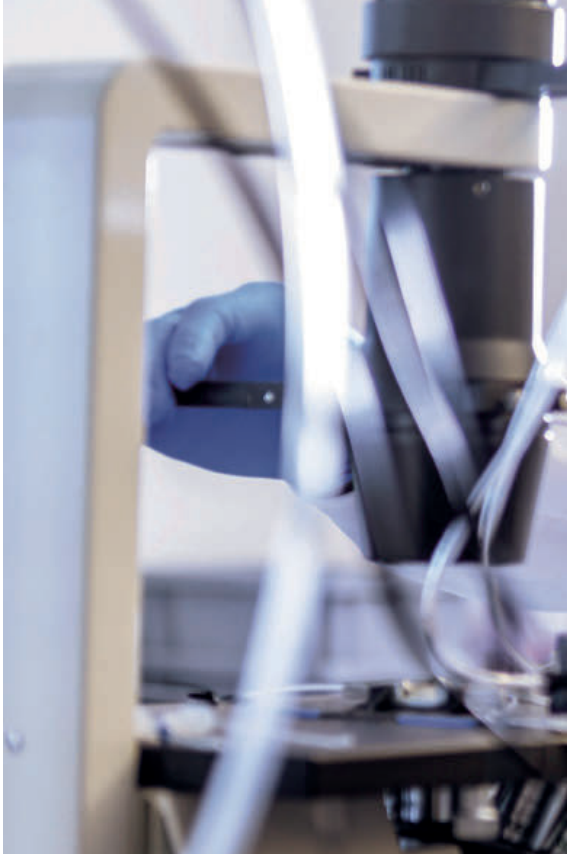
Therapy Area Review
Respiratory *continued*

$4.7bn

Product Sales of $4,706 million, down 1% (1% at CER)

18m

Respiratory medicines reached 18 million patients in 2017



In September 2017, the FDA approved *Symbicort* for the reduction of exacerbations in patients with COPD. The approval was based on data that evaluated COPD exacerbations as the primary endpoint in two Phase IIIb trials (RISE and Study 003), supported by data from two legacy Phase IIIa trials (SUN and SHINE). The RISE data was published in *Respiratory Medicine*. In November 2017, we announced clinical data from the Phase III SYGMA trials, which examined *Symbicort Turbuhaler* prescribed as an anti-inflammatory reliever as needed in patients with mild asthma. The primary objectives in severe-asthma exacerbation rates and asthma control were met.

In 2017, AstraZeneca launched the Turbu+ programme in eight countries. Turbu+ is our digital Integrated Patient Solution for *Symbicort Turbuhaler*, which helps patients with asthma and/or COPD to better manage their disease using a Bluetooth-enabled monitoring device and smartphone app.

AstraZeneca is advancing its portfolio of next-generation inhaled medicines which utilise *Aerosphere* Delivery Technology. In 2017, we launched *Bevespi Aerosphere*, our dual combination of glycopyrrolate/formoterol fumarate, in the US for the maintenance treatment of adults with COPD, and our regulatory submission for *Bevespi Aerosphere* in the EU was accepted. Our *Aerosphere* Delivery Technology provides consistent drug delivery in a pressurised metered-dose inhaler.

In April 2017, AstraZeneca entered a strategic collaboration with Circassia for the development and commercialisation in the US of two inhaled medicines, *Tudorza* (LAMA) and *Duaklir* (LAMA/LABA), for the treatment of COPD. Under the terms of the collaboration, Circassia was granted the rights to *Duaklir* in the US. Circassia is also leading the promotion of *Tudorza* in the US, with the option to gain full commercial rights in the future. In September 2017, we announced positive top-line results from the Phase III AMPLIFY trial for *Duaklir*, which met its primary endpoints and demonstrated a statistically-significant improvement in lung function in patients with moderate to very severe stable COPD, compared to each individual component (either aclidinium bromide or formoterol). We anticipate the US submission of an NDA in the first half of 2018.

In December 2017, we also announced positive top-line results from the Phase III ASCENT trial for *Tudorza*, which met its primary efficacy endpoint of demonstrating a statistically significant reduction in the annual rate of moderate or severe COPD exacerbations compared to placebo. The ASCENT trial also met the primary safety endpoint, demonstrating an increase in time to first major adverse cardiovascular event (MACE) compared to placebo. We plan to submit an sNDA for an expanded *Tudorza* label following these positive results.

Biologic medicines

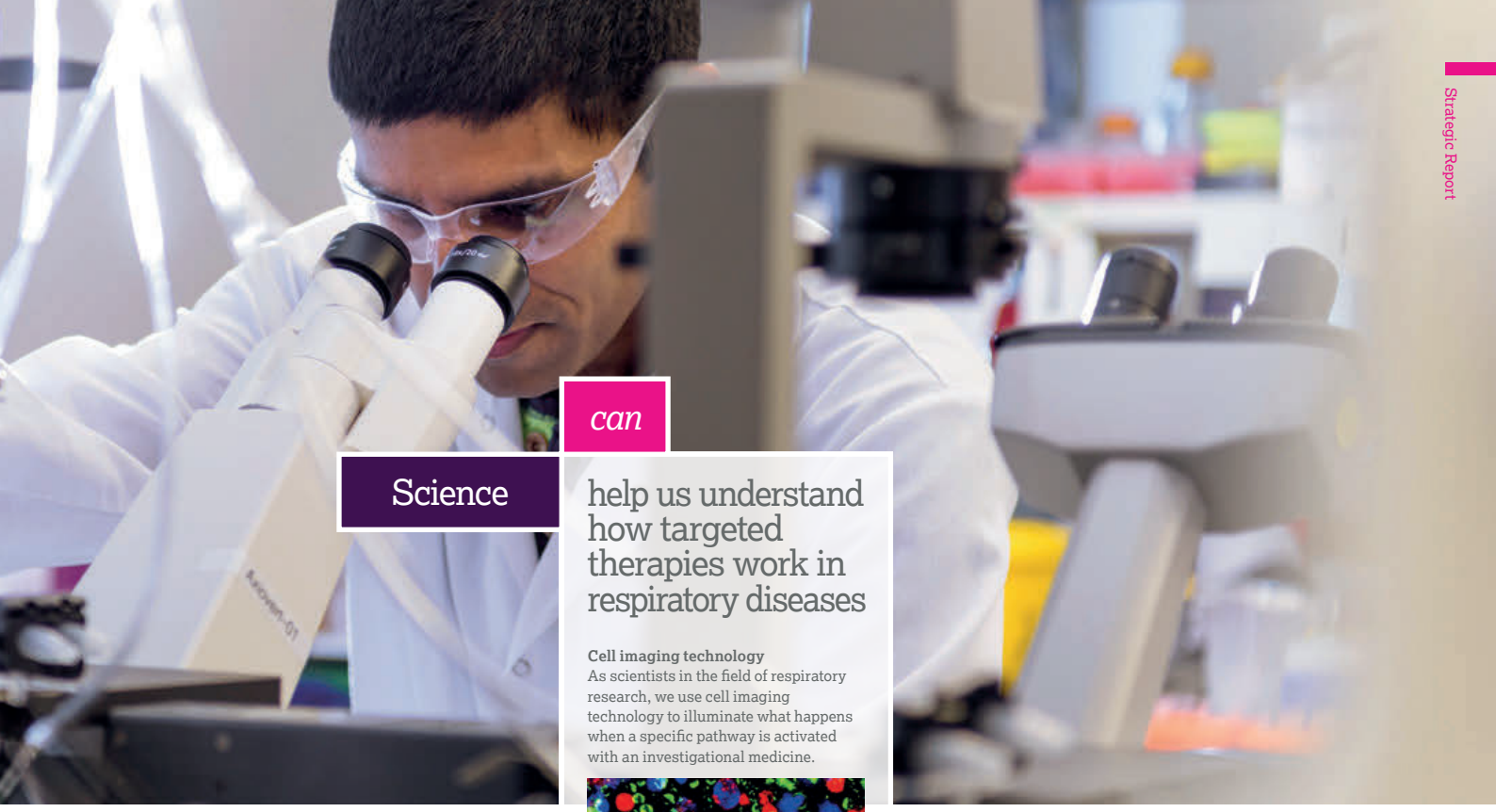
AstraZeneca's first respiratory biologic, *Fasenra*, was approved for severe, eosinophilic asthma by the FDA in November 2017, as well as by the EC and the Japanese Ministry of Health, Labour and Welfare in January 2018. *Fasenra* distinctively targets and depletes eosinophils, the biological effector cells in approximately 50% of asthma patients that lead to frequent exacerbations, impaired lung function and asthma symptoms. *Fasenra* is the first respiratory biologic with an 8-week maintenance dosing regimen. The approval of *Fasenra*, in the US and EU respectively, is based on results from the WINDWARD clinical trial programme, including two pivotal Phase III exacerbation trials, SIROCCO and CALIMA, reported in the *Lancet* in September 2016. The approvals were also based on the Phase III OCS-sparing trial, ZONDA, which was published in the *New England Journal of Medicine* in May 2017. ZONDA demonstrated a statistically-significant and clinically-meaningful reduction in daily maintenance, OCS use from baseline for patients with severe, uncontrolled OCS-dependent eosinophilic asthma receiving benralizumab compared with placebo.

In the pipeline

Inhaled combination medicines

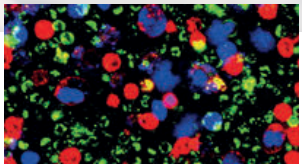
AstraZeneca has made significant progress in delivering the ATHENA programme, our Phase III clinical trial programme for PT010, which includes more than 11 trials and 15,500 patients. The four key ATHENA trials are ETHOS, KRONOS, TELOS and SOPHOS. In January 2018, we announced top-line results from the KRONOS trial that PT010 demonstrated a statistically-significant improvement compared with dual combination therapies in six out of seven lung function primary endpoints, based on forced expiratory volume in one second (FEV1) assessments in patients with moderate to very severe COPD. In total, eight of the nine primary endpoints in the KRONOS trial were met, including two non-inferiority endpoints to qualify PT009 (budesonide/formoterol fumarate) as one of the comparators.

In February 2018, we announced results of the Phase III TELOS trial, which compared two doses of PT009 (budesonide/formoterol fumarate) to its individual components, PT005 (formoterol fumarate) and PT008 (budesonide), and to *Symbicort Turbuhaler* to assess lung



Science *can* help us understand how targeted therapies work in respiratory diseases

Cell imaging technology
As scientists in the field of respiratory research, we use cell imaging technology to illuminate what happens when a specific pathway is activated with an investigational medicine.



The illustration shows two different immune cell types, one red and one green. The red cells are eosinophils, which play a key pathogenic role in inflammation in asthma. The green cells are natural killer cells. The eosinophils have been treated such that they are now recognisable to the natural killer cells. The natural killer cells target the eosinophils which results in cell death (blue).

Severe asthma is a heterogeneous disease with complex biology. Cell imaging helps us to visualise the effects of our investigational drugs on inflammation and follow the science to develop medicines targeted to a particular inflammatory phenotype.

For more information, please see our website, www.astrazeneca.com/our-focus-areas/respiratory, Down the microscope.

function in patients with moderate to very severe COPD to qualify PT009 as active comparator in PT010 clinical programme. All primary endpoints were met, with the exception of the lung function primary endpoint comparing low dose PT009 to PT005.

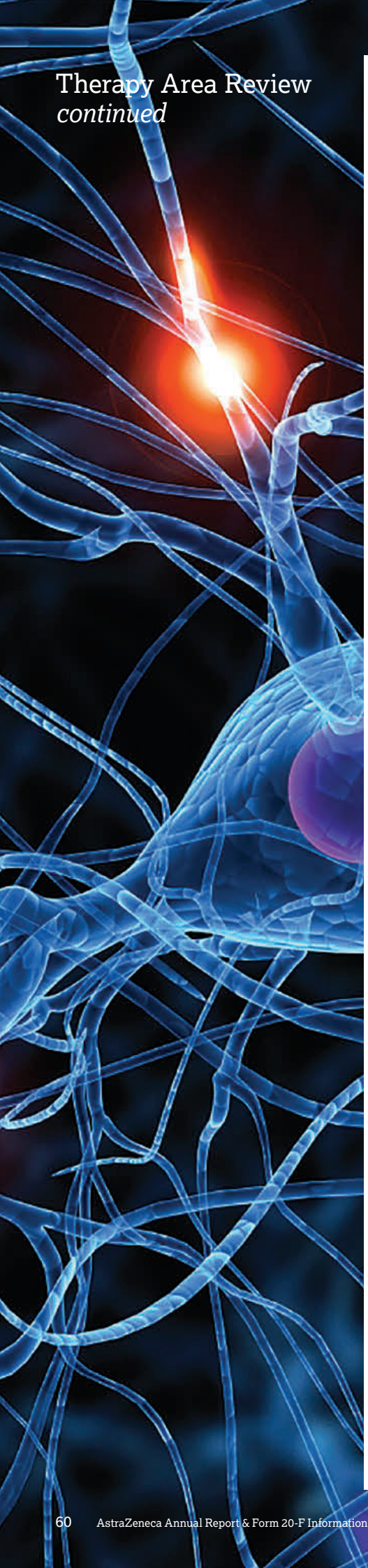
Biologic medicines

In addition to AstraZeneca's progress with *Fasenra* in severe asthma, AstraZeneca is investigating *Fasenra* for at-home use in an autoinjector device as well as for indications in other diseases. In the first half of 2018, we expect the results of our Phase III COPD trials, TERRANOVA and GALATHEA.

AstraZeneca and our partner Amgen published landmark data in the *New England Journal of Medicine* from the PATHWAY Phase IIb trial of tezepelumab in patients with severe, uncontrolled asthma. Tezepelumab is a first-in-class anti-thymic stromal lymphopoietin (TSLP) mAb that blocks TSLP, an upstream driver of multiple downstream inflammatory pathways. Tezepelumab met its primary efficacy endpoint in PATHWAY with the data demonstrating significant annual asthma exacerbation rate reductions of 61%, 71% and 66% in the tezepelumab arms receiving either 70mg or 210mg every four weeks or 280mg every two weeks, respectively. Significant and clinically-meaningful reductions in exacerbation rates were observed independent of baseline blood eosinophil count or other type 2 (T2) inflammatory biomarkers. Due to its activity early in the inflammatory cascade, tezepelumab may be suitable for patients with both T2 and non-T2 driven asthma, including those ineligible for current biologic therapies which only target the T2 pathway. A pivotal Phase III trial (NAVIGATOR) for tezepelumab in severe asthma was initiated in November 2017.

The ALLEVIAD Phase IIa trial data showed that tezepelumab did not meet statistical significance on the primary endpoint (EASI 50) of the 12-week exploratory trial that evaluated tezepelumab in moderate to severe atopic dermatitis (AD) as add-on treatment to regular medium-to-high strength topical glucocorticosteroids. Numeric differences in favour of tezepelumab, however, were observed across a number of disease activity endpoints (EASI, IGA and SCORAD response) compared to placebo.

During the year, we announced the results of Phase III trials for tralokinumab, an investigational anti-IL-13 human immunoglobulin-G4 mAb that blocks binding and signalling of IL-13 to IL-3 receptors, a potential target in severe, uncontrolled asthma patients. STRATOS 1 and STRATOS 2 were Phase III trials designed to evaluate the efficacy and safety of tralokinumab in patients with severe, uncontrolled asthma, despite treatment with ICS plus LABA. In the STRATOS 1 trial, tralokinumab did not meet its primary endpoint of a significant reduction in the annual asthma exacerbation rate (AAER), although a clinically-relevant reduction in AAER was observed in a sub-population of patients with elevated FeNO (Fractional exhaled Nitric Oxide), a biomarker associated with increased IL-13 activity. The primary analysis population specified in the STRATOS 2 trial was subjects with elevated FeNO, but tralokinumab did not achieve a statistically-significant reduction in AAER. In the OCS-sparing trial, TROPOS, tralokinumab did not achieve a statistically-significant reduction in OCS use when added to the standard of care in patients dependent on OCS. AstraZeneca has discontinued the development of tralokinumab in severe asthma. Through a licence agreement signed in 2016, LEO Pharma is developing tralokinumab in adults with moderate-to-severe atopic dermatitis and Phase III trials are ongoing.



Other Disease Areas

In addition to our focus on the treatment of diseases in our three main therapy areas, we are also selectively active in the areas of autoimmunity, infection, neuroscience and gastroenterology, where we aim to develop best-in-class therapies and follow an opportunity-driven approach.

Our approach in these other disease areas looks to maximise revenue through externalisation and on-market products; advance the novel product pipeline with partnerships where appropriate; and preserve a company stake in the most promising assets.

Autoimmunity

Systemic lupus erythematosus (SLE), or lupus, is an autoimmune disease that occurs when the immune system produces antibodies that attack healthy tissue, including skin, joints, kidney, the brain and blood vessels. SLE can cause a wide range of symptoms. Among these are pain, rashes, fatigue, swelling in joints, and fevers. SLE is associated with a greater risk of death from causes such as infection, nephritis and cardiovascular disease. Inflammation of the kidneys caused by SLE – known as lupus nephritis – can lead to significant morbidity and even death. Current treatment of SLE focuses on suppressing symptoms and controlling disease flares and, in the case of lupus nephritis, preventing renal failure.

Neuromyelitis optica spectrum disorder (NMOSD) is a rare, life-threatening autoimmune disease of the central nervous system in which the body's immune system attacks healthy cells, most commonly in the optic nerves and spinal cord, resulting in severe damage. NMOSD may cause severe muscle weakness and paralysis, loss of vision, respiratory failure, problems with bowel and bladder function and neuropathic pain. There is currently no cure or approved medicine for this rare disease.

Psoriasis is a chronic disease in which the immune system causes skin cells to grow rapidly. Instead of being shed, the skin cells pile up, causing painful and itchy, red, scaly patches that can bleed. Approximately 100 million people worldwide suffer from psoriasis. Despite available treatment options for moderate-to-severe plaque psoriasis, many patients do not experience a resolution of underlying inflammation, clearing of symptoms or an improved quality of life.

In the pipeline

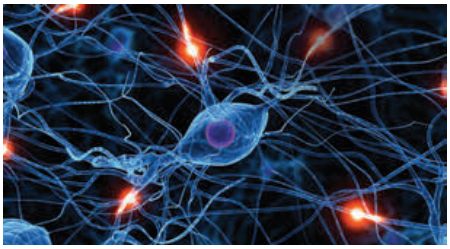
We are making important progress in advancing our pipeline and improving treatment options and clinical outcomes for patients with inflammatory and autoimmune diseases. Common molecular pathways are often shared across multiple autoimmune diseases, which provides opportunities to identify and work with approaches that could become treatments for more than one disease.

Anifrolumab is a developmental mAb that inhibits the activity of all type I interferons (IFN), which play a central role in lupus. A majority of patients with SLE show a high interferon gene signature, and increased levels of type I IFN have been shown to correlate with SLE disease activity and severity. During 2017, we completed enrolment in two Phase III trials, TULIP-SLE1 and TULIP-SLE2, of anifrolumab in patients with moderate-to-severe SLE. We also completed enrolment in a Phase II SLE study evaluating a subcutaneous route of administration of anifrolumab. Anifrolumab is also in Phase II development for lupus nephritis.

Other Disease Areas – pipeline progressions

Regional approvals	> *Duzallo* gout (US) > *Kyntheum* (brodalumab) psoriasis (EU; by partner) > *Siliq* (brodalumab) psoriasis (US; by partner) > *Nexium* paeds and sachet GERD (JP*)
Expedited review	> Orphan Drug Designation: inebilizumab (MEDI-551) – neuromyelitis optica (EU)
Regulatory submissions	> None
Phase III investment decisions	> None
Phase II starts/ progressions	None
Strategic transactions completed	Partnership with Sanofi for development and commercialisation of MEDI8897 (RSV antibody). Divestment to Aspen of the remaining rights in the anaesthetics portfolio and to Grünenthal of the rights to *Zomig* outside Japan
Setbacks and terminated projects	Discontinued: verinurad for hyperuricemia/gout; AZD3241 (MPO) for multiple system atrophy

* Approved in January 2018.



In March 2017, the EMA granted Orphan Drug Designation to inebilizumab (MEDI-551) for the treatment of NMOSD. Inebilizumab is currently in Phase II/III clinical development for NMOSD.

Brodalumab is a human mAb that targets the interleukin-17 (IL-17) receptor. During 2017, brodalumab (*Siliq* in the US and *Kyntheum* in Europe) received both FDA and EMA approvals for the treatment of adult patients with moderate-to-severe plaque psoriasis who are candidates for systemic therapy or phototherapy and have failed to respond or no longer respond to other systemic therapies.

Through collaboration agreements, Valeant holds the exclusive licence to develop and commercialise brodalumab globally, except in Japan and certain other Asian countries where rights are held by Kyowa Hakko Kirin through an agreement with Amgen, and in Europe, where LEO Pharma holds exclusive rights to develop and commercialise *Kyntheum* for psoriasis.

Infection

Seasonal influenza is a serious public health problem that causes severe illness and death in high-risk populations. In 2017, the US Advisory Committee on Immunization Practices, under the Centers for Disease Control and Prevention (CDC), continued its recommendation (issued in 2016) that *FluMist* Quadrivalent (LAIV) should not be used in the US for the 2017 to 2018 influenza season until further data is available. This recommendation was based on concerns regarding low effectiveness of the vaccine in the US in previous seasons. The vaccine remains licensed in the US, Canada and the EU and we remain committed to supporting *FluMist* Quadrivalent/*Fluenz* Tetra in the US and in the rest of the world. Our investigation into findings of lower than expected vaccine effectiveness informed our selection of a new A/H1N1 LAIV strain for the 2017 to 2018 flu season. The new A/H1N1 LAIV strain has demonstrated improved performance in laboratory assays and we are currently conducting a clinical study to further evaluate this strain. We continue to keep the US CDC updated on our progress.

FluMist Quadrivalent/*Fluenz* Tetra continues to be recommended for use in many countries outside the US based on their respective public health authorities' review of existing and recent vaccine effectiveness data. We also have an ongoing agreement with the WHO to donate and supply at reduced prices a portion of vaccine production in the event of an influenza pandemic.

Our marketed products:

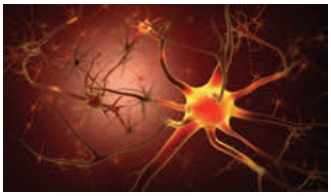
Infection
> *Fluenz FluMist*/Tetra Quadrivalent[1,2] (live attenuated influenza vaccine)
> *Synagis*[3] (palivizumab)

Neuroscience
> *Movantik/Moventig* (naloxegol)
> *Seroquel* IR (quetiapine fumarate)
> *Seroquel XR* (quetiapine fumarate)
> *Vimovo*[4] (naproxen and esomeprazole magnesium)

Gastrointestinal
> *Losec/Prilosec* (omeprazole)
> *Nexium* (esomeprazole magnesium)

Full product information on page 208.

[1] Intra-nasal.
[2] Daiichi Sankyo holds rights to *Fluenz* Tetra/*FluMist* Quadrivalent in Japan.
[3] US rights only. AbbVie holds rights to *Synagis* outside the US.
[4] Licensed from Pozen. Divested US rights to Horizon Pharma USA, Inc. effective 22 November 2013.



$4.2bn

Product Sales of $4,156 million, down 18% (17% at CER)

MEDI8852, an investigational human mAb for the treatment of patients hospitalised with Type A strain influenza, received Fast Track Designation from the FDA in March 2016. The programme is on hold while a government or industry partner is sought to share late-stage development costs and commercialisation activities. Discussions with potential partners are ongoing.

Respiratory Synctial Virus (RSV) is a common seasonal virus and the most prevalent cause of lower respiratory tract infections among infants and young children. It is the leading cause of hospitalisations and admissions to paediatric intensive care units and leads to nearly 200,000 deaths globally in children under five years of age, with the majority of deaths occurring in developing countries. Since its initial approval in 1998, *Synagis* has become the global standard of care for RSV prevention and helps protect at risk babies globally against RSV. *Synagis* is approved in more than 80 countries and we continue to work with our worldwide partner, AbbVie, to protect vulnerable infants.

MEDI8897 is a novel extended half-life mAb for the prevention of serious respiratory disease caused by RSV in infants. It is designed to require dosing only once per RSV season – a potential breakthrough in RSV prophylaxis. In March 2017, we formed an alliance with Sanofi to develop and commercialise MEDI8897 jointly. MEDI8897 is currently in a Phase IIb clinical trial in preterm infants who are ineligible for *Synagis*, the current standard of care medicine.

Neuroscience

Alzheimer's disease (AD) is the most common form of dementia worldwide and is a major health challenge facing the world today. We are progressing lanabecestat (AZD3293), our BACE inhibitor, in collaboration with Lilly for the potential treatment of AD. A second interim analysis in the Phase III AMARANTH trial was completed in July 2017, and the independent data monitoring committee recommended the trial proceed with no modifications. In addition, we initiated a new extension trial of the AMARANTH study to further evaluate the benefit of earlier intervention in the course of the disease.

Building on the current partnership for lanabecestat, we are also now co-developing with Lilly MEDI1814, an antibody selective for amyloid-beta 42 (Aβ42), which is currently in Phase I development as a potential disease-modifying treatment for AD.

Current commercialised AstraZeneca neuroscience brands include *Seroquel* IR and *XR* (atypical antipsychotics), which have lost exclusivity in all major markets. The largest market for *Seroquel XR* was the US, where we lost exclusivity in November 2016. Two licensed generics were launched at that time followed by four additional generic entrants in May 2017 and another two in November 2017. Three additional generics received final FDA approval but have not yet entered the US market.

In June 2017, AstraZeneca announced an agreement with Grünenthal for the global rights to *Zomig* (zolmitriptan) outside Japan, including the US, where the rights were previously licensed to Impax Pharmaceuticals. In October 2017, we entered into an agreement with Sawai Pharmaceuticals Company Ltd for the rights to *Zomig* in Japan.

In September 2017, AstraZeneca announced an agreement with Aspen, under which Aspen acquired the residual rights to our remaining anaesthetic medicines. This builds on the agreement with Aspen in June 2016, under which they gained the exclusive commercialisation rights to the medicines in markets outside the US. The agreement covered seven established medicines – *Diprivan* (general anaesthesia), *EMLA* (topical anaesthetic) and five local anaesthetics (*Xylocaine/Xylocard/Xyloproct, Marcaine, Naropin, Carbocaine* and *Citanest*).

In the pain space, we are continuing to explore ways of bringing *Movantik/Moventig* to patients who need to manage the side effect of opioid induced constipation. In August 2017, the FDA updated the indication of *Movantik* to include adult patients with chronic pain related to prior cancer or its treatment who do not require frequent opioid dosage escalation.

Gastrointestinal

In 2017, use of *Nexium* continued to grow in a limited number of markets such as China and Japan. Demand for *Nexium* in China is expected to continue to grow over the next several years, based on broader geographic expansion as well as anticipated label expansions, and has the potential to become a top-selling medicine in its class, as in Japan. Patent protection for *Nexium* remains in Japan. For the rest of the world, *Nexium* is subject to generic competition. *Nexium* sales continue to decline under generic pressure in the US and EU.

Risk Overview

We face a diverse range of risks and uncertainties. The Board defines those risks which have a potential to have a material impact on our business or results of operations as our Principal Risks.

The Board has carried out a robust assessment of the Principal Risks facing the Group, including those that threaten its business model, future performance, solvency or liquidity. The table overleaf provides insight into the Principal Risks, outlining why effective management of these risks is important and relevant to the business, how we are managing them and which risks are rising, falling or have remained static during the past 12 months.

Our approach to risk management is designed to encourage clear decision making on which risks we take and how we manage these risks. Fundamental to this process is a sound understanding of every risk's potential strategic, commercial, financial, compliance, legal and reputational implications.

Further information on our key risk management and assurance processes can be found in Risk from pages 210 to 220 which also includes a description of circumstances under which principal and other risks and uncertainties might arise in the course of our business and their potential impact.

Managing risk

We work to ensure that we have effective risk management processes in place to support the delivery of our strategic priorities. This enables us to meet the expectations of our stakeholders and upholds our Values. We monitor our business activities and external and internal environments for new, emerging and changing risks to ensure that these are managed appropriately. The Board believes that existing processes provide it with adequate information on the risks and uncertainties we face. Details of these risks and the potential impacts on our business are contained on pages 210 to 220.

Risk management embedded in business processes

We strive to embed sound risk management in our strategy, planning, budgeting and performance management processes.

The Board defines the Group's risk appetite, enabling the Group, in both quantitative and qualitative terms, to judge the level of risk it is prepared to take in achieving its overall objectives. The Board expresses the acceptable levels of risk for the Group using three key dimensions. These are: (i) earnings and cash flow; (ii) return on investment; and (iii) ethics and reputation. Annually, the Group develops a detailed three-year bottom-up business plan and 10-year long-range projection to support the delivery of its strategy. The Board considers these in the context of the Group's risk appetite. Adjustments are made to the plan or risk appetite to ensure they remain aligned. Our risk management approach is aligned to our strategy and business planning processes. We cross-check financial risks and opportunities identified through the business planning process and integrate our findings into the overall risk management reporting. Line managers are accountable for identifying and managing risks and for delivering business objectives in accordance with the Group's risk appetite.

The SET is required by the Board to oversee and monitor the effectiveness of the risk management processes implemented by management. Within each SET function, leadership teams discuss the risks the business faces. Every year, we map these risks to AstraZeneca's risk 'taxonomy'. This process provides a Group-wide assessment for the Board, Audit Committee and SET. Quarterly, each SET function assesses changes to these risks, new and emerging risks, and mitigation plans. These are assimilated into a Group Risk Report for the Board, Audit Committee and SET. Supporting tools are in place to assist risk leaders and managers in managing, monitoring and planning for risk and we continue to work on developing our risk management standards and guidelines. Global Compliance, Finance and Internal Audit Services support SET by advising on policy and standard setting, monitoring and auditing, communication and training, as well as reporting on the adequacy of line management processes as they apply to risk management.

We have a business resilience framework which governs our ability to prevent or quickly adapt to situations while maintaining continuous business operations and safeguarding our people, processes and reputation. Within this we have business continuity plans to address situations in which specific risks have the potential to severely impact our business. These plans include training and crisis simulation activities for business managers.

More information about our Global Compliance function and the Code of Ethics can be found in the Corporate Governance Report page 97.

Viability statement

In accordance with provision C.2.2 of the 2014 UK Corporate Governance Code, the Board has determined that a three-year period to 31 December 2020 constitutes an appropriate period over which to provide its viability statement.

The Board considers annually and on a rolling basis, a three-year bottom-up detailed business plan. The Board also considers a 10-year long-range projection but, given the inherent uncertainty involved, believes that the three-year statement presents readers of the Annual Report with a reasonable degree of assurance while still providing a longer-term perspective.

The three-year detailed business plan captures risks to the sales and cost forecasts at a market and SET function level. The plan is used to perform central net debt and headroom profile analysis. This analysis contemplates a severe downside scenario reflecting the Principal Risks including market pricing and access, delivery of pipeline, unexpected loss of patent protection and the need to meet pension fund obligations. The Board has considered more stressed scenarios including restrictions on debt factoring and no access to capital markets to raise new debt. In each scenario the Group is able to rely on its committed credit facilities, leverage its cost base, reduce capital expenditure and take other cash management measures to mitigate the impacts and still have residual capacity to absorb further shocks. Based on the results of this analysis, the Directors have a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the three-year period of their assessment.

Brexit

On 23 June 2016, the UK held a referendum on the UK's continuing membership of the EU, the outcome of which was a decision for the UK to leave the EU (Brexit). The progress of current negotiations between the UK Government and the EU will likely determine the future terms of the UK's relationship with the EU, as well as to what extent the UK will be able to continue to benefit from the EU's single market and other arrangements. Until the Brexit negotiation process is completed, it is difficult to anticipate the potential impact on AstraZeneca's market share, sales, profitability and results of operations. The Group operates from a global footprint and retains flexibility to adapt to changing circumstances. The uncertainty during and after the period of negotiation is also expected to increase volatility and may have an economic impact, particularly in the UK and Eurozone. The Group has responded by engaging proactively with key external stakeholders and establishing a cross-functional internal steering committee to understand, assess, plan and implement operational actions that may be required. Some of these actions are being implemented based on assumptions rather than defined positions so that the Company is able to mitigate the risks arising from variable external outcomes. Currently, a number of areas for action have been identified including duplication of release testing and procedures for products based in the EU27 and the UK, transfer of regulatory licences, customs and duties set up for introduction or amendment of existing tariffs or processes and associated IT systems upgrades. The Board reviews the potential impact of Brexit as an integral part of its Principal Risks (as outlined overleaf) rather than as a stand-alone risk. As the process of Brexit evolves, the Board will continue to assess its impact.

Risk Overview
continued

Principal Risks

Strategy key

- Achieve Scientific Leadership
- Return to Growth
- Be a Great Place to Work
- Achieve Group Financial Targets

Trend key

- Increasing risk
- Decreasing risk
- Unchanged

Risk category and Principal Risks	Context/potential impact	Management actions	Trend versus prior year
Product pipeline and intellectual property			
Delivery of pipeline and new products	The development of any pharmaceutical product candidate is a complex, risky and lengthy process involving significant financial, R&D and other resources. A project may fail or be delayed at any stage of the process due to a number of factors, which could reduce our long-term growth, revenue and profit	> Prioritise and accelerate our pipeline > Strengthen pipeline through acquisitions, licensing and collaborations > Focus on innovative science in three main therapy areas	Unchanged
Meet quality, regulatory and ethical drug approval and disclosure requirements	Delays in regulatory reviews and approvals impact patients and market access, and can materially affect our business or financial results	> Quality management systems incorporating monitoring, training and assurance activities > Collaborating with regulatory bodies and advocacy groups to monitor and respond to changes in the regulatory environment, including revised process, timelines and guidance	Unchanged
Secure and protect product IP	Discovering and developing medicines requires a significant investment of resources. For this to be a viable investment, new medicines must be safeguarded from being copied for a reasonable amount of time. If we are not successful in obtaining, maintaining, defending or enforcing our IP rights, our revenues could be materially adversely affected Third parties may allege infringement of their IP, and may seek injunctions and/or damages, which, if ultimately awarded, could adversely impact our commercial and financial performance	> Active management of IP rights and IP litigation	Increasing risk Increased number of patent litigation suits alleging patent infringement filed against AstraZeneca by research-based pharmaceutical competitors. Details of material patent litigation matters can be found in Note 28 to the Financial Statements from page 182
Commercialisation			
Externally driven demand, pricing, access and competitive pressures	Operating in over 100 countries, we are subject to political, socioeconomic and financial factors both globally and in individual countries. There can be additional pressure from governments and other healthcare payers on medicine prices and sales in response to recessionary pressures, reducing our revenue, profits and cash flow	> Focus on Growth Platforms > Demonstrating value of medicines/health economics > Global footprint > Diversified portfolio	Increasing risk Global economic and political conditions placing downwards pressure on healthcare pricing and spending, and therefore on revenue
Quality and execution of commercial strategies	If commercialisation of a product does not succeed as anticipated, or its rate of sales growth is slower than anticipated, there is a risk that we may not be able to fully recoup the costs in launching it	> Focus on Growth Platforms > Accelerate and risk share through business development and strategic collaborations and alliances	Increasing risk The number of new product launches is increasing. Maximising the commercial potential of these new products underpins the success of our strategy and the delivery of our short- and medium-term targets
Supply chain and business execution			
Maintain supply of compliant, quality product	Delays or interruptions in supply can lead to recalls, product shortages, regulatory action, reputational harm and lost sales	> Establishment of new manufacturing facilities, creating capacity and technical capability to support new product launches, particularly biologics > Business continuity and resilience initiatives, disaster and data recovery and emergency response plans > Contingency plans including dual sourcing, multiple suppliers and stock levels > Quality management systems	Unchanged

Risk category and Principal Risks	Context/potential impact	Management actions	Trend versus prior year
Supply chain and business execution *continued*			
Information technology and data security and privacy	Significant disruption to our IT systems, cyber security incidents including breaches of data security, or failure to prepare for emerging EU Global Data Privacy Regulations (GDPR), could harm our reputation and materially affect our financial condition or results of operations. This could lead to regulatory penalties or non-compliance with laws and regulations	> Cyber security framework and dashboard > Privacy office established to oversee compliance with EU GDPR legislation > Disaster and data recovery plans > Strategies to secure critical systems and processes > Regular cybersecurity and privacy training for employees	↑ Growing multi-faceted cyber threat and introduction of new EU GDPR regulation effective May 2018
Delivery of gains from productivity initiatives	Inappropriately managed initiatives could lead to low employee engagement and reduced productivity, increased absence and attrition levels, or even industrial action. All could adversely impact the value of the initiative	> Appropriate project governance structure and oversight > Regular review of strategic initiatives by appropriate senior executive and Board level committees	↔
Attract, develop, engage and retain talented and capable employees at all levels	Failure to attract and retain highly-skilled personnel may weaken our succession plans for critical positions in the medium term. Failure to engage our employees could impact productivity and turnover. Both could adversely affect the achievement of our strategic objectives	> Targeted recruitment and retention strategies deployed > Support of staff impacted by Brexit > Development of our employees > Evolve our culture > Focus on simplification	↑ Increasingly competitive labour markets, with particular focus in specific locations and capability sets, and in the UK the added uncertainty created by Brexit, could impact the hiring and retention of staff in some business-critical areas
Legal, regulatory and compliance			
Safety and efficacy of marketed products	Patient safety is very important to us and we strive to minimise the risks and maximise the benefits of our medicines. Failure to do this could adversely impact our reputation, our business and the results of operations, and could lead to product liability claims	> Robust processes and systems in place to manage patient safety and efficacy trends as well as externally reported risks through regulatory agencies and other parties. This includes a comprehensive pharmacovigilance programme supplemented by close monitoring and review of adverse events	↑ The number of new products in our marketed portfolio is growing and is anticipated to increase further as our pipeline develops. Our ability to accurately assess the safety and efficacy of new products is inherently limited due to relatively short periods of product testing and relatively small clinical study patient samples
Defence of product, pricing and practices litigation	Investigations or legal proceedings could be costly, divert management attention or damage our reputation and demand for our products. Unfavourable resolutions could subject us to criminal liability, fines, penalties or other monetary or non-monetary remedies, adversely affecting our financial results	> Combined internal and external counsel management	↔
Meet regulatory and ethical expectations on commercial practices, including bribery and corruption, and scientific exchanges	Any failure to comply with applicable laws, rules and regulations, including bribery and corruption legislation, may result in civil and/or criminal legal proceedings and/or regulatory sanctions, fines or penalties, impacting financial results	> Strong ethical and compliance culture > Established compliance framework in place including annual Code of Ethics training for all employees > Focus on due diligence and oversight of third-party engagements	↑ Increasing government and regulatory scrutiny and evolving compliance challenges as complexity of business relationships increases
Economic and financial			
Achieve strategic plans and meet targets and expectations	Failure to successfully implement our business strategy may frustrate the achievement of our financial or other targets or expectations. This failure could, in turn, damage our reputation and materially affect our business, financial position or results of operations	> Focus on Growth Platforms and innovative science in three main therapy areas > Strengthen pipeline through acquisitions, licensing and collaborations > Appropriate capital structure and balance sheet > Portfolio-driven decision making process governed by senior executive-led committees	↑ Increasing challenge to balance long- and short-term investments as we navigate a period of loss of exclusivity on key brands while seeking to maximise the commercial potential of new product launches

Financial Review

In 2017, our financial performance reflected the launch of several new medicines, the strong performance of our Growth Platforms and the continued impact from patent expiries; most notably for *Crestor* and *Seroquel XR* in the US.

Overall, Total Revenue declined by 2% (CER: 2%) to $22.5 billion. Strong acceleration in our New Oncology medicines (driven by *Tagrisso*), supported by continued good growth in Emerging Markets, particularly in China, resulted in a 5% increase (CER: 6%) in our Growth Platform sales. Within Growth Platforms, New CVMD grew by 9% to $3.6 billion, with both *Farxiga* and *Brilinta* each exceeding annual Product Sales of $1 billion. In 2017, we realised $2.3 billion in Externalisation Revenue, including $1.2 billion received as part of our collaboration with MSD on *Lynparza* and selumetinib, and $0.6 billion in additional Ongoing Externalisation Revenue. However, the continued effect of patent expiries, including those impacting *Crestor* and *Seroquel XR* in the US and *Symbicort* in Europe, and pricing pressures, resulted in a decline in Total Revenue.

Our continued focus on cost discipline delivered a decrease of 2% (CER: 1%) in Reported R&D costs and a decrease of 4% (CER: 3%) in Core R&D costs, despite the rapid progression of the pipeline. Reported SG&A costs increased by 9% (CER: 10%) reflecting the impact of favourable fair value adjustments to long-term liabilities in the comparative period, and Core SG&A costs declined by 4% (CER: 3%) with the benefit of efficiency savings being only partially offset by the selective investment in launches of new products.

Reported other operating income was $1.8 billion in the year and included income from various disposal transactions, including the sale of the remaining rights to the anaesthetics portfolio to Aspen and the sale of rights to *Seloken* in Europe to Recordati.

The Reported tax rate of (29)% benefited from a favourable net adjustment of $0.6 billion to deferred tax, reflecting the recently reduced US Federal Income tax rate and non-taxable remeasurement of acquistion-related liabilities. Additionally, there was a $0.5 billion benefit to the Reported and Core tax rates resulting from a number of factors, including the reduction in tax provisions. The Core tax rate for the year was 14%.

Reported operating profit declined by 25% (CER: 28%) to $3.7 billion and Core operating profit increased by 2% (CER: stable) to $6.9 billion in the year. Reported EPS was $2.37 and Core EPS was $4.28.

We generated a net cash inflow from operating activities of $3.6 billion in the year and we maintain a strong, investment-grade credit rating. During the year, we issued new bonds totalling $2 billion and repaid $1.75 billion of bonds maturing. We ended the year with total long-term debt of $15.6 billion and net debt of $12.7 billion.

Marc Dunoyer
Chief Financial Officer

Next-generation DNA sequencing: Specifically, the process in which the polymerase creates a complementary strand of the hybridised fragments at the beginning of cluster generation

Contents

The purpose of this Financial Review is to provide a balanced and comprehensive analysis of the financial performance of the business during 2017, the cash flow and liquidity position of the business, the financial position as at the end of the year, and the main business factors and trends which could affect the future financial performance of the business.

Business background and results overview

The business background is covered in the Marketplace section from page 8, the Therapy Area Review from page 46 and the Geographical Review from page 221, and describes in detail the developments in both our products and the geographical regions in which we operate.

As described earlier in this Annual Report, sales of our products are directly influenced by medical need and are generally paid for by health insurance schemes or national healthcare budgets. Our operating results can be affected by a number of factors other than the delivery of operating plans and normal competition, such as:

- The risk of competition from generics following loss of patent protection or patent expiry of one of our products, or an 'at risk' launch by a competitor, or the launch of a competitive product in the same class as one of our products, with potential adverse effects on sales volumes and prices. Details of patent expiries for our key marketed products are included in Patent Expiries of Key Marketed Products from page 208.
- The adverse impact on pharmaceutical prices as a result of the macroeconomic and regulatory environment. For instance, in the US, political leadership has continued to consider drug pricing controls and transparency measures at national and local levels. In other parts of the world, governments have continued to implement and expand price control measures, including reference pricing.
- The timings of new product launches, which can be influenced by national regulators, the speed to market relative to competitor products and the risk that such new products do not succeed as anticipated, together with the rate of sales growth and costs following new product launches.
- Currency fluctuations. Our functional and reporting currency is the US dollar, but we have substantial exposures to other currencies, in particular the euro, Japanese yen, pound sterling, Chinese renminbi and Swedish krona.
- Macro factors such as greater demand from an ageing population and increasing requirements of Emerging Markets.

Further details of the risks faced by the business are given in Risk Overview from page 63 and Risk from page 210.

Over the longer term, the success of our R&D is crucial and we devote substantial resources to this area. The benefits of this investment are expected to emerge over the long term and there is considerable inherent uncertainty as to whether and when it will generate future products.

The most significant features of our financial results in 2017 are:

- Total Revenue down 2% to $22,465 million (CER: 2%). Product Sales were down 5% (CER: 5%) reflecting the continued impact of generic versions of *Crestor* in the US and pricing pressure in the US on *Symbicort*. Product Sales of *Crestor* and *Symbicort* in the US declined by 70% and 12% respectively.
- Revenues from our Growth Platforms increased by 5% (CER: 6%) and constituted 68% of our Total Revenue, with
  - Emerging Markets up 6% (CER: 8%) supported by China, up by 12% (CER: 15%).
  - Japan up 1% (CER: 4%) to $2,208 million reflecting growth of *Tagrisso* and *Forxiga.*
  - Respiratory down 1% (CER: 1%) reflecting a 12% fall in US Product Sales of *Symbicort.*
  - New Oncology Product Sales of $1,313 million, up 98% (CER: 98%) primarily due to the growth of *Tagrisso*, which reached sales of $955 million.
  - New CVMD grew by 9% (CER: 9%) following strong performances by *Farxiga* and *Brilinta*, which both exceeded $1 billion of sales in the year.
- Reported operating profit was down 25% (CER: 28%) to $3,677 million (2016: $4,902 million), including a $109 million charge in 2017, with 2016 having benefited from a $1,158 million credit, on revaluation of contingent consideration arising from business acquisitions.
- Core operating profit was up 2% (stable at CER) to $6,855 million (2016: $6,721 million).
- Reported operating margin of 16.4% of Total Revenue was down 4.9 percentage points (CER: 5.8 percentage points). Core operating margin was 30.5% of Total Revenue (2016: 29.2%).
- Reported EPS was down 14% (CER: 15%) to $2.37. Core EPS was $4.28, down 1% (CER: 2%).
- Dividends paid amounted to $3,519 million (2016: $3,561 million).

Measuring performance

The following measures are referred to in this Financial Review when reporting on our performance both in absolute terms, but more often in comparison to earlier years:

- Reported performance: Reported performance takes into account all the factors (including those which we cannot influence, such as currency exchange rates) that have affected the results of our business, as reflected in our Group Financial Statements prepared in accordance with IFRSs as adopted by the EU and as issued by the IASB (IFRS).
- Non-GAAP financial measures: Core financial measures, EBITDA, Net Debt, Ongoing Externalisation Revenue and Initial Externalisation Revenue are non-GAAP financial measures because they cannot be derived directly from the Group Consolidated Financial Statements. Management believes that these non-GAAP financial measures, when provided in combination with Reported results, will provide investors with helpful supplementary information to better understand the financial performance and position of the Group on a comparable basis from period to period. These non-GAAP financial measures are not a substitute for, or superior to, financial measures prepared in accordance with GAAP.
- Core financial measures are adjusted to exclude certain significant items, such as:
  - amortisation and impairment of intangible assets, including impairment reversals but excluding any charges relating to IT assets
  - charges and provisions related to our global restructuring programmes, which include charges that relate to the impact of our global restructuring programmes on our capitalised IT assets
  - other specified items, principally comprising acquisition-related costs and credits, which include fair value adjustments and the imputed finance charge relating to contingent consideration on business combinations, legal settlements and foreign-exchange gains and losses on certain non-structural intra-group loans. In determining the adjustments to arrive at the Core result, we use a set of established principles relating to the nature and materiality of individual items or groups of items, excluding, for example, events which (i) are outside the normal course of business, (ii) are incurred in a pattern that is unrelated to the trends in the underlying financial performance of our ongoing business, or (iii) are related to major acquisitions, to ensure that investors' ability to evaluate and analyse the underlying financial performance of our ongoing business is enhanced. See the 2017 Reconciliation of Reported results to Core results table on the opposite page for a reconciliation of Reported to Core performance, as well as further details of the adjustments.
- EBITDA is defined as Reported Profit Before Tax plus Net Finance Expense, results from Joint Ventures and Associates and charges for depreciation, amortisation and impairment. Reference should be made to the Reconciliation of Reported Profit Before Tax to EBITDA included on page 70 of this Annual Report.
- Net Debt is defined as interest-bearing loans and borrowings net of cash and cash equivalents, other investments and net derivative financial instruments. Reference should be made to the Net Debt reconciliation table included on page 74 of this Annual Report.
- Ongoing Externalisation Revenue is defined as Externalisation Revenue excluding Initial Externalisation Revenue (which is defined as Externalisation Revenue that is recognised at the date of completion of an agreement or transaction). Ongoing Externalisation Revenue comprises, among other items, royalties, milestones and profit sharing income. Reference should be made to the reconciliation of Externalisation Revenue to Ongoing Externalisation Revenue included on page 70 of this Annual Report.
- Constant exchange rate (CER) growth rates: These are also non-GAAP measures. These measures remove the effects of currency movements by retranslating the current year's performance at the previous year's average exchange rates and adjusting for other exchange effects, including hedging. A reconciliation of the Reported results adjusted for the impact of currency movements is provided in the 2017 Reported operating profit table on the page opposite.
- Gross and operating margin percentages: These measures set out the progression of key performance margins and illustrate the overall quality of the business.
- Prescription volumes and trends for key products: These measures can represent the real business growth and the progress of individual products better and more immediately than invoiced sales.

We strongly encourage readers of the Annual Report not to rely on any single financial measure but to review our financial statements, including the notes thereto, and our other publicly filed reports, carefully and in their entirety.

CER measures allow us to focus on the changes in revenues and expenses driven by volume, prices and cost levels relative to the prior period. Revenues and cost growth expressed in CER allows management to understand the true local movement in revenues and costs, in order to compare recent trends and relative return on investment. CER growth rates can be used to analyse revenues in a number of ways but, most often, we consider CER growth by products and groups of products, and by countries and regions. CER revenue growth can be further analysed into the impact of revenue volumes and selling price. Similarly, CER cost growth helps us to focus on the real local change in costs so that we can manage the cost base effectively.

We believe that disclosing non-GAAP financial and growth measures, in addition to our Reported financial information, enhances investors' ability to evaluate and analyse the financial performance of our ongoing business and the related key business drivers. The adjustments are made to our Reported financial information in order to show non-GAAP financial measures that illustrate clearly, on a year-on-year or period-by-period basis, the impact on our performance caused by factors such as changes in revenues and expenses driven by volume, prices and cost levels relative to such prior years or periods.

Readers of the Annual Report should note that Core results cannot be achieved without incurring the costs that the Core measures exclude such as:

- Amortisation of intangible assets which generally arise from business combinations and individual licence acquisitions. We adjust for these charges because their pattern of recognition is largely uncorrelated with the underlying performance of the business. However, a significant part of our revenues could not be generated without owning the associated acquired intangible assets.
- Charges and provisions related to our global restructuring programmes which can take place over a significant period of time, given the long life-cycle of our business. We adjust for these charges and provisions because they primarily reflect the financial impact of change to legacy arrangements, rather than the underlying performance of our ongoing business. However, our Core results do reflect the benefits of such restructuring initiatives.

It should also be noted that other costs excluded from our Core results, such as finance charges related to contingent consideration will recur in future years and other excluded items such as impairments and legal settlement costs, along with other acquisition-related costs, may recur in the future.

As shown in the 2017 Reconciliation of Reported results to Core results table to the right, our reconciliation of Reported financial information to Core financial measures includes a breakdown of the items for which our Reported financial information is adjusted, and a further breakdown by specific line item as such items are reflected in our Reported income statement. This illustrates the significant items that are excluded from Core financial measures and their impact on our Reported financial information, both as a whole and in respect of specific line items.

Management presents these results externally to meet investors' requirements for transparency and clarity. Core financial measures are also used internally in the management of our business performance, in our budgeting process and when determining compensation. As a result, Core financial measures merely allow investors to differentiate between different kinds of costs and they should not be used in isolation. You should also refer to our Reported financial information in the 2017 Reported operating profit table and our reconciliation of Core financial measures to Reported financial information in the Reconciliation of Reported results to Core results table, both to the right, for our discussion of comparative Actual growth measures that reflect all factors that affect our business.

Our determination of non-GAAP measures, and our presentation of them within this financial information, may differ from similarly titled non-GAAP measures of other companies.

The SET retains strategic management of the costs excluded from Reported financial information in arriving at Core financial measures, tracking their impact on Reported operating profit and EPS, with operational management being delegated on a case-by-case basis to ensure clear accountability and consistency for each cost category.

Results of operations – summary analysis of year ended 31 December 2017

2017 Reported operating profit

	2017			2016	Percentage of Total Revenue		Reported 2017 compared with Reported 2016	
	Reported $m	CER growth $m	Growth due to exchange effects $m	Reported $m	Reported 2017 %	Reported 2016 %	Actual growth %	CER growth[1] %
Product Sales	**20,152**	**(1,053)**	**(114)**	21,319			**(5)**	**(5)**
Externalisation Revenue	**2,313**	**639**	**(9)**	1,683			**37**	**38**
Total Revenue	**22,465**	**(414)**	**(123)**	23,002			**(2)**	**(2)**
Cost of sales	**(4,318)**	**(277)**	**85**	(4,126)	**(19.2)**	(17.9)	**5**	**7**
Gross profit	**18,147**	**(691)**	**(38)**	18,876	**80.8**	82.1	**(4)**	**(4)**
Distribution costs	**(310)**	**10**	**6**	(326)	**(1.4)**	(1.5)	**(5)**	**(3)**
Research and development expense	**(5,757)**	**68**	**65**	(5,890)	**(25.6)**	(25.6)	**(2)**	**(1)**
Selling, general and administrative costs	**(10,233)**	**(964)**	**144**	(9,413)	**(45.5)**	(40.9)	**9**	**10**
Other operating income and expense	**1,830**	**177**	**(2)**	1,655	**8.1**	7.2	**11**	**11**
Operating profit	**3,677**	**(1,400)**	**175**	4,902	**16.4**	21.3	**(25)**	**(28)**
Net finance expense	**(1,395)**			(1,317)				
Share of after tax losses of joint ventures and associates	**(55)**			(33)				
Profit before tax	**2,227**			3,552				
Taxation	**641**			(146)				
Profit for the period	**2,868**			3,406				
Basic earnings per share ($)	**2.37**			2.77				

[1] As detailed on page 68, CER growth is calculated using prior year actual results adjusted for certain exchange effects including hedging.

2017 Reconciliation of Reported results to Core results

	2017 Reported $m	Restructuring costs $m	Intangible amortisation and impairments $m	Diabetes Alliance $m	Other[3] $m	2017 Core[1] $m	Core 2017 compared with Core 2016[1] Actual growth %	Core 2017 compared with Core 2016[1] CER growth %
Gross profit	**18,147**	**181**	**149**	**–**	**–**	**18,477**	**(3)**	**(3)**
Product Sales gross margin %[2]	***79.6***					***81.2***		
Total Revenue gross margin %	***80.8***					***82.2***		
Distribution costs	**(310)**	**–**	**–**	**–**	**–**	**(310)**	**(5)**	**(3)**
Research and development expense	**(5,757)**	**201**	**144**	**–**	**–**	**(5,412)**	**(4)**	**(3)**
Selling, general and administrative costs	**(10,233)**	**347**	**1,469**	**641**	**(77)**	**(7,853)**	**(4)**	**(3)**
Other operating income and expense	**1,830**	**78**	**45**	**–**	**–**	**1,953**	**14**	**14**
Operating profit	**3,677**	**807**	**1,807**	**641**	**(77)**	**6,855**	**2**	**–**
Operating margin as a % of Total Revenue	***16.4***					***30.5***		
Net finance expense	**(1,395)**	**–**	**–**	**313**	**432**	**(650)**		
Taxation	**641**	**(169)**	**(453)**	**(198)**	**(681)**	**(860)**		
Basic earnings per share ($)	**2.37**	**0.50**	**1.07**	**0.60**	**(0.26)**	**4.28**		

[1] Each of the measures in the Core column in the above table is a non-GAAP measure.
[2] Gross margin as a % of Product Sales reflects gross profit derived from Product Sales, divided by Product Sales.
[3] See page 72 for further details of other adjustments.

Financial Review
continued

Total Revenue
Total Revenue for the year was down 2% (CER: 2%) to $22,465 million, comprising Product Sales of $20,152 million, down 5% (CER: 5%) and Externalisation Revenue of $2,313 million, an increase of 37% (CER: 38%).

By Geography
US Product Sales were down 16% to $6,169 million, reflecting continued competition from multiple generic *Crestor* medicines that entered the US market in 2016 as well as lower Product Sales of *Nexium* and *Symbicort*. In Europe, Product Sales declined by 6% (CER: 7%) to $4,753 million, partly driven by pricing pressures on *Symbicort* and the initial impact from generic competition on *Crestor*. Established Markets remained stable (CER: up 1%) to $3,081 million including an increase of 1% in Japan (CER: 4%) to $2,208 million. *Crestor* Product Sales in Japan declined 6% (CER: 4%) to $489 million as generic competition entered the market in the year. Product Sales in Emerging Markets increased by 6% (CER: 8%) to $6,149 million in 2017, with growth in China of 12% (CER: 15%) to $2,955 million.

By Product
Our largest selling products in 2017 were *Symbicort* ($2,803 million), *Crestor* ($2,365 million), *Nexium* ($1,952 million) and *Pulmicort* ($1,176 million). Global Product Sales of *Crestor* declined in the year by 30% (CER: 30%), which primarily reflected the impact of generic competition. *Symbicort* global Product Sales declined by 6% (CER: 6%) including a reduction of 12% in the US due to the impact of a competitive environment on net pricing. *Nexium* Product Sales were down 4% (CER: 3%), including a 10% decrease in the US, reflecting continued lower demand and inventory de-stocking as a result of the loss of exclusivity from 2015. Strong underlying volume growth in Emerging Markets drove an 11% global Product Sales increase in *Pulmicort* (CER: 12%), with 71% of Product Sales of the medicine coming from that region in the year. There were also strong performances from *Farxiga* and *Brilinta* each exceeding $1 billion of sales in the year.

Reconciliation of Reported Profit Before Tax to EBITDA

	2017 $m	2016 $m	Actual growth %	CER growth %
Reported Profit Before Tax	**2,227**	3,552	**(37)**	**(38)**
Net Finance Expense	**1,395**	1,317	**6**	**(4)**
Share of after tax losses of joint ventures and associates	**55**	33	**66**	**66**
Depreciation, Amortisation and Impairment	**3,036**	2,357	**29**	**29**
EBITDA	**6,713**	7,259	**(8)**	**(10)**

Growth Platforms

	2017 Product Sales $m	2016 Product Sales $m	Actual growth %	CER growth %
Emerging Markets	**6,149**	5,794	**6**	**8**
Respiratory	**4,706**	4,753	**(1)**	**(1)**
New CVMD[1]	**3,567**	3,266	**9**	**9**
Japan	**2,208**	2,184	**1**	**4**
New Oncology[2]	**1,313**	664	**98**	**98**
Total Growth Platform Product Sales[3]	**15,231**	14,491	**5**	**6**

[1] New Cardiovascular & Metabolic Diseases, incorporating *Brilinta* and Diabetes.
[2] New Oncology comprises *Lynparza*, *Iressa* (US), *Tagrisso*, *Imfinzi* and *Calquence*.
[3] Certain Product Sales are included in more than one Growth Platform. Total Growth Platform sales represents the net total sales for all Growth Platforms.

Externalisation Revenue

	2017 $m	2016 $m
Externalisation Revenue – Initial		
Lynparza/selumetinib (MSD)	**997**	–
Zoladex (TerSera)	**250**	–
MEDI8897 (Sanofi)	**127**	–
Global non-US anaesthetics portfolio (Aspen)	**–**	520
Plendil (CMS)	**–**	298
Toprol-XL (Aralez)	**–**	175
tralokinumab (LEO Pharma)	**–**	115
Other	**118**	219
Total Initial Externalisation Revenue	**1,492**	1,327
Ongoing Externalisation Revenue		
Lynparza/selumetinib (MSD) – option exercised	**250**	–
Global non-US anaesthetics portfolio (Aspen) – milestone	**150**	–
brodalumab (Valeant) – milestone	**130**	–
AZD3293 (Lilly) – milestone	**50**	100
Royalties	**108**	119
Other	**133**	137
Total Ongoing Externalisation Revenue	**821**	356
Total Externalisation Revenue	**2,313**	1,683

Growth Platforms

In the periods under review, our Growth Platforms included products in our three main therapy areas, and a focus on the Emerging Markets and Japan. Our Growth Platforms grew by 5% (CER: 6%), representing 68% of Total Revenue after removing the effect of certain Product Sales which are included in more than one Growth Platform.

Product Sales in Emerging Markets grew by 6% compared to 2016 (CER: 8%). Product Sales in China increased by 12% in 2017 (CER: 15%), representing 48% of Emerging Markets Product Sales in the year.

Product Sales of our Respiratory medicines declined by 1% (CER: 1%), reflecting pricing pressure in the US for *Symbicort.*

New CVMD grew by 9% with revenue of $3,567 million (2016: $3,266 million). Within New CVMD, sales of *Brilinta* in the year were $1,079 million, an increase of 29%. *Brilinta* sales in the US were up 46% to $509 million, as it remained the branded oral anti-platelet market leader.

Our Diabetes Product Sales were 3% higher than in 2016 (CER: 2%), driven primarily by growth of 29% (CER: 28%) on *Farxiga* with global sales of $1,074 million as it continued to be our largest-selling Diabetes medicine and SGLT2-class growth was supported by growing evidence around cardiovascular benefits, including data from the CVD-REAL study that was published in March 2017.

Japan Product Sales increased by 1% (CER: 4%) underpinned by the growth of *Tagrisso* and *Forxiga*, partly mitigated by the impact of the entry of generic competition to *Crestor* in the year.

Product Sales of New Oncology medicines were up to $1,313 million in 2017 (2016: $664 million), $955 million of which came from *Tagrisso* (2016: $423 million) which continues to be our leading medicine for the treatment of lung cancer and received regulatory approval in more than 60 countries by the end of 2017.

Externalisation Revenue

Details of our significant business development transactions which give rise to Externalisation Revenue are given below:

- In July 2017, the Group announced a global strategic oncology collaboration with MSD to co-develop and co-commercialise AstraZeneca's *Lynparza* for multiple cancer types. Under the collaboration, the companies will develop and commercialise *Lynparza* jointly, both as monotherapy and in combination with other potential medicines. AstraZeneca and MSD will also jointly develop and commercialise AstraZeneca's selumetinib, an oral, potent, selective inhibitor of MEK, part of the mitogen-activated protein kinase (MAPK) pathway, currently being developed for multiple indications including thyroid cancer. Independently, AstraZeneca and MSD will develop and commercialise *Lynparza* in combination with their respective PD-L1 and PD-1 medicines, *Imfinzi* and *Keytruda*. Under the terms of the agreement, the two companies will share the development and commercialisation costs for *Lynparza* and selumetinib monotherapy and non-PD-L1/PD-1 combination therapy opportunities. Gross profits from *Lynparza* and selumetinib Product Sales generated through monotherapies or combination therapies will be shared equally. MSD will fund all development and commercialisation costs of *Keytruda* in combination with *Lynparza* or selumetinib. AstraZeneca will fund all development and commercialisation costs of *Imfinzi* in combination with *Lynparza* or selumetinib. AstraZeneca will continue to manufacture *Lynparza* and selumetinib. As part of the agreement, MSD will pay AstraZeneca up to $8.5 billion in total consideration, including $1.6 billion upfront, $750 million for certain licence options and up to $6.2 billion contingent upon successful achievement of future regulatory and sales milestones. Of the upfront payment of $1.6 billion, $1.0 billion was recognised as Externalisation Revenue on deal completion, with the remaining $0.6 billion deferred to the balance sheet. AstraZeneca will book all Product Sales of *Lynparza* and selumetinib; gross profits due to MSD under the collaboration will be recorded under Cost of Sales. Subsequent to deal completion, MSD exercised the first licence option resulting in additional Externalisation Revenue of $250 million.
- In March 2017, AstraZeneca announced an agreement to develop and commercialise MEDI8897 jointly with Sanofi. Under the terms of the global agreement, Sanofi made an upfront payment of €120 million and will pay up to €495 million upon achievement of certain development and sales-related milestones. All costs and profits are shared equally.
- In March 2017, AstraZeneca entered into an agreement with TerSera for the commercial rights to *Zoladex* in the US and Canada. TerSera paid $250 million upon completion of the transaction. The Group will also receive sales-related income through milestones totalling up to $70 million, as well as recurring quarterly sales-based payments at mid-teen percent of Product Sales. AstraZeneca will also manufacture and supply *Zoladex* to TerSera, providing a further source of ongoing income from *Zoladex* in the US and Canada.
- In October 2016, the Group announced an agreement with Aralez for the rights to the branded and authorised generic (marketed by Par Pharmaceuticals) for *Toprol-XL* (metoprolol succinate) in the US. Aralez paid $175 million upon completion of the transaction. Aralez will also pay up to $48 million in milestone and sales-related payments, as well as mid-teen percentage royalties on Product Sales. AstraZeneca continues to manufacture and supply *Toprol-XL* and the authorised generic medicine to Aralez.
- In June 2016, AstraZeneca entered into a licence agreement with LEO Pharma for the global development and commercialisation of tralokinumab in dermatology indications. AstraZeneca will manufacture and supply tralokinumab to LEO Pharma. LEO Pharma has been granted an exclusive licence to the global dermatology rights to tralokinumab, which has completed Phase IIb for atopic dermatitis. LEO Pharma paid an upfront payment of $115 million for the exclusive licence. LEO Pharma will also pay up to $1 billion in commercially-related milestones and up to mid-teen tiered percentage royalties on Product Sales.
- In June 2016, AstraZeneca announced that it had entered into a commercialisation agreement with Aspen for rights to its global anaesthetics portfolio outside the US. The agreement covers seven established medicines – *Diprivan*, *EMLA* and five local anaesthetics (*Xylocaine*, *Marcaine*, *Naropin*, *Carbocaine* and *Citanest*). Under the terms of the agreement, Aspen acquired the commercialisation rights for an upfront consideration of $520 million. In July 2017, Aspen achieved the first Product Sales related payment milestone triggering a payment to AstraZeneca of $150 million. In September 2017, AstraZeneca announced that it had entered into an agreement with Aspen, under which Aspen acquired the residual rights to the seven established anaesthetics medicines. This new agreement completed in October 2017. Further details of the new arrangement are included on page 72.

- In February 2016, the Group entered into a licensing agreement with CMS for the commercialisation rights in China to *Plendil* (felodipine). Under the terms of the agreement, CMS paid AstraZeneca $310 million for the licence ($155 million in 2016 and a further $155 million in 2017).
- In September 2015, AstraZeneca announced that the Group had entered into a collaboration agreement with Valeant under which AstraZeneca granted an exclusive licence to Valeant to develop and commercialise brodalumab, except in Japan and certain other Asian countries. Valeant assumed all development costs associated with the regulatory approval for brodalumab. Under the terms of the agreement, Valeant made an upfront payment to AstraZeneca of $100 million in 2015. The agreement also included pre-launch milestones of up to $170 million and further sales related milestone payments of up to $175 million. After approval, profits would be shared between Valeant and AstraZeneca. In February 2017, the FDA approved brodalumab injection for the treatment of adult patients with moderate-to-severe plaque psoriasis who are candidates for systemic therapy or phototherapy and have failed to respond or lost response to other systemic therapies, triggering a milestone payment of $130 million to AstraZeneca.
- In April 2015, the Group signed a Collaboration and License Agreement with Celgene, a global leader in haematological cancers, to develop and commercialise *Imfinzi* across a range of blood cancers including non-hodgkin's lymphoma, myelodysplastic syndromes and multiple myeloma. Under the terms of the agreement, Celgene made an upfront payment of $450 million to AstraZeneca in relation to *Imfinzi*, which was recorded within Externalisation Revenue in 2015. Celgene lead on development across all clinical trials within the collaboration and took on all R&D costs until the end of 2015, after which they now take on 75% of these costs. Celgene will also be responsible for global commercialisation of approved treatments. AstraZeneca will manufacture and record all sales of *Imfinzi* and will pay a royalty to Celgene on worldwide sales in haematological indications. The royalty rate will start at 70% and will decrease to approximately half of the sales of *Imfinzi* in haematological indications over a period of four years.
- In March 2015, AstraZeneca announced a co-commercialisation agreement with Daiichi Sankyo, for *Movantik* in the US. The drug was launched on 31 March 2015. Under the agreement, Daiichi Sankyo paid a $200 million upfront fee, recognised as Externalisation Revenue in 2015, and will pay sales-related payments of up to $625 million. AstraZeneca will be responsible for manufacturing, will record all sales and will make sales-related commission payments to Daiichi Sankyo. Both companies will be jointly responsible for commercial activities.

As detailed in Risk from page 210, the development of any pharmaceutical product candidate is a complex and risky process that may fail at any stage in the development process due to a number of factors (including items such as failure to obtain regulatory approval, unfavourable data from key studies, adverse reaction to the product candidate or indications of other safety concerns). The potential future milestones quoted above are subject to these risks.

Gross margin, operating margin and earnings per share

Reported gross profit declined by 4% to $18,147 million. Core gross profit declined by 3% to $18,477 million. Externalisation Revenue of $2,313 million included $1,247 million received as part of the *Lynparza* and selumetinib collaboration with MSD. This was outweighed by the adverse impact of product mix, the increase of the manufacturing capacity for new medicines and the inclusion of the profit share on the aforementioned collaboration.

Reported R&D expense in the year declined by 2% (CER: 1%) to $5,757 million, as the Group continued to focus on resource prioritisation and cost discipline. Core R&D costs declined by 4% (CER: 3%) to $5,412 million. The movement compared to prior year was in line with indications made in 2017.

Reported SG&A costs increased by 9% (CER: 10%) to $10,233 million. The large movement in Reported SG&A is influenced by a favourable $999 million fair value adjustment recorded in 2016 related to the acquisition of BMS's share of the Global Diabetes Alliance, based on revised milestone probabilities, and revenue and royalty forecasts. Core SG&A decreased by 4% (CER: 3%) to $7,853 million. The decrease in Core SG&A reflects the indications made in 2017 and incorporated the necessity to invest in the launch programme, given the productivity and success of the pipeline.

Reported other operating income and expense in the year was up 11% at $1,830 million which includes $555 million from the sale of the remaining rights to the anaesthetics portfolio to Aspen, $301 million from the sale of rights to *Seloken* in Europe to Recordati, milestone receipts of $175 million from the disposal of *Zavicefta* to Pfizer, $165 million on the sale of the global rights to *Zomig* outside Japan to Grünenthal and $161 million of gains from the sale of short-term investments. As these elements of our income arose from product divestments, where we no longer retain a significant element of continued interest, in accordance with our Externalisation Revenue definition and the requirements of IFRS, proceeds from these divestments are recorded as other operating income.

Reported operating profit declined by 25% (CER: 28%) to $3,677 million in the year. The Reported operating margin declined by 4.9 percentage points (CER: 5.8 percentage points) to 16.4% of Total Revenue. The decrease was primarily driven by the movement in Reported SG&A costs as detailed above.

Core operating profit increased by 2% (stable at CER) in the year to $6,855 million. The Core operating profit margin increased by 1% to 31% of Total Revenue.

Reported net finance expense increased by 6% (CER: decreased 4%) in the year to $1,395 million (2016: $1,317 million) primarily reflecting a foreign exchange impact relating to the classification of certain non-structural intra-group loans. Reported net finance expense declined by 4% at CER, reflecting reduced levels of discount unwind on acquisition-related liabilities resulting from the diabetes alliance with BMS. Excluding the discount unwind on acquisition-related liabilities and adverse foreign exchange impact, Core net finance expense declined by 2% (CER: 4%) in the year to $650 million.

Profit before tax amounted to $2,227 million in 2017 (2016: $3,552 million). Pre-tax adjustments to arrive at Core profit before tax amounted to $3,923 million in 2017 (2016: $2,475 million), comprising $3,178 million adjustments to operating profit (2016: $1,819 million) and $745 million to net finance expense (2016: $656 million). EBITDA declined by 8% (CER: 10%) to $6,713 million.

Excluded from Core results were:

- Restructuring costs totalling $807 million (2016: $1,107 million), incurred as we continued to enhance productivity through the implementation of our restructuring initiatives.
- Amortisation totalling $1,319 million (2016: $1,247 million) relating to intangible assets, except those related to IT and to our acquisition of BMS's share of our Global Diabetes Alliance (which are separately detailed below). Further information on our intangible assets is contained in Note 9 to the Financial Statements from page 155.

- Intangible impairment charges of $488 million (2016: $44 million) excluding those related to IT. Further details relating to intangible asset impairments are included in Note 9 to the Financial Statements from page 155.
- Costs associated with our acquisition of BMS's share of our Global Diabetes Alliance in February 2014 amounting to $954 million (2016: credit of $238 million). As noted above, the 2016 net credit included a contingent consideration fair value decrease of $999 million reflecting lower than expected Diabetes portfolio revenues. The 2017 costs of $954 million included $426 million of amortisation charges, $313 million of interest charges relating to a discount unwind on contingent consideration arising on the acquisition and a fair value increase of $208 million.
- Net legal provisions and other charges of $355 million (2016: $315 million) include $305 million (2016: $267 million) discount unwind charges offset by $309 million (2016: $199 million) of net fair value adjustments relating to contingent consideration arising on our other business combinations as detailed in Note 18 to the Financial Statements from page 163. The net charge of $355 million also included legal charges relating to the Texas Attorney General and *Pulmicort Respules* proceedings. Further details of legal proceedings in which we are currently involved are contained within Note 28 to the Financial Statements from page 182.
- Also included in other charges are foreign exchange gains and losses of $125 million relating to the classification of certain non-structural intra-group loans and a one-off adjustment of $617 million reflecting adjustments to deferred tax in line with the recently reduced US federal income tax rate.

Reported EPS of $2.37 in the year represented a decline of 14% (CER: 15%). The performance was driven by a decline in Total Revenue and increased Reported SG&A costs, partly offset by a net tax benefit, continued progress on Reported R&D cost control and an increase in other operating income and expense. Core EPS in the year declined by 1% (CER: 2%) to $4.28.

The Reported tax credit for the year of $641 million (2016: charge of $146 million) consisted of a current tax charge of $378 million (2016: $370 million) and a credit arising from movements on deferred tax of $1,019 million (2016: $224 million). The current tax charge included a prior period current tax credit of $287 million (2016: $14 million).

The Reported tax rate for the year was (29)% (2016: 4%).

The Reported tax rate of (29)% in the year benefited from a favourable net adjustment of $617 million to deferred tax, reflecting the recently reduced US federal income tax rate and non-taxable remeasurements of acquisition-related liabilities. Additionally, there was a $472 million benefit to the Reported tax rate reflecting the favourable impact of UK Patent box profits, the recognition of previously unrecognised tax losses, and reductions in net tax provisions and provision to return adjustments arising on the expiry of statute of limitations or favourable progress of discussion with tax authorities. Absent these benefits, the Reported tax rate for the year would have been 22%.

The Core tax rate for the year was 14%. Excluding the $472 million benefit above, the Core tax rate would have been 22%.

The tax paid for the year was $454 million (20% of Reported profit before tax). The cash tax paid for the year was $1,095 million higher than the tax charge for the year as a result of certain items with no cash impact including $617 million deferred tax credit reflecting the reduction in US federal income tax rate, $402 million of other deferred tax credits, other net reductions in provisions for tax contingencies partially offset by refunds following a previously disclosed agreement of inter-government transfer pricing arrangements and other cash tax timing differences.

Total comprehensive income increased by $1,879 million from the prior year, resulting in a net income of $3,507 million for 2017. The decrease in profit for the year of $538 million was more than offset by an increase of $2,417 million in other comprehensive income. The increase in other comprehensive income arose principally from foreign exchange gains arising on consolidation of $536 million (2016: losses of $1,050 million) and foreign exchange gains arising on designating borrowings in net investment hedges of $505 million (2016: loss of $591 million), partially offset by losses recorded on the remeasurement of our defined benefit pension liability of $242 million (2016: loss of $575 million), due to a decrease in the discount rate applied to our pension liabilities reflecting an increase in corporate bond yields and other reference interest rate instruments.

Restructuring

Since 2007, we have undertaken significant efforts to restructure and reshape our business to improve our long-term competitiveness. The first phases of this restructuring, involving the integration of MedImmune, efficiencies within the R&D function and a reduction in SG&A costs, were completed in 2011. The targeted commercial restructuring announced in 2015 has also been successfully completed with a total cost of $151 million.

In 2016, we announced plans to advance our strategy through sharper focus by streamlining operations, primarily in Commercial and Manufacturing, to redeploy investment to key therapy areas, particularly Oncology. Restructuring costs associated with this programme were initially forecast to be $1.5 billion by the end of 2017 and generate net annualised benefits of $1.1 billion by 2018. The total cost estimate remains at $1.5 billion but this will be incurred by 2019, with benefits expected to be $1.3 billion in 2018 and $1.4 billion in 2019.

In addition to the 2016 plan, there are two further active programmes. The first is the continuation of the Phase 3 restructuring that was announced in 2012, superseded by Phase 4 in 2013 and subsequently expanded in 2014. This initiative consists of centralisation of our global R&D footprint into three strategic centres, transformation of the IT organisation, closure of a number of manufacturing facilities and other activities to simplify and streamline the organisation. At the time of the announcement, the Phase 4 programme was estimated to incur $3.2 billion of costs and deliver $1.1 billion of annualised benefits by 2016. By the end of 2017, the Phase 4 programme had incurred costs of $3.5 billion, creating headroom for investment in our pipeline and launch capability. The Phase 4 programme is now expected to complete in 2020 with total programme costs estimated to be $3.7 billion and annualised benefits of $1.2 billion.

The second step was initiated in 2016 and relates to multi-year transformation programmes within our G&A functions (principally Finance and HR) with anticipated costs by the end of 2018 of $270 million. We expect these transformation programmes to deliver annualised benefits of $100 million by 2018. By the end of 2017, these programmes had incurred costs of $225 million with total expected costs rising to $300 million.

The aggregate restructuring charge incurred in 2017 across all our restructuring programmes was $807 million (2016: $1,107 million), including the ongoing integration of BMS and other acquired assets. Final estimates for programme costs, benefits and headcount impact in all functions are subject to completion of the requisite consultation in the various areas.

Our priority as we undertake these restructuring initiatives is to work with our affected employees on the proposed changes, acting in accordance with relevant local consultation requirements and employment law.

Brexit planning

Following the UK referendum outcome of a decision in June 2016 for the UK to leave the EU, the progress of current negotiations between the UK Government and the EU will likely determine the future terms of the UK's relationship with the EU, as well as to what extent the UK will be able to continue to benefit from the EU's single market and its regulatory frameworks.

In response to this, the Company has taken the decision to implement certain actions to mitigate potential risk of disruption to the supply of medicines including, but not limited to, duplication of release testing and procedures for products based in the EU27 and the UK, transfer of regulatory licences, customs and duties set up for introduction or amendment of existing tariffs or processes and associated IT systems upgrades. The costs associated with this and certain other actions directly related to Brexit will be charged as restructuring with the majority of such costs expected to be cash costs. However, until the Brexit negotiation process is completed, it is difficult to anticipate the overall potential impact on AstraZeneca's operations and hence the final expected costs to be incurred.

Cash flow and liquidity – for the year ended 31 December 2017

Summary cash flows

	2017 $m	2016 $m	2015 $m
Net debt brought forward at 1 January	**(10,657)**	(7,762)	(3,223)
Profit before tax	**2,227**	3,552	3,069
Sum of changes in interest, depreciation, amortisation, impairment, and share of after tax losses on joint ventures and associates	**4,486**	3,707	3,897
Movement in working capital and short-term provisions	**(50)**	926	(49)
Tax paid	**(454)**	(412)	(1,354)
Interest paid	**(698)**	(677)	(496)
Gains on disposal of intangible assets	**(1,518)**	(1,301)	(961)
Fair value movements on contingent consideration arising from business combinations	**109**	(1,158)	(432)
Non-cash and other movements	**(524)**	(492)	(350)
Net cash available from operating activities	**3,578**	4,145	3,324
Disposal/(purchase) of intangibles (net)	**1,082**	559	(330)
Non-contingent payments on business combinations	**(1,450)**	(2,564)	(2,446)
Payment of contingent consideration from business combinations	**(434)**	(293)	(579)
Other capital expenditure (net)	**(1,319)**	(1,405)	(1,326)
Investments	**(2,121)**	(3,703)	(4,681)
Dividends	**(3,519)**	(3,561)	(3,486)
Share proceeds	**43**	47	43
Distributions	**(3,476)**	(3,514)	(3,443)
Other movements	**(3)**	177	261
Net debt carried forward at 31 December	**(12,679)**	(10,657)	(7,762)

Net debt reconciliation

	2017 $m	2016 $m	2015 $m
Cash and cash equivalents	**3,324**	5,018	6,240
Other investments[1]	**1,300**	898	613
Net derivative financial instruments	**504**	235	438
Cash, investments and derivatives	**5,128**	6,151	7,291
Overdraft and short-term borrowings	**(845)**	(451)	(849)
Finance leases	**(5)**	(93)	(95)
Current instalments of loans	**(1,397)**	(1,769)	–
Loans due after one year	**(15,560)**	(14,495)	(14,109)
Loans and borrowings	**(17,807)**	(16,808)	(15,053)
Net debt	**(12,679)**	(10,657)	(7,762)

[1] Other investments in 2017 includes $70 million (2016: $14 million) of non-current Treasury investments.

Bonds issued in 2017 and 2016

	Repayment dates	Face value of bond $m	Net book value of bond at 31 December 2017 $m
Bonds issued in 2017:			
2.375% USD bond	2022	1,000	**992**
Floating rate USD notes	2022	250	**249**
3.125% USD bond	2027	750	**742**
Total 2017		2,000	**1,983**
Bonds issued in 2016:			
0.25% Euro bond	2021	566	**594**
0.75% Euro bond	2024	1,016	**1,067**
1.25% Euro bond	2028	897	**941**
Total 2016		2,479	**2,602**

Net cash generated from operating activities was $3,578 million in the year ended 31 December 2017, compared with $4,145 million in 2016. The 2016 operating cash inflows benefited from a $926 million improvement in working capital and short-term provisions that reflected improved cash management performance compared to prior years.

Net investment cash outflows were $2,121 million (2016: $3,703 million).

2017 investment cash outflows included a $1,450 million payment to the shareholders of Acerta Pharma, a contractual obligation triggered by the first regulatory approval for *Calquence,* following on from our majority investment in Acerta Pharma in 2016. 2016 cash outflows included $2,383 million relating to the majority investment in Acerta Pharma. Investment cash outflows also include $434 million (2016: $293 million) of payments against contingent consideration arising on business combinations and $294 million (2016: $868 million) for the purchase of other intangible assets. The comparative period in 2016 included $561 million on the purchase of respiratory assets from Takeda.

Investment cash inflows include $1,376 million (2016: $1,427 million) from the sale of intangible assets, including $300 million from the disposal of EU rights for *Seloken*, $200 million from the divestment of *Zomig* rights outside Japan, $200 million relating to the sale of our remaining anaesthetic portfolio to Aspen and $175 million regarding the *Zavicefta* divestment. The comparative period in 2016 included $552 million for the disposal of our late-stage antibiotics assets, $330 million for the sale of our rights to *Rhinocort Aqua* outside the US and $250 million on the out-licence of MEDI-2070.

Net cash distributions to shareholders were $3,476 million (2016: $3,514 million), including dividends of $3,519 million (2016: $3,561 million). Proceeds from the issue of shares on the exercise of share options amounted to $43 million (2016: $47 million).

In June 2017, we issued $2.0 billion of bonds in the dollar debt capital markets with maturities of 5 and 10 years. We also repaid a $1.75 billion 5.9% bond, which matured in September 2017.

At 31 December 2017, outstanding gross debt (interest-bearing loans and borrowings) was $17,807 million (2016: $16,808 million). Of the gross debt outstanding at 31 December 2017, $2,247 million is due within one year (2016: $2,307 million). Net debt at 31 December 2017 was $12,679 million, compared to $10,657 million at the beginning of the year, as a result of the cash flows as described above.

Financial position – 31 December 2017

All data in this section is on a Reported basis.

Summary statement of financial position

	2017 $m	Movement $m	2016 $m	Movement $m	2015 $m
Property, plant and equipment	**7,615**	**767**	6,848	435	6,413
Goodwill and intangible assets	**38,013**	**(1,231)**	39,244	4,798	34,446
Inventories	**3,035**	**701**	2,334	191	2,143
Trade and other receivables	**5,856**	**382**	5,474	(2,055)	7,529
Trade and other payables	**(19,481)**	**493**	(19,974)	(854)	(19,120)
Provisions	**(1,468)**	**(50)**	(1,418)	(176)	(1,242)
Net income tax payable	**(826)**	**128**	(954)	142	(1,096)
Net deferred tax liabilities	**(1,806)**	**1,048**	(2,854)	(1,483)	(1,371)
Retirement benefit obligations	**(2,583)**	**(397)**	(2,186)	(212)	(1,974)
Non-current other investments (excluding Treasury investments of $70m in 2017 (2016: $14m))	**863**	**150**	713	255	458
Investment in associates and joint ventures	**103**	**4**	99	14	85
Net debt	**(12,679)**	**(2,022)**	(10,657)	(2,895)	(7,762)
Net assets	**16,642**	**(27)**	16,669	(1,840)	18,509

Business combinations

In 2016, we acquired a majority equity stake in Acerta Pharma. In 2015, we completed the acquisition of ZS Pharma. No business acquisitions were made in 2017. Further details of our business combinations are contained in Note 25 to the Financial Statements from page 173.

Property, plant and equipment

Property, plant and equipment increased by $767 million to $7,615 million. Additions of $1,311 million (2016: $1,449 million) were offset by depreciation of $624 million (2016: $609 million), impairments of $78 million (2016: $2 million), exchange adjustments of $352 million (2016: $329 million) and disposals and other movements of $194 million (2016: $74 million).

Goodwill and intangible assets

Our goodwill of $11,825 million (2016: $11,658 million) principally arose on the acquisition of MedImmune in 2007, the restructuring of our US joint venture with MSD in 1998 and the acquisition of BMS's share of the Global Diabetes Alliance.

Intangible assets amounted to $26,188 million at 31 December 2017 (2016: $27,586 million). Intangible asset additions were $441 million in 2017 (2016: $8,205 million). 2016 additions included product rights acquired from the majority equity investment of Acerta Pharma of $7,307 million. Amortisation in the year was $1,829 million (2016: $1,701 million). Impairment charges in the year amounted to $491 million (2016: $45 million) including impairments on launched products *Byetta, FluMist* and *Movantik* as a consequence of revised market share assumptions and, for *FluMist,* the expected timing of renewed recommendation in the US market. Disposals of intangible assets totalled $307 million in the year (2016: $331 million).

Further details of our additions to intangible assets, and impairments recorded, are included in Note 9 to the Financial Statements from page 155.

Receivables, payables and provisions

Trade and other receivables increased by $382 million with trade receivables increasing by $219 million to $2,802 million principally as a result of higher invoiced sales in China. Non-current other receivables decreased by $54 million to $847 million.

Trade and other payables decreased by $493 million in 2017 to $19,481 million. The movement included a $1,450 million payment of deferred consideration on the majority investment in Acerta Pharma, partially offset by amounts deferred from the upfront receipt of $1.6 billion from MSD on the *Lynparza* and selumetinib collaboration to reflect future commitments and the effects of foreign exchange retranslation.

The increase in provisions of $50 million in 2017 included a $281 million increase to charges on legal provisions and reductions to severance provisions of $129 million. Further details of the charges made against provisions are contained in Notes 19 and 28 to the Financial Statements on page 164, and 182 to 188, respectively.

Contingent consideration

The majority of our business acquisitions in recent years have included elements of consideration that are contingent on future development and/or sales milestones, with both the Diabetes and Respiratory acquisitions in 2014 also including royalty payments linked to future revenues. The acquisitions of ZS Pharma in 2015 and Acerta Pharma in 2016 had no contingent consideration element and there were no relevant acquisitions in 2017.

Our agreement with BMS provides for $0.6 billion in milestones and various sales-related royalty payments up until 2025. Our transaction with Almirall includes further payments of up to $0.9 billion for future development, launch, and sales-related milestones and various other sales-related milestone payments, and sales-related royalty payments as detailed in Note 18 to the Financial Statements on page 163. All these future payments are treated as contingent consideration liabilities, and are fair valued using decision-tree analyses, with key assumptions, including the probability of success, the potential for delays and the expected levels of future revenues. The fair value is updated at each reporting date to reflect our latest estimate of the probabilities of these key assumptions. Given the long-term nature of the liabilities, the fair value calculation includes the discounting of future potential payments to their present value using discount rates appropriate to the period over which payments are likely to be made. Over time, as the target date of a consideration payment approaches, the discount in absolute terms of such future potential payment to its present value decreases. Therefore, in each period we take a corresponding charge reflecting the passage of time. We refer to this charge as 'discount unwind'.

Both the discount unwind and any movements of the fair value of the underlying future payments can result in significant income statement movements. As detailed in the Results of operations section above, these movements are treated as non-Core items in our income statement analysis. In 2017, we recorded an interest charge of $402 million on the discount unwind on contingent consideration arising on our business combinations, and a net fair value increase on contingent consideration of $109 million (which resulted in a charge to our income statement for the same amount) driven, principally, by revised forecasts for revenues for our Diabetes franchise. At 31 December 2017, our contingent consideration liability was $5,534 million (2016: $5,457 million) with the movements of the balance detailed in the table below.

Tax payable and receivable

Net income tax payable has decreased by $128 million to $826 million, principally due to the revision to the presentation of interest on tax contingencies, as described in the Group Accounting Policies section of the Financial Statements on page 139. The tax receivable balance of $524 million (2016: $426 million) comprises tax owing to us from certain governments expected to be received on settlements of transfer pricing audits and disputes of $275 million (see Note 28 to the Financial Statements from page 182) and cash tax timing differences of $249 million.

Net deferred tax liabilities decreased by $1,048 million in the year reflecting adjustments to deferred taxes in line with the recently reduced US federal income tax rate from 35% to 21% and recognition of previously unrecognised deferred tax assets. Additional information on the movement in deferred tax balances is contained in Note 4 to the Financial Statements from page 148.

Contingent consideration arising on business combinations

	2017			2016		
	Acquisition of BMS's share of Diabetes Alliance $m	**Other business combinations $m**	**Total 2017 $m**	Acquisition of BMS's share of Diabetes Alliance $m	Other business combinations $m	Total 2016 $m
At 1 January	**4,240**	**1,217**	**5,457**	5,092	1,319	6,411
Settlements	**(284)**	**(150)**	**(434)**	(242)	(51)	(293)
Fair value adjustments	**208**	**(99)**	**109**	(999)	(159)	(1,158)
Discount unwind	**313**	**89**	**402**	389	108	497
At 31 December	**4,477**	**1,057**	**5,534**	4,240	1,217	5,457

Payments due by period

	Less than 1 year $m	**1-3 years $m**	**3-5 years $m**	**Over 5 years $m**	**2017 Total $m**	2016 Total $m
Bank loans and other borrowings[1]	**2,844**	**3,708**	**3,752**	**15,575**	**25,879**	24,889
Finance leases	**5**	**–**	**–**	**–**	**5**	95
Operating leases	**112**	**178**	**126**	**107**	**523**	441
Contracted capital expenditure	**570**	**–**	**–**	**–**	**570**	629
Total	**3,531**	**3,886**	**3,878**	**15,682**	**26,977**	26,054

[1] Bank loans and other borrowings include interest charges payable in the period, as detailed in Note 26 to the Financial Statements on page 175.

Retirement benefit obligations

Approximately 92% of our total retirement benefit obligations (or around 79% of net obligations) are concentrated in the UK, the US and Sweden. Net retirement benefit obligations increased by $397 million in 2017 (2016: increase of $212 million) to $2,583 million. Net re-measurement adjustments of $242 million primarily in the UK, Sweden and Germany arose principally from reductions in discount rate assumptions driven by falls in long-term bond yields. A negative $219 million impact of exchange rate movements also arose in the year as the US dollar weakened against pound sterling, euro and Swedish krona increasing liability obligations in US dollar terms. These adverse movements were mitigated by employer contributions to the pension scheme of $157 million. Benefits paid amounted to $581 million (2016: $500 million).

Over the course of 2017, the UK Actuarial Valuation (as at 31 March 2016) was finalised with the UK Trustee and was accepted by the pensions regulator. In recent years, we have undertaken several initiatives to reduce our net pension obligation exposure. For the UK defined benefit pension scheme, which is our largest defined benefit scheme, these initiatives have included agreeing funding principles for cash contributions to be paid into the UK pension scheme to target a level of assets in excess of the current expected cost of providing benefits, and, in 2010, amendments to the scheme to freeze pensionable pay at 30 June 2010 levels. Furthermore, liability management exercises have been carried out including the completion of a Pensions Increase Exchange exercise in 2017 and other exercises are planned.

In the US we realised a credit of $92 million from the closure of both the qualified and non-qualified US pension plans to future accrual in December 2017 and from a change in eligibility criteria for the US post-retirement welfare plan. The legacy defined benefit pension plan participants are eligible for defined contribution benefits from January 2018.

From January 2017, for the defined benefit plans in the UK, the US, Sweden and Germany, the Group moved to a multiple discount rate approach. This has resulted in separate discount rates being utilised to value defined benefit obligations, service cost and interest cost. The change has impacted on the measurement of the service and interest cost items in 2017.

Further details of our pension schemes are included in Note 20 to the Financial Statements from page 164.

Commitments and contingencies

We have commitments and contingencies which are accounted for in accordance with the accounting policies described in the Financial Statements in the Group Accounting Policies section from page 139. We also have taxation contingencies. These are described in the Taxation section in the Critical accounting policies and estimates section on page 82 and in Note 28 to the Financial Statements from page 182.

Off-balance sheet transactions and commitments

We have no off-balance sheet arrangements and our derivative activities are non-speculative. The table on page 76 sets out our minimum contractual obligations at the year end.

Research and development collaboration payments

Details of future potential R&D collaboration payments are also included in Note 28 to the Financial Statements on page 182. As detailed in Note 28, payments to our collaboration partners may not become payable due to the inherent uncertainty in achieving the development and revenue milestones linked to the future payments. We may enter into further collaboration projects in the future that may include milestone payments and, therefore, as certain milestone payments fail to crystallise due to, for example, development not proceeding, they may be replaced by potential payments under new collaborations.

Investments, divestments and capital expenditure

We have completed over 250 major or strategically important business development transactions over the past three years, two of which were accounted for as business acquisitions under IFRS 3 'Business Combinations', being the majority investment in Acerta Pharma in 2016 and the acquisition of ZS Pharma in 2015.

In addition to the business development transactions detailed under Externalisation Revenue from page 71 of this Financial Review, the following significant collaborations remain in the development phase:

> In April 2015, we entered into two oncology agreements with Innate Pharma: firstly, a licence which provides us with exclusive global rights to co-develop and commercialise IPH2201 in combination with *Imfinzi* and, secondly, an option to license exclusive global rights to co-develop and commercialise IPH2201 in monotherapy and other combinations in certain treatment areas. Under the terms of the combination licence, we assumed exclusive global rights to research, develop and commercialise IPH2201 in combination with *Imfinzi*. We jointly fund Phase II studies with Innate Pharma and we lead the execution of these studies. Under the terms of the agreements, we made an initial payment to Innate Pharma of $250 million, which included the consideration for exclusive global rights to co-develop and commercialise IPH2201 in combination with *Imfinzi*, as well as access to IPH2201 in monotherapy and other combinations in certain treatment areas. The agreement includes a Phase III initiation milestone of $100 million, as well as additional regulatory and sales-related milestones. We record all sales and will pay Innate Pharma double digit royalties on net sales. The arrangement includes the right for Innate Pharma to co-promote in Europe for a 50% profit share in the territory.
> In July 2013, we entered into a strategic collaboration with FibroGen to develop and commercialise roxadustat (FG-4592), a first-in-class oral compound in late-stage development for the treatment of anaemia associated with chronic kidney disease and end-stage renal disease (ESRD). This broad collaboration focuses on the US, China and all major markets excluding Japan, Europe, the CIS, the Middle East and South Africa, which are covered by an existing agreement between FibroGen and Astellas. Under the arrangement, we agreed to pay FibroGen upfront and subsequent non-contingent payments totalling $350 million, as well as potential development-related milestone payments of up to $465 million, and potential future sales-related milestone payments, in addition to tiered royalty payments on future sales of roxadustat in the low 20% range. Additional development milestones will be payable for any subsequent indications which the companies choose to pursue. We will be responsible for the US commercialisation of roxadustat, with FibroGen undertaking specified promotional activities in the ESRD segment in this market. The companies will also co-commercialise roxadustat in China where FibroGen will be responsible for clinical trials, regulatory matters, manufacturing and medical affairs, and we will oversee promotional activities and commercial distribution.
> In March 2013, we signed an exclusive agreement with Moderna to discover, develop and commercialise pioneering medicines based on *messenger RNA Therapeutics* for the treatment of serious cardiovascular, metabolic and renal diseases, as well as cancer. Under the terms of the agreement, we made an upfront payment of $240 million. We will have exclusive access to select any

target of our choice in cardiometabolic and renal diseases, as well as selected targets in oncology, over a period of up to five years for subsequent development of *messenger RNA Therapeutics*. In addition, Moderna is entitled to an additional $180 million for the achievement of three technical milestones. Through this agreement, we have the option to select up to 40 drug products for clinical development and Moderna will be entitled to development and commercial milestone payments as well as royalties on drug sales. We will lead the pre-clinical, clinical development and commercialisation of therapeutics resulting from the agreement and Moderna will be responsible for designing and manufacturing the *messenger RNA Therapeutics* against selected targets. We are currently progressing 19 projects across CVMD and Oncology. Utilising both companies' expertise, significant progress has also been made to the technology platform, with the focus on formulation, safety, and drug metabolism and pharmacokinetics.

We determine the above business development transactions to be significant using a range of factors. We look at the specific circumstances of the individual arrangement and apply several quantitative and qualitative criteria. Because we consider business development transactions to be an extension of our R&D strategy, the expected total value of development payments under the transaction and its proportion of our annual R&D spend, both of which are proxies for overall R&D effort and cost, are important elements of the significance determination. Other quantitative criteria we apply include, without limitation, expected levels of future sales, the possible value of milestone payments and the resources used for commercialisation activities (for example, the number of staff). Qualitative factors we consider include, without limitation, new market developments, new territories, new areas of research and strategic implications.

Capitalisation and shareholder return

Dividends for 2017

	$	Pence	SEK	Payment date
First interim dividend	0.90	68.9	7.40	11 September 2017
Second interim dividend	1.90	133.6	14.97	19 March 2018
Total	2.80	202.5	22.37	

Capitalisation

The total number of shares in issue at 31 December 2017 was 1,266 million (2016: 1,265 million). 1.0 million Ordinary Shares were issued upon share option exercises for a total of $43 million. Shareholders' equity increased by $106 million to $14,960 million at the year end. Non-controlling interests were $1,682 million (2016: $1,815 million), with the decrease in the year as a result of the losses attributable to shareholders of the non-controlling interest in Acerta Pharma.

Dividend and share repurchases

The Board has recommended a second interim dividend of $1.90 (133.6 pence, 14.97 SEK) to be paid on 19 March 2018. This brings the full-year dividend to $2.80 (202.5 pence, 22.37 SEK). Against Core earnings per share the Group had a dividend cover ratio of 1.5 in 2017 (2016:1.5).

This dividend is consistent with the progressive dividend policy, by which the Board intends to maintain or grow the dividend each year.

The Board regularly reviews its distribution policy and its overall financial strategy to continue to strike a balance between the interests of the business, our financial creditors and our shareholders. Having regard for business investment, funding the progressive dividend policy and meeting our debt service obligations, the Board currently believes it is appropriate to continue the suspension of the share repurchase programme which was announced in October 2012.

Future prospects

As outlined earlier in this Annual Report, our strategy is focused on innovation, returning to growth and building a sustainable, durable and more profitable business. In support of this, we made certain choices around our three strategic priorities.

As we experience a period of patent expiries:

- Our immediate priorities are to continue to drive Product Sales of our on-market medicines through investment in our Growth Platforms and our portfolio of legacy medicines outside of the Growth Platforms. The Growth Platforms include products in our three main therapy areas, and a focus on the Emerging Markets and Japan. We are also pursuing business development and investment in R&D. We have already accelerated a number of projects and progressed them into Phase III development.
- Our late-stage pipeline is progressing ahead of plans. Our science-driven, collaborative culture is driving increased R&D productivity.
- Our long-term aspiration, in line with our strategic ambition, is to achieve scientific leadership and sustainable growth.

Full Year 2018: additional commentary

In 2018, the sum of Externalisation Revenue and Other operating income and expense is anticipated to reduce versus 2017. Core R&D costs in 2018 are expected to be in the range of a low single-digit percentage decline to stable. This expectation includes the favourable impact of development costs from the MSD collaboration. The Group maintains its focus on reducing operational and infrastructure costs. Total Core SG&A costs in 2018, however, are expected to increase by a low to mid single-digit percentage, wholly reflecting targeted support for launches and potential launches, including *Fasenra* in severe, uncontrolled asthma and *Imfinzi* in locally, unresectable lung cancer. A Core tax rate of 16 to 20% is expected for 2018.

These targets represent management's current estimates and are subject to change. Please see the Cautionary statement regarding forward-looking statements from page 240.

Financial risk management

Financial risk management policies

Insurance

Our risk management processes are described in Risk Overview from page 63. These processes enable us to identify risks that can be partly or entirely mitigated through the use of insurance. We negotiate the best available premium rates with insurance providers on the basis of our extensive risk management procedures. We focus our insurance resources on the most critical areas, or where there is a legal requirement, and where we can get best value for money. Risks to which we pay particular attention include business interruption, directors' and officers' liability, and property damage. In order to contain insurance costs, as of February 2006, we adjusted our product liability coverage profile, accepting uninsured exposure above $100 million.

Taxation

Our approach to managing tax risk is integrated with our broader business risk management and compliance framework. Our approach is to manage tax risks and tax costs in a manner consistent with applicable regulatory requirements and with shareholders' best long-term interests, taking into account operational, economic and reputational factors. We manage tax risks in the context of substantive business transactions.

Treasury

The principal financial risks to which we are exposed are those arising from liquidity, interest rate, foreign currency and credit. We have a centralised treasury function to manage these risks in accordance with Board-approved policies. Specifically, liquidity risk is managed through maintaining access to a number of sources of funding to meet anticipated funding requirements, including committed bank facilities and cash resources.

Interest rate risk is managed through maintaining a debt portfolio that is weighted towards fixed rates of interest. Accordingly, our net interest charge is not significantly affected by movements in floating rates of interest. We monitor the impact of currency on a portfolio basis (to recognise correlation effect), and may hedge to protect against significant adverse impacts on cash flow over the short to medium term. We hedge the currency exposure that arises between the booking and settlement dates on non-local currency purchases and sales by subsidiaries and the external dividend. Significant intra-group loans that give rise to foreign exchange movements are also hedged.

Credit risk is managed through setting and monitoring credit limits appropriate for the assessed risk of the counterparty.

Our capital and risk management objectives and policies are described in further detail in Note 26 to the Financial Statements from page 175 and in Risk Overview from page 63. Sensitivity analysis of the Group's exposure to exchange rate and interest rate movements is also detailed in Note 26 to the Financial Statements from page 175.

Critical accounting policies and estimates

Our Financial Statements are prepared in accordance with IFRSs as adopted by the EU (adopted IFRS) and as issued by the IASB, and the accounting policies employed are set out in the Group Accounting Policies section in the Financial Statements from page 139. In applying these policies, we make estimates and assumptions that affect the Reported amounts of assets and liabilities and disclosure of contingent assets and liabilities. The actual outcome could differ from those estimates. Some of these policies require a high level of judgement because the areas are especially subjective or complex. We believe that the most critical accounting policies and significant areas of judgement and estimation are in:

- revenue recognition
- research and development
- business combinations and contingent consideration
- impairment testing of goodwill and intangible assets
- litigation
- post-retirement benefits
- taxation.

Revenue recognition

Product Sales are recorded at the invoiced amount (excluding inter-company sales and value-added taxes) less movements in estimated accruals for rebates and chargebacks given to managed-care and other customers and product returns – a particular feature in the US. It is the Group's policy to offer a credit note for all returns and to destroy all returned stock in all markets. Cash discounts for prompt payment are also deducted from sales. Revenue is recognised when the significant risks and rewards of ownership have been transferred to a third party, which is usually when title passes to the customer, either on shipment or on receipt of goods by the customer depending on local trading terms.

Rebates, chargebacks and returns in the US

When invoicing Product Sales in the US, we estimate the rebates and chargebacks that we expect to pay. These rebates typically arise from sales contracts with third-party managed-care organisations, hospitals, long-term care facilities, group purchasing organisations and various federal or state programmes (Medicaid contracts, supplemental rebates etc). They can be classified as follows:

- Chargebacks, where we enter into arrangements under which certain parties, typically hospitals, long-term care facilities, group purchasing organisations, the Department of Veterans Affairs, Public Health Service Covered Entities and the Department of Defense, are able to buy products from wholesalers at the lower prices we have contracted with them. The chargeback is the difference between the price we invoice to the wholesaler and the contracted price charged by the wholesaler to the other party. Chargebacks are credited directly to the wholesalers.
- Regulatory, including Medicaid and other federal and state programmes, where we pay rebates based on the specific terms of agreements with the US Department of Health and Human Services and with individual states, which include product usage and information on best prices and average market prices benchmarks.
- Contractual, under which entities such as third-party managed-care organisations are entitled to rebates depending on specified performance provisions, which vary from contract to contract.

The effects of these deductions on our US pharmaceuticals revenue and the movements on US pharmaceuticals revenue provisions are set out overleaf.

Accrual assumptions are built up on a product-by-product and customer-by-customer basis, taking into account specific contract provisions coupled with expected performance, and are then aggregated into a weighted average rebate accrual rate for each of our products. Accrual rates are reviewed and adjusted on an as needed basis. There may be further adjustments when actual rebates are invoiced based on utilisation information submitted to us (in the case of contractual rebates) and claims/invoices are received (in the case of regulatory rebates and chargebacks). We believe that we have made reasonable estimates for future rebates using a similar methodology to that of previous years. Inevitably, however, such estimates involve judgements on aggregate future sales levels, segment mix and the customers' contractual performance.

Overall adjustments between gross and net US Product Sales amounted to $8,468 million in 2017 (2016: $12,275 million) with the decrease driven by an overall reduction in our US Product Sales and changes in product mix.

Cash discounts are offered to customers to encourage prompt payment. Accruals are calculated based on historical experience and are adjusted to reflect actual experience.

Gross to net Product Sales
US pharmaceuticals

	2017 $m	2016 $m	2015 $m
Gross Product Sales	**14,637**	19,640	23,641
Chargebacks	**(2,299)**	(3,449)	(2,985)
Regulatory – Medicaid and state programmes	**(1,462)**	(1,903)	(1,714)
Contractual – Managed-care and Medicare	**(3,598)**	(5,219)	(7,543)
Cash and other discounts	**(30)**	(358)	(472)
Customer returns	**(37)**	(130)	(333)
US Branded Pharmaceutical Fee	**3**	(145)	(174)
Other	**(1,045)**	(1,071)	(946)
Net Product Sales	**6,169**	7,365	9,474

Movement in provisions
US pharmaceuticals

	Brought forward at 1 January 2017 $m	Provision for current year $m	Adjustment in respect of prior years $m	Returns and payments $m	Carried forward at 31 December 2017 $m
Chargebacks	**562**	**2,432**	**(133)**	**(2,655)**	**206**
Regulatory – Medicaid and state programmes	**807**	**1,568**	**(106)**	**(1,520)**	**749**
Contractual – Managed-care and Medicare	**1,443**	**3,815**	**(217)**	**(3,774)**	**1,267**
Cash and other discounts	**6**	**29**	**1**	**(32)**	**4**
Customer returns	**473**	**36**	**1**	**(124)**	**386**
US Branded Pharmaceutical Fee	**260**	**105**	**(108)**	**(194)**	**63**
Other	**161**	**1,030**	**15**	**(1,055)**	**151**
Total	**3,712**	**9,015**	**(547)**	**(9,354)**	**2,826**

	Brought forward at 1 January 2016 $m	Provision for current year $m	Adjustment in respect of prior years $m	Returns and payments $m	Carried forward at 31 December 2016 $m
Chargebacks	324	3,470	(21)	(3,211)	562
Regulatory – Medicaid and state programmes	777	1,976	(73)	(1,873)	807
Contractual – Managed-care and Medicare	2,206	5,517	(298)	(5,982)	1,443
Cash and other discounts	44	358	–	(396)	6
Customer returns	467	130	–	(124)	473
US Branded Pharmaceutical Fee	264	195	(50)	(149)	260
Other	186	1,071	–	(1,096)	161
Total	4,268	12,717	(442)	(12,831)	3,712

	Brought forward at 1 January 2015 $m	Provision for current year $m	Adjustment in respect of prior years $m	Returns and payments $m	Carried forward at 31 December 2015 $m
Chargebacks	457	3,019	(34)	(3,118)	324
Regulatory – Medicaid and state programmes	707	1,809	(95)	(1,644)	777
Contractual – Managed-care and Medicare	2,366	7,666	(123)	(7,703)	2,206
Cash and other discounts	33	464	8	(461)	44
Customer returns	318	349	(16)	(184)	467
US Branded Pharmaceutical Fee	245	206	(32)	(155)	264
Other	163	947	(1)	(923)	186
Total	4,289	14,460	(293)	(14,188)	4,268

Industry practice in the US allows wholesalers and pharmacies to return unused stocks within six months of, and up to 12 months after, shelf-life expiry. The customer is credited for the returned product by the issuance of a credit note. Returned products are not exchanged for products from inventory and once a return claim has been determined to be valid and a credit note has been issued to the customer, the returned products are destroyed. At the point of sale in the US, we estimate the quantity and value of products which may ultimately be returned. Our returns accruals in the US are based on actual experience. Our estimate is based on the historical sales and returns information for established products together with market-related information, such as estimated shelf life, product recalls, and estimated stock levels at wholesalers and competitor activity, which we receive via third party information services. For newly launched products, we use rates based on our experience with similar products or a pre-determined percentage.

For products facing generic competition, we may lose the ability to estimate the levels of returns from wholesalers with the same degree of precision that we can for products still subject to patent protection. This is because we may have limited or no insight into a number of areas: the actual timing of the generic launch (for example, a generic manufacturer may or may not have produced adequate pre-launch inventory); the pricing and marketing strategy of the competitor; the take-up of the generic; and (in cases where a generic manufacturer has approval to launch only one dose size in a market of several dose sizes) the likely level of switching from one dose to another. Under our accounting policy, revenue is recognised only when the amount of the revenue can be measured reliably. Our approach in meeting this condition for products facing generic competition will vary from product to product depending on the specific circumstances.

The adjustment in respect of prior years increased 2017 net US pharmaceuticals revenue by 8.9% (2016: 6.0%; 2015: 3.1%). However, taking into account the adjustments affecting both the current and the prior year, 2016 revenue would have been increased by 1.4% and 2015 revenue would have been increased by 1.6%, by adjustments between years.

We have distribution service agreements with major wholesaler buyers which serve to reduce the speculative purchasing behaviour of the wholesalers and reduce short-term fluctuations in the level of inventory they hold. We do not offer any incentives to encourage wholesaler speculative buying and attempt, where possible, to restrict shipments to underlying demand when such speculation occurs.

Component revenue accounting

A consequence of charging all internal R&D expenditure to the income statement in the year in which it is incurred (which is normal practice in the pharmaceutical industry) is that we own valuable intangible assets which are not recorded on the Statement of Financial Position. We also own acquired intangible assets which are included on the Statement of Financial Position. As detailed on page 14, our business model means that, from time to time, we sell such assets and generate income. Sales of product lines are often accompanied by an agreement on our part to continue manufacturing the relevant product for a reasonable period (often about two years) while the purchaser constructs its own manufacturing facilities. The contracts typically involve the receipt of an upfront payment, which the contract attributes to the sale of the intangible assets, and ongoing receipts, which the contract attributes to the sale of the product we manufacture. In cases where the transaction has two or more components, we account for the delivered item (for example, the transfer of title to the intangible asset) as a separate unit of accounting and record revenue on delivery of that component, provided that we can make a reasonable estimate of the fair value of the undelivered component. Where the fair market value of the undelivered component (for example, a manufacturing agreement) exceeds the contracted price for that component, we defer an appropriate element of the upfront consideration and amortise this over the performance period. However, where the fair market value of the undelivered component is equal to or lower than the contracted price for that component, we treat the whole of the upfront amount as being attributable to the delivered intangible assets and recognise that part of the revenue upon delivery. No element of the contracted revenue related to the undelivered component is allocated to the sale of the intangible asset. This is because the contracted revenue relating to the undelivered component is contingent on future events (such as sales) and so cannot be anticipated.

Research and development

Our business model includes investment in targeted business developments to strengthen our portfolio, pipeline and capabilities. These business development transactions include collaborations, asset in-licences and business acquisitions.

Each transaction is considered to establish whether it qualifies as a business combination by applying the criteria assessment detailed in IFRS 3 'Business Combinations'.

On the acquisition of a business, fair values are attributed to the identifiable assets and liabilities and contingent liabilities unless the fair value cannot be measured reliably, in which case the value is subsumed into goodwill. Goodwill is the difference between the fair value of the consideration and the fair value of net assets acquired. Fair value is the price that would be received to sell an asset or pay for a liability in an orderly transaction at the date of acquisition. The price may be directly observable but, in most cases, is estimated using valuation techniques which normally involve predicting future cash flows and applying a market participant discount rate. Further details of our recent business acquisitions are included in Note 25 to the Financial Statements from page 173.

Future contingent elements of consideration, which may include development and launch milestones, revenue threshold milestones and revenue-based royalties, are fair valued at the date of acquisition using decision-tree analysis with key inputs including probability of success, consideration of potential delays and revenue projections based on the Group's internal forecasts. Unsettled amounts of consideration are held at fair value within payables with changes in fair value recognised immediately in profit. Several of our recent business combinations have included significant amounts of contingent consideration. Details of the movements in the fair value of the contingent consideration in the year, and the range of possible contingent consideration amounts that may eventually become payable are contained in Note 18 to the Financial Statements on page 163.

Where not all the equity of a subsidiary is acquired, the non-controlling interest is recognised either at fair value or at the non-controlling interest's proportionate share of the net assets of the subsidiary, on a case-by-case basis. Put options over non-controlling interests are recognised as a financial liability measured at amortised cost, with a corresponding entry in either retained earnings or against non-controlling interest reserves on a case-by-case basis.

Impairment testing of goodwill and intangible assets

As detailed above, we have significant investments in goodwill and intangible assets as a result of acquisitions of businesses and purchases of assets, such as product development and marketing rights.

Details of the estimates and assumptions we make in our annual impairment testing of goodwill are included in Note 8 to the Financial Statements on page 154. The Group, including acquisitions, is considered a single operating segment for impairment purposes. No impairment of goodwill was identified.

Impairment reviews have been carried out on all intangible assets that are in development (and not being amortised), all major intangible assets acquired during the year and all intangible assets that have had indications of impairment during the year. Recoverable amount is determined on a fair value less cost to sell basis using discounted cash flow calculations. Sales forecasts and specific allocated costs (which have both been subject to appropriate senior management sign-off) are risk-adjusted and discounted using appropriate rates based on our post-tax weighted average cost of capital. Our weighted average cost of capital reflects factors such as our capital structure and our costs of debt and equity.

A significant portion of our investments in intangible assets and goodwill arose from the restructuring of the joint venture with MSD which commenced in 1998, the acquisition of MedImmune in 2007 and our 2014 acquisition of BMS's interest in the Group's Diabetes Alliance. In addition, our recent business combinations, as detailed in Note 25 to the Financial Statements from page 173, have added significant product, marketing and distribution intangible rights to our intangible asset portfolio. We are satisfied that the carrying values of our intangible assets as at 31 December 2017 are fully justified by estimated future cash flows. The accounting for our intangible assets is fully explained in Note 9 to the Financial Statements from page 155, including details of the estimates and assumptions we make in impairment testing of intangible assets.

Litigation

In the normal course of business, contingent liabilities may arise from product-specific and general legal proceedings, from guarantees or from environmental liabilities connected with our current or former sites. Where we believe that potential liabilities have a less than 50% probability of crystallising, or where we are unable to make a reasonable estimate of the liability, we treat them as contingent liabilities. These are not provided for but are disclosed in Note 28 to the Financial Statements from page 182.

In cases that have been settled or adjudicated, or where quantifiable fines and penalties have been assessed and which are not subject to appeal (or other similar forms of relief), or where a loss is probable (more than 50% assessed probability) and we are able to make a reasonable estimate of the loss, we indicate the loss absorbed or the amount of the provision accrued.

Where it is considered that the Group is more likely than not to prevail, or in the rare circumstances where the amount of the legal liability cannot be estimated reliably, legal costs involved in defending the claim are charged to profit as they are incurred. Where it is considered that we have a valid contract which provides the right to reimbursement (from insurance or otherwise) of legal costs and/or all or part of any loss incurred or for which a provision has been established and we consider recovery to be virtually certain, then the best estimate of the amount expected to be received is recognised as an asset.

Assessments as to whether or not to recognise provisions or assets and of the amounts concerned usually involve a series of complex judgements about future events and can rely heavily on estimates and assumptions. We believe that the provisions recorded are adequate based on currently available information and that the insurance recoveries recorded will be received. However, given the inherent uncertainties involved in assessing the outcomes of these cases and in estimating the amount of the potential losses and the associated insurance recoveries, we could in future periods incur judgments or insurance settlements that could have a material adverse effect on our results in any particular period.

The position could change over time, and there can, therefore, be no assurance that any losses that result from the outcome of any legal proceedings will not exceed the amount of the provisions that have been booked in the accounts.

Although there can be no assurance regarding the outcome of legal proceedings, we do not currently expect them to have a material adverse effect on our financial position, but they could significantly affect our financial results in any particular period.

Post-retirement benefits

We offer post-retirement benefit plans which cover many of our employees around the world. In keeping with local terms and conditions, most of these plans are defined contribution in nature, where the resulting income statement charge is fixed at a set level or is a set percentage of employees' pay. However, several plans, mainly in the UK (which has by far the largest single scheme), the US and Sweden are defined benefit plans where benefits are based on employees' length of service and final salary (typically averaged over one, three or five years). The UK and US defined benefit schemes were closed to new entrants in 2000. New employees in these countries are offered defined contribution schemes.

In applying IAS 19 'Employee Benefits', we recognise all actuarial gains and losses immediately through Other Comprehensive Income. Investment decisions in respect of defined benefit schemes are based on underlying actuarial and economic circumstances with the intention of ensuring that the schemes have sufficient assets to meet liabilities as they fall due, rather than meeting accounting requirements. The local fiduciary bodies which govern the investment of pension fund assets will invest across a broad range of asset classes and employ specialist investment managers with different investment styles. This will ensure that the investment strategy is diversified across a broad range of return drivers. In addition, local fiduciary bodies will also seek to hedge liability risks (interest rate and inflation risk where applicable) inherent in the measurement of the liabilities and therefore reduce volatility in the funding level, where this is practical and cost effective to do so. The Group plays an active role in providing input into these decisions.

In assessing the discount rate applied to the obligations, we have used rates on AA corporate bonds with durations corresponding to the maturities of those obligations, except in Sweden where we have used rates on mortgage bonds as the market in high quality corporate bonds is insufficiently deep.

In all cases, the pension costs recorded in the Financial Statements are assessed in accordance with the advice of independent qualified actuaries, but require the exercise of significant judgement in relation to assumptions for long-term price inflation, and future salary and pension increases.

Further details of our accounting for post-retirement benefit plans are included in Note 28 to the Financial Statements from page 182.

Taxation

Accruals for tax contingencies require management to make judgements and estimates of exposures in relation to tax audit issues. Tax benefits are not recognised unless the tax positions will probably be sustained based upon management's interpretation of applicable laws and regulations and the likelihood of settlement. Once considered to be probable, management reviews each material tax benefit to assess whether a provision should be taken against full recognition of the benefit on the basis of potential settlement through negotiation and/or litigation. Accruals for tax contingencies are measured using the single best estimate of likely outcome approach.

We face a number of audits in jurisdictions around the world and, in some cases, are in dispute with the tax authorities. The issues under discussion are often complex and can require many years to resolve.

Further details of the estimates and assumptions we make in determining our recorded liability for transfer pricing contingencies and other tax contingencies are included in the Tax section of Note 28 to the Financial Statements from page 182.

Sarbanes-Oxley Act Section 404

As a consequence of our NYSE listing, we are required to comply with those provisions of the Sarbanes-Oxley Act applicable to foreign issuers. Section 404 of the Sarbanes-Oxley Act requires companies annually to assess and make public statements about the quality and effectiveness of their internal control over financial reporting. As regards Sarbanes-Oxley Act Section 404, our approach is based on the Committee of Sponsoring Organizations (COSO) 2013 framework.

Our approach to the assessment has been to select key transaction and financial reporting processes in our largest operating units and a number of specialist areas (eg financial consolidation and reporting, treasury operations and taxation etc), so that, in aggregate, we have covered a significant proportion of the key lines in our Financial Statements. Each of these operating units and specialist areas has ensured that its relevant processes and controls are documented to appropriate standards, taking into account, in particular, the guidance provided by the SEC. We have also reviewed the structure and operation of our 'entity level' control environment. This refers to the overarching control environment, including structure of reviews, checks and balances that are essential to the management of a well-controlled business.

The Directors have concluded that our internal control over financial reporting is effective at 31 December 2017 and the assessment is set out in the Directors' Annual Report on Internal Controls over Financial Reporting on page 128. PwC has audited the effectiveness of our internal control over financial reporting at 31 December 2017 and their report is unqualified.

Strategic Report

The following sections make up the Strategic Report, which has been prepared in accordance with the requirements of the Companies Act 2006:

- AstraZeneca at a glance
- Chairman's Statement
- Chief Executive Officer's Review
- Marketplace
- Business model and life-cycle of a medicine
- Strategy and Key Performance Indicators
- Business Review
- Therapy Area Review
- Risk Overview
- Financial Review

and has been approved and signed on behalf of the Board.

A C N Kemp
Company Secretary
2 February 2018

can

Science

accelerate the development of new chemical entities to bring potential new medicines to patients

The Cryo-electron Microscope, Cryo-EM, allows us to determine near atomic resolution models of complex protein molecules at a tenth of a millionth of a millimetre in scale. We can directly image individual molecules, using a focused electron beam and, from the 2D projections obtained, build a 3D object so that we know what the molecule looks like and can understand how it functions.

This is revolutionising structural biology, allowing us to resolve the structures of complex macromolecular machines for the first time, investigate the biological mechanisms underlying disease states and design potential new drugs based on this knowledge. For example, in collaboration with the MRC Laboratory of Molecular Biology, we have applied this technology to define the world's first protein structures for human ataxia telangiectasia mutated (ATM). ATM is a key trigger protein in the DNA damage response and a prime therapeutic target in cancer.

For more information, please see our website, www.astrazeneca.com, Cryo-electron microscopy.

Chairman's Introduction

AstraZeneca's return to sustainable growth can only be achieved if it is underpinned by sound corporate governance.

"We are always mindful of the trust shareholders place in us."

Leadership

The strength and quality of a Board begin with the calibre of its Directors. AstraZeneca is privileged to have a diverse, skilled and experienced Board and 2017 saw some changes to its composition. After three years' service, Ann Cairns retired at the AGM in April. At the same meeting, Philip Broadley was elected to the Board and appointed to the Audit Committee. His significant international business and financial experience are already proving valuable.

Later, in August, Bruce Burlington retired as a Non-Executive Director and member of the Audit Committee, the Nomination and Governance Committee, and from his role as Chairman of the Science Committee. We particularly valued his insightful and frank participation during a period of innovation-led transformation at AstraZeneca.

We are very fortunate to have had three exceptional women join the Board as Non-Executive Directors during 2017. Nazneen Rahman is a renowned medical scientist and joined us in June. Sheri McCoy was appointed in October and brings several decades of pharmaceutical industry experience from her time at Johnson & Johnson. Finally, Deborah DiSanzo, global General Manager for IBM Watson Health, joined us in December.

I welcome the new Board members and thank all Board members for their continuing commitment and contribution to our discussions.

Governance in support of our strategy

I am also grateful to those Directors who chair and are members of the Committees of the Board, which are shown on the opposite page. The diligent way in which they carry out their Committee duties enables us to discharge our responsibilities efficiently and effectively.

We are always mindful of the trust shareholders place in us as your elected Directors and of our wider responsibilities to all of AstraZeneca's stakeholders. We seek to apply governance best practice in our work for you and those other stakeholders, which you can read about in this Governance Report.

In all our deliberations, we never lose sight of the fact that our ultimate success will be measured in our ability to deliver life-changing medicines. In this way we can add value to patients, shareholders and society more generally.

Leif Johansson
Chairman

Minute pieces of tumour DNA circulating in the bloodstream

Corporate Governance Overview

Delivery

How our governance supports the delivery of our strategy

All Directors are collectively responsible for the success of the Group. The Non-Executive Directors exercise independent, objective judgement in respect of Board decisions, and scrutinise and challenge management. They also have various responsibilities concerning the integrity of financial information, internal controls and risk management.

The Board is responsible for setting our strategy and policies, overseeing risk and corporate governance, and monitoring progress towards meeting our objectives and annual plans. It is accountable to our shareholders for the proper conduct of the business and our long-term success, and represents the interests of all stakeholders. The Board conducts an annual review of the Group's overall strategy. The CEO, CFO and Senior Executive Team (SET) take the lead in developing our strategy, which is then reviewed, constructively challenged and approved by the Board.

Governance structure

The Board has delegated some of its powers to the CEO and operates with the assistance of four Committees:

Board
Corporate Governance Report from page 92

- **Audit Committee** – Report from page 100
- **Remuneration Committee** – Report from page 105
- **Nomination & Governance Committee** – page 96
- **Science Committee** – page 97

In addition to the SET, we have two senior level governance bodies:

Senior Executive Team (SET)
Details of our SET on page 90

- **Early Stage Product Committees** – page 90
- **Late Stage Product Committee** – page 90

Attendance in 2017

Board Committee membership and meeting attendance in 2017

● Board or Committee Chairman

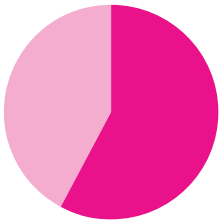
Name	Board	Audit	Remuneration	Nomination & Governance	Science
Geneviève Berger	5(6)				3(3)
Philip Broadley – *elected 27 April 2017*	4(4)	3(3)			
Bruce Burlington – *retired 31 August 2017*	3(3)	3(3)		3(3)	● 2(2)
Ann Cairns – *retired 27 April 2017*	2(2)	2(2)			
Graham Chipchase	5(6)		● 5(5)	4(5)	
Deborah DiSanzo – *appointed 1 December 2017*	1(1)				
Marc Dunoyer	6(6)				
Leif Johansson	● 6(6)		4(5)	● 5(5)	
Rudy Markham	6(6)	● 5(5)	5(5)	5(5)	
Sheri McCoy – *appointed 1 October 2017*	2(2)	2(2)			
Nazneen Rahman – *appointed 1 June 2017*	4(4)				1(1)
Pascal Soriot	6(6)				
Shriti Vadera	6(6)	5(5)	5(5)		
Marcus Wallenberg	4(6)				3(3)

Note: number in brackets denotes number of meetings during the year that Board members were entitled to attend.

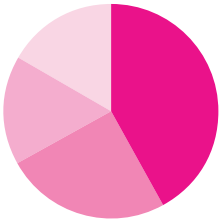
Board of Directors
as at 31 December 2017

Board composition

Gender split of Directors as at 31 December 2017



Directors' nationalities as at 31 December 2017



Length of tenure of Non-Executive Directors

<3 years
4
Philip Broadley
Deborah DiSanzo
Sheri McCoy
Nazneen Rahman

3-6 years
3
Leif Johansson
Geneviève Berger
Graham Chipchase

6-9 years
1
Shriti Vadera

>9 years
2
Rudy Markham
Marcus Wallenberg

Committee Membership Key

- Committee Chairman
- A Audit
- R Remuneration
- NG Nomination & Governance
- S Science

* Date of first appointment or election to the Board.

Leif Johansson NG R

Non-Executive Chairman of the Board (April 2012*)

Skills and experience: From 1997 to 2011, Leif was Chief Executive Officer of AB Volvo. Prior to that, he served at AB Electrolux, latterly as Chief Executive Officer from 1994 to 1997. He was a Non-Executive Director of BMS from 1998 to September 2011, serving on the Board's Audit Committee, and Compensation and Management Development Committee. He holds an MSc in engineering from Chalmers University of Technology, Gothenburg.

Other appointments: Leif is Chairman of global telecommunications company, LM Ericsson. He holds board positions at Autoliv, Inc and Ecolean AB. He has been a member of the Royal Swedish Academy of Engineering Sciences since 1994. Leif is also a member of the European Round Table of Industrialists.

Pascal Soriot

Executive Director and CEO (October 2012*)

Skills and experience: Pascal brings a passion for science and medicine as well as significant experience in established and emerging markets, strength of strategic thinking, a successful track record of managing change and executing strategy, and the ability to lead a diverse organisation. He served as Chief Operating Officer of Roche's pharmaceuticals division from 2010 to September 2012 and, prior to that, Chief Executive Officer of Genentech, a biologics business, where he led its successful merger with Roche. Pascal joined the pharmaceutical industry in 1986 and has worked in senior management roles in numerous major companies around the world. He is a doctor of veterinary medicine (École Nationale Vétérinaire d'Alfort, Maisons-Alfort) and holds an MBA from HEC, Paris.

Marc Dunoyer

Executive Director and CFO (November 2013*)

Skills and experience: Marc's career in pharmaceuticals, which has included periods with Roussel Uclaf, Hoechst Marion Roussel and GSK, has given him extensive industry experience, including finance and accounting; corporate strategy and planning; research and development; sales and marketing; business reorganisation; and business development. Marc is a qualified accountant and joined AstraZeneca in 2013, serving as Executive Vice-President, GPPS from June to October 2013. Prior to that, he served as Global Head of Rare Diseases at GSK and (concurrently) Chairman, GSK Japan. He holds an MBA from HEC, Paris and a Bachelor of Law degree from Paris University.

Rudy Markham A R NG

Senior independent Non-Executive Director (September 2008*)

Skills and experience: Rudy has significant international business and financial experience, having formerly held various senior commercial and financial positions with Unilever, culminating in his appointment as its Chief Financial Officer. He has also served as a Non-Executive Director of the UK Financial Reporting Council from 2007 to 2012, as Chairman and a Non-Executive Director of Moorfields Eye Hospital NHS Foundation Trust, and as a Non-Executive Director of Legal & General Group plc.

Other appointments: Rudy is a non-executive member of the Board of United Parcel Services Inc. He is also Vice Chairman of the Supervisory Board of Corbion NV (formerly CSM NV), a Fellow of the Chartered Institute of Management Accountants and a Fellow of the Association of Corporate Treasurers.

Changes to the composition of the Board and its Committees for the year ended 31 December 2017

Philip Broadley
Elected to the Board on 27 April 2017 and became a member of the Audit Committee on the same date.

Ann Cairns
Retired from the Board and as a member of the Audit Committee with effect from 27 April 2017, after three years' service.

Bruce Burlington
Retired from the Board and those Board Committees on which he served on 31 August 2017, after seven years' service.

Nazneen Rahman
Appointed to the Board and became a member of the Science Committee with effect from 1 June 2017.

Sheri McCoy
Appointed to the Board and became a member of the Audit Committee with effect from 1 October 2017.

Deborah DiSanzo
Appointed to the Board with effect from 1 December 2017.

Geneviève Berger S

Non-Executive Director
(April 2012*)

Skills and experience: Geneviève was Chief Science Officer at Unilever PLC & NV, and a member of the Unilever Leadership Executive from 2008 to April 2014. She holds three doctorates – in physics, human biology and medicine – and was appointed Professor of Medicine at l'Université Pierre et Marie Curie, Paris in 2006. Her previous positions include Professor and Hospital Practitioner at l'Hôpital de la Pitié-Salpêtrière in Paris; Director General at the Centre National de la Recherche Scientifique; Chairman of the Health Advisory Board of the EU Commission; and Non-Executive Director of Smith & Nephew plc.

Other appointments: In May 2015, Geneviève was appointed as a Director of Air Liquide S.A. for a term of four years. She is currently Chief Research Officer at Firmenich SA, Geneva, Switzerland.

Philip Broadley A

Non-Executive Director
(April 2017*)

Skills and experience: Philip has significant financial and international business experience, having previously been Group Finance Director of Prudential plc for eight years and Old Mutual plc for six years. He started his career at Arthur Andersen where he was a partner for seven years. He is a past Chairman of the 100 Group of Finance Directors in the UK. He is a Fellow of the Institute of Chartered Accountants in England and Wales. He graduated in Philosophy, Politics and Economics from St Edmund Hall, Oxford and has a MSc in Behavioural Science from the London School of Economics.

Other appointments: Philip chairs the Audit Committee of Legal & General Group plc. He is a member of the Code Committee of The Takeover Panel and of the Oxford University Audit Committee. He is Treasurer of the London Library and Chairman of the Board of Governors of Eastbourne College.

Graham Chipchase R NG

Non-Executive Director
(April 2012*)

Skills and experience: Graham is Chief Executive Officer and a Director of Brambles Limited, the global supply-chain logistics company listed on the Australian Securities Exchange. Brambles operates in over 60 countries, primarily through the CHEP and IFCO brands. Graham served as Chief Executive Officer of global consumer packaging company, Rexam PLC from 2010 to 2016 after serving at Rexam as Group Director, Plastic Packaging and Group Finance Director. Previously, he was Finance Director of Aerospace Services at the global engineering group GKN PLC from 2001 to 2003. After starting his career with Coopers & Lybrand Deloitte, he held various finance roles in the industrial gases company The BOC Group PLC (now part of The Linde Group). He is a Fellow of the Institute of Chartered Accountants in England and Wales and holds an MA (Hons) in chemistry from Oriel College, Oxford.

Other appointments: Chief Executive Officer of Brambles Limited.

Deborah DiSanzo

Non-Executive Director
(December 2017*)

Skills and experience: Deborah is the global General Manager for IBM Watson Health, the business unit founded to achieve IBM's next 'moonshot'. Deborah is widely recognised by multiple organisations as a top health influencer, including publications Health Data Management and Modern Healthcare, and is a sought-after speaker at healthcare and women in technology venues, including the Forbes Healthcare Summit and Aspen Ideas Festival. Deborah has a distinguished career working at the intersection of healthcare and technology. Prior to joining IBM, she was CEO of Philips Healthcare. Previously, she held management roles at Agilent, Hewlett-Packard and Apollo Computer.

Other appointments: Director of ReWalk Robotics, Inc.

Sheri McCoy A

Non-Executive Director
(October 2017*)

Skills and experience: Sheri is Chief Executive Officer and a Director of Avon Products, Inc. Prior to joining them in 2012, she had a distinguished 30-year career at Johnson & Johnson, latterly serving as Vice Chairman of the Executive Committee, responsible for the Pharmaceuticals and Consumer business segments that represented more than 60% of the company's revenues. Sheri joined Johnson & Johnson as a scientist in research and development and subsequently managed businesses in every major product sector, including consumer, prescription medicines and medical devices, holding positions including Worldwide Chairman, Surgical Care Group and Division President, Consumer. She holds a Bachelor of Science degree in textile chemistry from the University of Massachusetts Dartmouth, a Master's degree in chemical engineering from Princeton University and an MBA from Rutgers University, both in New Jersey, US.

Other appointments: In addition to Avon Products, Inc., Sheri serves on the boards of New Avon LLC; Catalyst, a global non-profit that helps build workplaces that work for women; and Stonehill College, Easton, Massachusetts.

Nazneen Rahman S

Non-Executive Director
(June 2017*)

Skills and experience: Nazneen is Head of the Division of Genetics and Epidemiology at the Institute of Cancer Research (ICR), London; Head of the Cancer Genetics Unit at the Royal Marsden NHS Foundation Trust; and Director of the TGL clinical gene testing laboratory at the ICR. Her research harnesses her scientific and clinical expertise to identify and clinically implement human disease genes. She has a strong focus on cancer predisposition genes, in which she is an internationally-recognised expert and has discovered many such genes during her career, particularly for breast, ovarian and childhood cancers. Nazneen qualified in medicine from Oxford University in 1991, gained her Certificate of Completion of Specialist Training in medical genetics in 2001 and completed a PhD in molecular genetics in 1999. She has a strong commitment to open science and science communication and has garnered numerous awards, including a CBE in the 2016 Queen's birthday honours in recognition of her contribution to medical sciences.

Other appointments: Nazneen is a member of the scientific advisory board of Genomics plc and the advisory board of Wellcome Open Research.

Shriti Vadera A R

Non-Executive Director
(January 2011*)

Skills and experience: Shriti has significant knowledge of global finance, emerging markets and public policy. She has advised governments, banks and investors on the Eurozone crisis, the banking sector, debt restructuring and markets. She is a member of the G20 CEO Advisory Group and of the International Advisory Council of Asia House. Shriti is also Chairman of the European Financial Services Chairman's Advisory Committee, TheCityUK. She has served as a Minister in the UK Cabinet Office, and Business and International Development Departments. She has also served on the Council of Economic Advisers, HM Treasury, where she focused on business and international economic issues. Prior to that, Shriti spent 14 years in investment banking with SG Warburg/UBS.

Other appointments: Shriti is Chairman of Santander UK plc and Senior Independent Director of BHP Billiton.

Marcus Wallenberg S

Non-Executive Director
(April 1999*)

Skills and experience: Marcus has international business experience across various industry sectors, including the pharmaceutical industry from his directorship with Astra prior to 1999.

Other appointments: Marcus is Chairman of Skandinaviska Enskilda Banken AB, Saab AB and FAM AB. He is a member of the boards of Investor AB, Temasek Holdings Limited, and the Knut and Alice Wallenberg Foundation.

Senior Executive Team (SET)
as at 31 December 2017

Pascal Soriot
CEO

See page 88.

Marc Dunoyer
CFO

See page 88.

In addition to the SET, we have two senior level governance bodies accountable for making key decisions regarding our portfolio and pipeline.

Early Stage Product Committees (ESPCs)
The ESPCs are senior level, cross-functional governance bodies with accountability for oversight of our early-stage small molecule and biologics portfolio to Proof of Concept stage. The EVPs of our two science units, IMED and MedImmune, chair our ESPCs.

The ESPCs seek to deliver a flow of products to GMD for Phase III development through to launch. The ESPCs also seek to maximise the value of our internal and external R&D investments through robust, transparent and well-informed decision making that drives business performance and accountability.

Specifically, the ESPCs have responsibility for the following:

- approving early-stage investment decisions
- prioritising the respective portfolios
- licensing activity for products in Phase I and earlier
- delivering internal and external opportunities
- reviewing allocation of R&D resources.

Late Stage Product Committee (LSPC)
The LSPC is also a senior level governance body, accountable for the quality of the portfolio post-Phase III investment decision. Jointly chaired by the EVPs of GMD and GPPS, members include, as appropriate, members of the SET, including the CEO and CFO, and members of the GMD and GPPS leadership teams.

The LSPC seeks to maximise the value of our investments in the late-stage portfolio, also ensuring well-informed and robust decision making. Specific accountabilities include:

- approval of the criteria supporting Proof of Concept
- decision to invest in Phase III development based on agreement of commercial opportunity and our plans to develop the medicine
- evaluation of the outcome of the development programme and decision to proceed to regulatory filing
- decision to invest in life-cycle management activities for the late-stage assets
- decision to invest in late-stage business development opportunities.

Katarina Ageborg
Executive Vice-President Sustainability and Chief Compliance Officer

Katarina currently serves as Executive Vice-President Sustainability and Chief Compliance Officer. In 2015, she assumed responsibility for the Company's sustainability programme, with oversight for the Access to Healthcare, Environmental Protection and Ethics & Transparency strategic priority areas. Prior to her broadened role in sustainability, she focused on delivery, design and implementation of the Company's compliance programme as well as streamlining the Safety, Health & Environment function. She has been a member of the SET since 2011. Katarina led the Global Intellectual Property function from 2008 to 2011, during which time she streamlined the organisation and launched a new patent filing strategy. After joining Astra AB in 1998, she held a series of senior legal roles supporting Commercial, Regulatory and Intellectual Property. Prior to AstraZeneca, Katarina established her own law firm and worked as a lawyer on both civil and criminal cases. Katarina holds a Master of Law Degree from Uppsala University School of Law in Sweden.

Dr Sean Bohen
Executive Vice-President, Global Medicines Development and Chief Medical Officer

Sean was appointed Executive Vice-President, GMD in September 2015 and leads our global late-stage development organisation for both small molecules and biologics, driving a medicines pipeline which features novel and groundbreaking science across three main therapy areas – Oncology, Cardiovascular & Metabolic diseases and Respiratory – as well as the selective areas of autoimmunity, neuroscience and infection. He is also the Company's Chief Medical Officer and is responsible for patient safety across the entire AstraZeneca and MedImmune portfolio. He joined AstraZeneca from Genentech, where he held a number of senior leadership roles across various therapy areas and within early development. Before joining Genentech, Sean was a Clinical Instructor in Oncology at Stanford University School of Medicine, a research associate at the Howard Hughes Medical Institute and a postdoctoral fellow at the National Cancer Institute. He is a graduate of the University of Wisconsin and later earned his doctorate in biochemistry and his medical degree at the University of California, San Francisco.

Pam Cheng
Executive Vice-President, Operations & Information Technology

Pam joined AstraZeneca in June 2015 after having spent 14 years in Global Manufacturing and Supply Chain roles at Merck/MSD. Pam was the Head of Global Supply Chain Management & Logistics for Merck from 2006 to 2011 and led the transformation of Merck supply chains across the global supply network. More recently, Pam was President of MSD China, responsible for MSD's entire business in China. Prior to joining Merck, Pam held various engineering and project management positions at Universal Oil Products, Union Carbide Corporation and GAF Chemicals. Pam holds Bachelor's and Master's degrees in chemical engineering from Stevens Institute of Technology in New Jersey and an MBA in marketing from Pace University in New York. She has been a member of the Board of Directors for Codexis Inc. (CDXS) since 2014.

Fiona Cicconi
Executive Vice-President, Human Resources

Fiona joined AstraZeneca in September 2014 as Executive Vice-President, Human Resources and is responsible for the overall design and delivery of the Company's people strategy, impacting over 60,000 employees in more than 100 countries. She started her career at General Electric, where she held various human resources roles within the oil and gas business, which included experience in major global acquisitions and driving change. Subsequently, Fiona spent a number of years at Cisco, overseeing human resources in seven countries in Europe and latterly handling employee relations in Europe, Middle East and Africa, before joining Roche in 2006. There, she was most recently responsible for global human resources for Pharma Technical Operations, where her primary focus was to identify and develop a sustainable supply of leadership and talent from within the organisation.

Note: Jamie Freedman was Executive Vice-President, Oncology from April 2017 to October 2017

Dr Ruud Dobber

Executive Vice-President, North America

Ruud was appointed Executive Vice-President, North America in August 2016 and is responsible for driving growth and maximising the contribution of the commercial operations in North America to AstraZeneca's global business. Ruud joined Zeneca in 1997 and has held various senior commercial and leadership roles. Most recently, Ruud was Executive Vice-President, Europe and oversaw business functions in the 28 EU member states. Ruud was also responsible for the development of our late-stage, small molecule antibiotic pipeline as well as its global commercialisation. Prior to that, Ruud was Regional Vice-President of AstraZeneca's European, Middle East and African division, Regional Vice-President for the Asia Pacific region and Interim Executive Vice-President, GPPS. Ruud was a member of the Board and Executive Committee of the European Federation of Pharmaceutical Industries and Associations (EFPIA) and was previously Chairman of the Asia division of Pharmaceutical Research and Manufacturers of America. Holding a doctorate in immunology from the University of Leiden in the Netherlands, Ruud began his career as a scientist, researching in the field of immunology and ageing.

David Fredrickson

Executive Vice-President, Global Head Oncology Business Unit

Dave was appointed Executive Vice-President, Global Head Oncology Business Unit in October 2017 and is responsible for driving growth and maximising commercial performance of the global oncology and haematology portfolio within AstraZeneca. In addition, he plays a critical leadership role in setting the Oncology portfolio and product strategy for the organisation. Prior to this role, Dave served as President of AstraZeneca K.K. in Japan, and Vice-President, Specialty Care for AstraZeneca in the US, spanning oncology, infectious disease, and neuroscience medicines. Dave joined AstraZeneca from Roche/Genentech in 2014, where he was Business Unit Manager, Oncology in Spain and held growing commercial responsibilities in strategy, marketing and sales in the US. He also served for nine years at the Monitor Group, LLC (now Monitor Deloitte Group, LLC), a global strategy consultancy. He has served as Vice Chairman of the European Federation of Pharmaceutical Industries and Associations (EFPIA) Japan and was a member of the Board of the Japan Pharmaceutical Manufacturers Association (JPMA). He is a graduate of Georgetown University (DC) in Government.

Dr Bahija Jallal

Executive Vice-President, MedImmune

Bahija was appointed Executive Vice-President, MedImmune in January 2013 and is responsible for biologics research and development activities. Bahija is tasked with advancing the biologics pipeline of medicines. She joined MedImmune in 2006 as Vice-President, Translational Sciences and has held roles of increasing responsibility at AstraZeneca. Prior to joining AstraZeneca, Bahija worked with Chiron Corporation, where she served as Vice-President, Drug Assessment and Development. Bahija received a Master's degree in biology from l'Université de Paris VII and her doctorate in physiology from l'Université Pierre et Marie Curie, Paris VI. She conducted her postdoctoral research at the Max-Planck Institute of Biochemistry in Martinsried, Germany. She is the President of the Board of Directors of the Association for Women in Science and she is also on the Board of Trustees of the Johns Hopkins University.

Mark Mallon

Executive Vice-President, Global Product and Portfolio Strategy, Global Medical Affairs & Corporate Affairs

Mark was appointed Executive Vice-President, GPPS, GMA & Corporate Affairs in August 2016, leading AstraZeneca's global marketing and commercial portfolio strategy as well as the medical affairs and corporate affairs functions. These functions integrate corporate, therapy area and product strategies to bridge scientific development and commercial excellence in the core areas of cardiovascular and respiratory diseases. Prior to this, Mark was EVP for the International region, responsible for the growth and performance of AstraZeneca's commercial businesses in this region. Since joining Zeneca, Mark has held many senior sales and marketing roles, including Regional Vice-President for Asia Pacific, President of our Chinese and Italian subsidiaries, Chief Operating Officer of our Japanese subsidiary and Vice-President of our US gastrointestinal and respiratory businesses. Mark began his career in the pharmaceutical industry in management consulting. He holds a degree in chemical engineering from the University of Pennsylvania and an MBA in marketing and finance from the Wharton School of Business.

Dr Menelas Pangalos

Executive Vice-President, IMED Biotech Unit and Global Business Development

Menelas (Mene) was appointed Executive Vice-President, IMED Biotech Unit in January 2013 and leads AstraZeneca's small molecule research and early development activities. Since joining AstraZeneca in 2010, Mene has been instrumental in driving the Company's commitment to science and led the transformation of R&D productivity through the development and implementation of our '5R' framework. Mene has previously held senior R&D roles at Pfizer, Wyeth and GSK. He completed his undergraduate degree in biochemistry at Imperial College London with a first class honours and earned a doctorate in neurochemistry from University College London. He is a Fellow of the Academy of Medical Sciences, Royal Society of Biology and Clare Hall at the University of Cambridge, a visiting Professor of Neuroscience at King's College London and recently gained an Honorary PhD from the University of Glasgow. In the UK, Mene serves on the Medical Research Council and is on the Board of the British Pharmaceutical Group.

Jeff Pott

General Counsel

Jeff was appointed General Counsel in January 2009 and has overall responsibility for all aspects of AstraZeneca's Legal and IP function. He joined AstraZeneca in 1995 and has worked in various litigation roles, where he has had responsibility for IP, anti-trust and product liability litigation. Before joining AstraZeneca, he spent five years at the US legal firm Drinker Biddle and Reath LLP, where he specialised in pharmaceutical product liability litigation and anti-trust advice and litigation. He received his bachelor's degree in political science from Wheaton College and his Juris Doctor Degree from Villanova University School of Law.

Iskra Reic

Executive Vice-President, Europe

Iskra was appointed Executive Vice-President, Europe in April 2017 and is responsible for sales, marketing and commercial operations across our businesses in 30 European countries, with the exception of Oncology teams in those which report to the Oncology Business Unit. Iskra trained as a Doctor of dental surgery at the Medical University of Zagreb, Croatia. She joined AstraZeneca in 2001 and has held a variety of in-market, regional sales and marketing and general management roles, including in Europe as Head of Commercial Operations for Croatia and Head of Specialty Care Central & Eastern Europe and Middle East & Africa. In 2012, she joined AstraZeneca Russia as Marketing & Strategy Director. She was appointed General Manager Russia in 2014 and, under her leadership, AstraZeneca achieved a leading share in its three main therapy areas and became a top-three prescription medicine pharmaceutical company. Iskra's responsibilities were expanded in 2016 to cover both Russia and the Eurasia Area, where she drove strong performance from a 1,500-strong team in a complex and dynamic region. Iskra has an International Executive MBA from the IEDC-Bled School of Management, Slovenia.

Leon Wang

Executive Vice-President, International and China President

Leon Wang is Executive Vice-President, International and China President. He is responsible for the overall strategy and for driving sustainable growth across the region. Leon joined AstraZeneca China in March 2013 and was promoted to President of AstraZeneca China in 2014. Under Leon's leadership, China has become AstraZeneca's second largest market worldwide, and AstraZeneca has become the second largest and the fastest growing multinational pharmaceutical company in China. In January 2017, Leon was promoted to Executive Vice-President, Asia Pacific Region. Prior to joining AstraZeneca, Leon held positions of increasing responsibility in marketing and business leadership at Roche, where he was a Business Unit Vice-President. In addition, Leon holds several positions in local trade associations and other prominent organisations in China. Leon holds an EMBA from China Europe International Business School, and a Bachelor of Arts from Shanghai International Studies University.

Corporate Governance Report

All Directors are collectively responsible for the success of the Group.

Corporate governance
We have prepared this Annual Report with reference to the UK Corporate Governance Code published by the UK Financial Reporting Council (FRC) in April 2016. This Corporate Governance Report (together with other sections of this Annual Report) describes how we apply the main principles of good governance in the UK Corporate Governance Code. We have complied throughout the accounting period with the provisions of the UK Corporate Governance Code, which is available on the FRC's website, www.frc.org.uk.

The membership of the Board at 31 December 2017 and information about individual Directors is contained in the Board of Directors section on pages 88 and 89.

Leadership and responsibilities

The roles of Chairman and CEO are split. Leif Johansson, our Non-Executive Chairman, is responsible for leadership of the Board. Our CEO, Pascal Soriot, leads the SET and has executive responsibility for running our business. The Board comprises 10 Non-Executive Directors, including the Chairman, and two Executive Directors – the CEO, Pascal Soriot, and the CFO, Marc Dunoyer. Its responsibilities are set out in the Corporate Governance Overview on page 87.

Rudy Markham, who joined the Board as a Non-Executive Director in 2008, was appointed as our senior independent Non-Executive Director in April 2015. The role of the senior independent Non-Executive Director is to serve as a sounding board for the Chairman and as an intermediary for the other Directors when necessary. The senior independent Non-Executive Director is also available to shareholders if they have concerns that contact through the normal channels of Chairman or Executive Directors has failed to resolve, or for which such contact is inappropriate.

As shown in the Corporate Governance Overview, there are four principal Board Committees. The membership and work of these Committees is described on the following pages. In addition, there may from time to time be constituted *ad hoc* Board Committees for specific projects or tasks.

In these cases, the scope and responsibilities of the Committee are documented. The Board provides adequate resources to enable each Committee to undertake its duties.

Reserved matters and delegation of authority

The Board maintains and periodically reviews a list of matters that are reserved to, and can only be approved by, the Board. These include: the appointment, termination and remuneration of any Director; approval of the annual budget; approval of any item of fixed capital expenditure or any proposal for the acquisition or disposal of an investment or business which exceeds $150 million; the raising of capital or loans by the Company (subject to certain exceptions); the giving of any guarantee in respect of any borrowing of the Company; and allotting shares of the Company. The matters that have not been expressly reserved to the Board are delegated by the Board to its Committees or the CEO.

The CEO is responsible to the Board for the management, development and performance of our business for those matters for which he has been delegated authority from the Board. Although the CEO retains full responsibility for the authority delegated to him by the Board, he has established, and chairs, the SET, which is the vehicle through which he exercises that authority in respect of our business.

The roles of the Board, Board Committees, Chairman and CEO are documented, as are the Board's reserved powers and delegated authorities.

Operation of the Board

The Board discharges its responsibilities as set out in the Corporate Governance Overview on page 87 through a programme of meetings that includes regular reviews of financial performance and critical business issues, and the formal annual strategy review day. The Board also aims to ensure that a good dialogue with our shareholders is maintained and that their issues and concerns are understood and considered.

The Board held six meetings in 2017, including its usual annual strategy review. Five took place in London, UK and one at AstraZeneca facilities in Sweden. The Board is currently scheduled to meet six times in 2018 and will meet at such other times as may be required to conduct business.

As part of the business of each Board meeting, the CEO typically submits a progress report, giving details of business performance and progress against the goals the Board has approved. To ensure that the Board has good visibility of the key operating decisions of the business, members of the SET attend Board meetings regularly and Board members meet other senior executives throughout the year. The Board also receives accounting and other management information about our resources, and presentations from internal and external speakers on legal, governance and regulatory developments. At the end of Board meetings, the Non-Executive Directors meet without the Executive Directors present to review and discuss any matters that have arisen during the meeting and/or such other matters as may appear to the Non-Executive Directors to be relevant in properly discharging their duty to act independently.

Principal matters considered by the Board in 2017

Area of focus		Strategic priority
Strategic matters	> The Group's overall strategy, including its long-range plan and annual budget	
	> The Group's capital structure, including financing needs and strategy	
	> Requests for approval of business development transactions of a size requiring Board approval	
	> Dividend decisions	
Operational matters	> Executive management reports, including business performance reports, R&D pipeline updates and the results of key clinical trials	
	> Quarterly results announcements	
	> Progress with construction of the Group's new strategic R&D centre and global corporate headquarters at Cambridge Biomedical Campus in the UK	
Stakeholders	> Employee gender data	
	> Sustainability matters	
	> Visits to R&D and Operations sites in Sweden and a review of the Company's Nordic Baltic business	
Governance, assurance and risk management	> Reports from Board Committees	
	> Routine succession planning for SET and Board-level roles	
	> Risks arising from Brexit and mitigation plans	
	> Year-end governance and assurance reports	
	> The Group's viability and risk appetite statements	
	> The annual review of the performance of the Board, its Committees and individual Directors	
	> Private discussion time for Non-Executive Directors only	

Key

- Achieve Scientific Leadership
- Return to Growth
- Be a Great Place to Work
- Achieve Group Financial Targets

Board effectiveness

Appointments to the Board, succession planning and diversity

The Nomination and Governance Committee and, where appropriate, the full Board, regularly review the composition of the Board and the status of succession to both senior executive management and Board-level positions. Directors have regular contact with, and access to, succession candidates for senior executive management positions. The Nomination and Governance Committee section on page 96 provides information about the appointment process for new Directors. Newly appointed Directors are provided with comprehensive information about the Group and their role as Non-Executive Directors. They also typically participate in tailored induction programmes that take account of their individual skills and experience.

Diversity

Diversity is integrated across our new Code of Ethics and associated workforce policy, and we promote a culture of diversity, respect, and equal opportunity, where individual success depends only on personal ability and contribution. We strive to treat our employees with fairness, integrity, honesty, courtesy, consideration, respect, and dignity, regardless of gender, race, nationality, age, sexual orientation, or other forms of diversity.

The Board is provided each year with a comprehensive overview of the AstraZeneca workforce, covering a wide range of metrics and measures (including trends around gender diversity, leadership ethnic diversity and age profile).

More specifically, the Board views gender, nationality and cultural diversity among Board members as important considerations when reviewing its composition. The Board recognises, in particular, the importance of gender diversity. Currently, 50% of the Company's Non-Executive Directors are women and women make up 42% of the full Board.

Considering diversity in a wider sense, the Board aims to maintain a balance in terms of the range of experience and skills of individual Board members, which includes relevant international business, pharmaceutical industry and financial experience, as well as appropriate scientific and regulatory knowledge. The biographies of Board members set out on pages 88 and 89 give more information about current Directors in this respect.

Although it has not set any objectives applying specifically to the composition of the Board within a formal policy, the Board intends to continue with its current approach to diversity in all its aspects, while at the same time seeking Board members of the highest calibre, and with the necessary experience and skills to meet the needs of the Company and its shareholders. Rather than adopting quotas or other similar objectives, the Board prefers to adopt a more flexible approach focused on appointing on merit while having due regard to the benefits that can be gained from diversity. This approach has yielded successful results – women make up 42% of the Board, which comfortably exceeds the target of 33% set out in the report from Lord Davies published in October 2015. Information about our approach to diversity in the organisation below Board level can be found in Employees from page 35.

Independence of the Non-Executive Directors

During 2017, the Board considered the independence of each Non-Executive Director for the purposes of the UK Corporate Governance Code and the corporate governance listing standards of the NYSE (Listing Standards). With the exception of Marcus Wallenberg, the Board considers that all of the Non-Executive Directors are independent. The Board noted that, as of September 2017, Rudy Markham had served on the Board for nine years but determined that he remains independent in character and judgement, as evidenced by the way in which he discharges his duties as a Board and Board Committee member, and as senior independent Non-Executive Director.

Leif Johansson was considered by the Board to be independent upon his appointment as Chairman. In accordance with the UK Corporate Governance Code, the test of independence is not appropriate in relation to the Chairman after his appointment.

Marcus Wallenberg was appointed as a Director of Astra in May 1989 and subsequently became a Director of the Company in 1999. He is a Non-Executive Director of Investor AB, which has a 4.07% interest in the issued share capital of the Company as at 2 February 2018. Mr Wallenberg, Investor AB and a number of Wallenberg charitable foundations are connected. For these reasons, the Board does not believe that he can be determined independent under the UK Corporate Governance Code.

However, the Board believes that he has brought, and continues to bring, considerable business experience and makes a valuable contribution to the work of the Board. In April 2010, he was appointed as a member of the Science Committee, reflecting his interest in innovation and R&D, knowledge of the history of the Company and its scientific heritage and culture, and his broad experience of other industries and businesses in which innovation and R&D are important determinants of success.

Conflicts of interest

The Articles enable the Directors to authorise any situation in which a Director has an interest that conflicts or has the potential to conflict with the Company's interests and which would otherwise be a breach of the Director's duty, under Section 175 of the Companies Act 2006. The Board has a formal system in place for Directors to declare such situations to be considered for authorisation by those Directors who have no interest in the matter being considered. In deciding whether to authorise a situation, the non-conflicted Directors must act in the way they consider, in good faith, would be most likely to promote the success of the Company, and they may impose limits or conditions when giving the authorisation, or subsequently, if they think this is appropriate. Situations considered by the Board and authorisations given are recorded in the Board minutes and in a register of conflicts maintained by the Company Secretary, and are reviewed annually by the Board. The Board believes that this system operates effectively.

Time commitment

Our expectation is that Non-Executive Directors should be prepared to commit 15 days a year, as an absolute minimum, to the Group's business. In practice, Board members' time commitment exceeds this minimum expectation when all the work that they undertake for the Group is considered, particularly in the case of the Chairman of the Board and the Chairmen of the Board Committees. As well as their work in relation to formal Board and Board Committee meetings, the Non-Executive Directors also commit time throughout the year to meetings and telephone calls with various levels of executive management, visits to AstraZeneca's sites throughout the world and, for new Non-Executive Directors, induction sessions and site visits.

On occasions when a Director is unavoidably absent from a Board or Board Committee meeting, for example where a meeting clashes with their other commitments, they still receive and review the papers for the meeting and typically provide verbal or written input ahead of the meeting, usually through the Chairman of the Board or the Chairman of the relevant Board Committee, so that their views are made known and considered at the meeting. Given the nature of the business to be conducted, some Board meetings are convened at short notice, which can make it difficult for some Directors to attend due to prior commitments.

Information and support

The Company Secretary is responsible to the Chairman for ensuring that all Board and Board Committee meetings are properly conducted, that the Directors receive appropriate information prior to meetings to enable them to make an effective contribution, and that governance requirements are considered and implemented.

The Company maintained Directors' and Officers' Liability Insurance cover throughout 2017. The Directors are also able to obtain independent legal advice at the expense of the Company, as necessary, in their capacity as Directors.

The Company has entered into a deed of indemnity in favour of each Board member since 2006. These deeds of indemnity are still in force and provide that the Company shall indemnify the Directors to the fullest extent permitted by law and the Articles, in respect of all losses arising out of, or in connection with, the execution of their powers, duties and responsibilities as Directors of the Company or any of its subsidiaries. This is in line with current market practice and helps us attract and retain high quality, skilled Directors.

Re-election of Directors

In accordance with Article 66 of the Articles, all Directors retire at each AGM and may offer themselves for re-election by shareholders. Accordingly, all of the Directors will retire at the AGM in May 2018. The Notice of AGM will give details of those Directors seeking re-election.

Board performance evaluation

2017 Overview

During the year, the Board conducted the annual evaluation of its own performance and that of its Committees and individual Directors. The 2017 evaluation was facilitated by Lintstock Ltd (Lintstock), a London-based corporate advisory firm that provides objective and independent counsel to leading European companies. Lintstock supplies software and services to the Company Secretary's team for Board evaluation questionnaires and for the management of insider lists but has no other commercial relationship with the Company. Based on Board members' responses to a web-based questionnaire covering a wide range of topics and on interviews carried out by Linstock with each Board member, Lintstock prepared a report, which was discussed by the Board at its meeting in February 2018 and was also used by the Chairman as the basis for individual conversations with each Board member prior to the full Board discussion.

The Board intends to continue to comply with the UK Corporate Governance Code guidance that the evaluation should be externally facilitated at least every three years and expects to commission the next externally facilitated review in 2020.

Director training

As part of each Director's individual discussion with the Chairman, his or her contribution to the work of the Board and personal development needs were considered. Directors' training needs are met by a combination of internal presentations and updates and external speaker presentations as part of Board and Board Committee meetings; specific training sessions on particular topics, where required; and the opportunity for Directors to attend external courses at the Company's cost, should they wish to do so.

2017 Outcomes

Main areas covered:

- Board composition and dynamics
- Board meeting management and support
- Board Committees
- Board oversight
- Risk management and internal control
- Succession planning and human resource management
- Priorities for 2018

Main conclusions and recommendations:

- The Board operates effectively and in a manner that encourages open and frank discussion.
- The Board valued the positive contributions of the new members that had been appointed during the year and noted the importance of sharing, and so retaining, corporate memory through the period of change.
- The Board identified certain areas that could be enhanced, including provision of further opportunities to visit and learn from different AstraZeneca teams and sites to help build a balanced understanding of the business, the use of informal meetings between Board members to focus on talent management, and ensuring succession planning activities for business critical roles were undertaken proactively with opportunities for all Board members to input.

Overall conclusion

- The reviews of the Board's Committees did not raise any significant problems and concluded that the Committees are operating effectively.
- In respect of the 2017 annual performance evaluation it was concluded that each Director continues to perform effectively and to demonstrate commitment to his or her role.

Chairman evaluation

The 2017 evaluation also included a review of the performance of the Chairman by the other Directors, led by the senior independent Non-Executive Director and absent the Chairman.

No significant issues needed to be addressed. The excellent quality of the Chairman's leadership of the Board was noted, as were the good relationships between him and key stakeholders.

Actions against prior year recommendations

2016 evaluation	2017 actions taken
Maintain and further improve the diversity of the Board	The recruitment of four new Non-Executive Directors in 2017 – Philip Broadley, Nazneen Rahman, Sheri McCoy and Deborah DiSanzo – has improved the diversity of the Board in several aspects.
Maintain and further improve full Board oversight of succession planning for Board-level roles	Reports back to the full Board from the Nomination and Governance Committee have been given greater prominence on Board meeting agendas and the practice of inviting all Board members to attend meetings of the Committee, should they wish to do so, has been continued during 2017.
Provide more opportunities for Board members to meet senior employees having the potential to progress to the most senior executive roles in the Company	Progress has been made by using presentations in Board meetings, site visits and Board lunches and dinners as opportunities to expose Board members to potential succession candidates. For example, the Board visited two of the Company's main sites in Sweden during 2017 and held small-group meetings with 'high-potential' employees there, and members of the Audit Committee met employees during their visits to the Company's sites in the UK, Germany and Brazil.
Maintain the right balance of Board time for R&D matters on the one hand, and commercial and operations matters on the other	As the Company's pipeline of new medicines has matured and several new drugs have achieved regulatory approval and been launched, with others in the pre-launch phase, the balance of Board time has naturally evolved to include a better balance between R&D and commercial matters. The Board is due to review Operations (manufacturing and supply) at a Board meeting in 2018.

Corporate Governance Report *continued*

Accountability

Risk management and internal control

The Board has overall responsibility for our system of internal controls and risk management policies and has an ongoing responsibility for reviewing their effectiveness. During 2017, the Directors continued to review the effectiveness of our system of controls, risk management and high level internal control processes. These reviews included an assessment of internal controls and, in particular, financial, operational and compliance controls, and risk management and their effectiveness, supported by management assurance of the maintenance of controls reports from Internal Audit Services, as well as the external auditor on matters identified in the course of its statutory audit work. During the year, a number of internal control weaknesses were reported relating to a new IT system implemented in January 2017 (used to manage customer deduction programmes in the US) and over the completeness of reports used to validate the adequacy of supporting documentation and approval of manual journals. These were remediated in-year with validation testing performed to ensure operational effectiveness. Across the wider internal control environment, a large number of design improvements have been implemented to further strengthen, enhance and de-risk our internal control over financial reporting. The system of controls is designed to manage rather than eliminate the risk of failure to achieve business objectives and can only provide reasonable (not necessarily absolute) assurance of effective operation and compliance with laws and regulations.

The Directors believe that the Group maintains an effective, embedded system of internal controls and complies with the FRC's guidance entitled 'Guidance on Risk Management, Internal Control and Related Financial and Business Reporting'.

More information about the ways in which we manage our business risks and describe our principal risks and uncertainties is set out in the Risk Overview from page 63 and Risk from page 210.

Remuneration

Information about our approach to remuneration and the role and work of the Remuneration Committee, is set out in the Directors' Remuneration Report from page 105.

Policy on external appointments and retention of fees

Subject to specific Board approval in each case, Executive Directors and other SET members may accept external appointments as non-executive directors of other companies, and retain any related fees paid to them, provided that such appointments are not considered by the Board to prevent or reduce the ability of the executive to perform his or her role within the Group to the required standard.

Relations with shareholders

In our quarterly, half-yearly and annual financial and business reporting to shareholders and other interested parties, we aim to present a balanced and understandable assessment of our strategy, financial position and prospects. We make information about the Group available to shareholders through a range of media, including our corporate website, www.astrazeneca.com, which contains a wide range of data of interest to institutional and private investors. We consider our website to be an important means of communication with our shareholders.

The Company has been authorised by shareholders to place shareholder communications (such as the Notice of AGM and this Annual Report) on the corporate website in lieu of sending paper copies to shareholders (unless specifically requested). While recognising and respecting that some shareholders may have different preferences about how they receive information from us, we will continue to promote the benefits of electronic communication given the advantages that this has over traditional paper-based communications, both in terms of the configurability and accessibility of the information provided and the consequent cost savings and reduction in environmental impact.

Our Investor Relations team acts as the main point of contact for investors throughout the year. We have frequent discussions with current and potential shareholders on a range of issues, including in response to individual *ad hoc* requests from shareholders and analysts. We also hold meetings to seek shareholders' views. Board members are kept informed of any issues, and receive regular reports and presentations from executive management and our brokers to assist them to develop an understanding of major shareholders' views about the Group.

From time to time, we conduct perception studies with institutional shareholders and a limited number of analysts to ensure that we are communicating clearly with them and that a high-quality dialogue is being maintained. The results of these studies are reported to, and discussed by, the full Board. As discussed above, the Senior independent Non-Executive Director, Rudy Markham, is available to shareholders if they have concerns that contact through the normal channels of Chairman, CEO and/or CFO has failed to resolve, or in relation to which such contact is inappropriate.

All shareholders, including private investors, have an opportunity at the AGM to put questions to members of the Board about our operation and performance. Formal notification of the AGM is sent to shareholders at least one month in advance. All Board members ordinarily attend the AGM to answer questions raised by shareholders. In line with the UK Corporate Governance Code, details of proxy voting by shareholders, including votes withheld, are given at the AGM and are posted on our website following the AGM.

Nomination and Governance Committee

The Nomination and Governance Committee's role is to recommend to the Board any new Board appointments and to consider, more broadly, succession plans at Board level. It reviews the composition of the Board using a matrix that records the skills and experience of current Board members, comparing this with the skills and experience it believes are appropriate to the Company's overall business and strategic needs, both now and in the future. Any decisions relating to the appointment of Directors are made by the entire Board based on the merits of the candidates and the relevance of their background and experience, measured against objective criteria, with care taken to ensure that appointees have enough time to devote to our business.

The Nomination and Governance Committee also advises the Board periodically on significant developments in corporate governance and the Company's compliance with the UK Corporate Governance Code.

During 2017, the members of the Nomination and Governance Committee were Leif Johansson (Chairman of the Committee), Rudy Markham, Bruce Burlington (until his retirement from the Board on 31 August 2017) and Graham Chipchase. Each member is a Non-Executive Director and considered independent by the Board. The Company Secretary acts as secretary to the Nomination and Governance Committee.

The Nomination and Governance Committee considers both planned and unplanned (unanticipated) succession scenarios and met five times in 2017, spending the majority of its time on succession planning for Non-Executive Directors with the assistance of the search firms MWM Consulting, Spencer Stuart and Korn Ferry and continued routine succession planning (internal and external) for the roles of CEO and CFO, with the assistance of Spencer Stuart. Korn Ferry and Spencer Stuart periodically undertake executive search assignments for the Company.

The attendance record of the Nomination and Governance Committee's members is set out on page 87.

The Nomination and Governance Committee's terms of reference are available on our website, www.astrazeneca.com.

Science Committee

The Science Committee's core role is to provide assurance to the Board regarding the quality, competitiveness and integrity of the Group's R&D activities by way of meetings and dialogue with our R&D leaders and other scientist employees; visits to our R&D sites throughout the world; and review and assessment of:

- the approaches we adopt in respect of our chosen therapy areas
- the scientific technology and R&D capabilities we deploy
- the decision-making processes for R&D projects and programmes
- the quality of our scientists and their career opportunities and talent development
- benchmarking against industry and scientific best practice, where appropriate.

The Science Committee periodically reviews important bioethical issues that we face, and assists in the formulation of, and agrees on behalf of the Board, appropriate policies in relation to such issues. It may also consider, from time to time, future trends in medical science and technology. The Science Committee does not review individual R&D projects but does review, on behalf of the Board, the R&D aspects of specific business development or acquisition proposals and advises the Board on its conclusions.

During 2017, the members of the Science Committee, all of whom have a knowledge of, or an interest in, life sciences, were Bruce Burlington (Chairman of the Committee) until his retirement from the Board on 31 August 2017, Geneviève Berger, Nazneen Rahman from her appointment as a Non-Executive Director on 1 June 2017 and Marcus Wallenberg. As usual, the EVP, GMD; the EVP, IMED; and the EVP, MedImmune, participated in meetings of the Science Committee as co-opted members in 2017. The Vice-President, IMED Operations acts as secretary to the Science Committee. The appointment of a new Chairman of the Science Committee is pending.

The Science Committee met twice in person in 2017, in London, UK and Cambridge, UK, and held one other meeting by telephone to review aspects of the Group scorecard in relation to 'Achieve Scientific Leadership' targets.

The Science Committee's terms of reference are available on our website, www.astrazeneca.com.

US corporate governance requirements

Our ADSs are traded on the NYSE and, accordingly, we are subject to the reporting and other requirements of the SEC applicable to foreign private issuers. Section 404 of the Sarbanes-Oxley Act requires companies to include in their annual report on Form 20-F filed with the SEC, a report by management stating its responsibility for establishing internal control over financial reporting and to assess annually the effectiveness of such internal control. We have complied with those provisions of the Sarbanes-Oxley Act applicable to foreign private issuers.

The Board continues to believe that the Group has a sound corporate governance framework, good processes for the accurate and timely reporting of its financial position and results of operations, and an effective and robust system of internal controls. We have established a Disclosure Committee, further details of which can be found in the Disclosure Committee section below.

The Directors' assessment of the effectiveness of internal control over financial reporting is set out in the Directors' Annual Report on Internal Controls over Financial Reporting on page 128.

We are required to disclose any significant ways in which our corporate governance practices differ from those followed by US companies under the Listing Standards. In addition, we must comply fully with the provisions of the Listing Standards relating to the composition, responsibilities and operation of audit committees, applicable to foreign private issuers. These provisions incorporate the rules concerning audit committees implemented by the SEC under the Sarbanes-Oxley Act. We have reviewed the corporate governance practices required to be followed by US companies under the Listing Standards and our corporate governance practices are generally consistent with those standards.

Business organisation

Disclosure Committee

Our disclosure policy provides a framework for the handling and disclosure of inside information and other information of interest to shareholders and the investment community. It also defines the role of the Disclosure Committee. The members of the Disclosure Committee in 2017 were: the CFO, who chaired the Disclosure Committee; the EVP, GMD (who is also the Company's Chief Medical Officer); the EVP, GPPS, Global Medical Affairs and Corporate Affairs; the General Counsel; the Vice-President, Corporate Affairs; the Head of Investor Relations; and the Vice-President Finance, Group Controller. Other senior executives attend its meetings on an agenda-driven basis. The Deputy Company Secretary acted as secretary to the Disclosure Committee. The Disclosure Committee meets regularly to assist and inform the decisions of the CEO concerning inside information and its disclosure. Periodically, it reviews our disclosure controls and procedures and its own operation as part of work carried out to enable management and the Board to assure themselves that appropriate processes are operating for both our planned disclosures, such as our quarterly results announcements and scheduled investor relations events, and our unplanned disclosures in response to unforeseen events or circumstances.

Disclosure of information to auditors

The Directors who held office at the date of approval of this Annual Report confirm that, so far as they are each aware, there is no relevant audit information of which the Company's auditors are unaware; and each Director has taken all the steps that he or she ought to have taken as a Director to make himself or herself aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

Global Compliance and Internal Audit Services (IA)

The role of the Global Compliance function is to help the Group achieve its strategic priorities by doing business the right way, with integrity and high ethical standards. Global Compliance continues to focus on ensuring the delivery of an aligned approach to compliance that addresses key risk areas across the business, including risks relating to external parties and anti-bribery/anti-corruption. Our priorities include improving compliance behaviours through effective training and communication; monitoring compliance with our Code of Ethics and supporting requirements; providing assurance that we are conducting appropriate risk assessments and due diligence on third parties whom we engage for services; and ensuring that employees and external parties can raise any concerns. Global Compliance and IA work with various specialist compliance functions throughout our organisation to co-ordinate compliance activities.

We take all alleged compliance breaches and concerns extremely seriously, and investigate them and report the outcome of such investigations to the Audit Committee, as appropriate. Internal investigations are undertaken by staff from our Global Compliance, Human Resources and/or Legal functions. When necessary, external advisers are engaged to conduct and/or advise on investigations.

Serious breaches are raised with the Audit Committee. Where a significant breach has occurred, management, in consultation with our Legal function, will consider whether the Group needs to disclose and/or report the findings to a regulatory or governmental authority.

Global Compliance provides direct assurance to the Audit Committee on matters concerning compliance issues, including an analysis of compliance breaches. Complementing this, IA carries out a range of audits that include compliance-related audits and reviews of the assurance activities of other Group assurance functions. The results from these activities are reported to the Audit Committee.

IA is established by the Audit Committee on behalf of the Board and acts as an independent and objective assurance function guided by a philosophy of adding value to improve the operations of the Group. The scope of IA's responsibilities encompasses, but is not limited to, the examination and evaluation of the adequacy and effectiveness of the Group's governance, risk management, and internal control processes in relation to the Group's defined goals and objectives.

Internal control objectives considered by IA include:

> consistency of operations or programmes with established objectives and goals and effective performance
> effectiveness and efficiency of operations and employment of resources
> compliance with significant policies, plans, procedures, laws and regulations
> reliability and integrity of management and financial information processes, including the means to identify, measure, classify, and report such information
> safeguarding of assets.

Based on its activity, IA is responsible for reporting significant risk exposures and control issues identified to the Board and to senior management, including fraud risks, governance issues, and other matters needed or requested by the Audit Committee. It may also evaluate specific operations at the request of the Audit Committee or management, as appropriate.

Code of Ethics

Our Code of Ethics (the Code), which is available on our website, www.astrazeneca.com, applies to all full-time and part-time Directors, officers, employees and temporary staff, in all companies within our Group worldwide. A Finance Code complements the Code and applies to the CEO, the CFO, the Group's principal accounting officers (including key Finance staff in major overseas subsidiaries) and all Finance function employees. This reinforces the importance of the integrity of the Group's Financial Statements, the reliability of the accounting records on which they are based and the robustness of the relevant controls and processes.

The Code is at the core of our compliance programme. It has been translated into approximately 40 languages and outlines how our commitments to ethics, honesty, integrity and responsibility are to be realised through consistent actions across all areas of the business.

Compliance with the Code is mandatory and every employee receives annual training on it which they are required to complete. The Code was updated in 2017 to strengthen employee understanding and adherence by outlining our commitments in simple terms and focusing on why these commitments matter. The updated Code is comprised of our Company Values, expected behaviours and Global Policies, and is further supported by requirements at the global, local and business-unit level, to provide clear guidance and direction to employees in carrying out their daily work. The Code is also reviewed periodically and updated to take account of changing legal and regulatory obligations.

The Code recommends that employees report possible violations to their line managers or to their local Human Resources, Legal, or Compliance partners. The Code also contains information on how to report possible violations through our Helpline, which includes the AZethics telephone lines, the AZethics website, and the Global Compliance email and postal addresses. The externally-operated website is available in 38 languages, and the phone lines are operable in 96 countries, to facilitate reporting. The Helpline is available to both employees and to external parties to report any concerns. Reports can be made anonymously where desired and where permitted by local law. Anyone who raises a potential breach in good faith is fully supported by management.

The majority of cases come to our attention through management and self-reporting, which can be seen as an indication that employees are comfortable in raising their concerns with line managers or local Human Resources, Legal or Compliance, as recommended in the Code and reinforced in the 2017 Code training. In addition, in 2017, 359 reports of alleged compliance breaches or other ethical concerns were made through the Helpline, including reports made by any anonymous route that could be considered whistleblowing; in 2016 there were 320 reports.

Other matters

Corporate governance statement under the UK Disclosure Guidance and Transparency Rules (DTR)

The disclosures that fulfil the requirements of a corporate governance statement under the DTR can be found in this section and in other parts of this Annual Report as listed below, each of which is incorporated into this section by reference:

> major shareholdings
> Articles.

Shareholder Information from page 228.

Subsidiaries and principal activities

The Company is the holding company for a group of subsidiaries whose principal activities are described in this Annual Report. The Group's principal subsidiaries and their locations are given in Group Subsidiaries and Holdings in the Financial Statements from page 190.

Branches and countries in which the Group conducts business

In accordance with the Companies Act 2006, we disclose below our subsidiary companies that have representative or scientific branches/offices outside the UK:

> AstraZeneca UK Limited: Algeria (scientific office), Angola, Belarus, Chile, Costa Rica, Croatia, Cuba, Dubai (branch office), Georgia, Ghana (scientific office), Jordan, Kazakhstan, Romania, Russia, Saudi Arabia (scientific office), Serbia, Slovenia (branch office), Syria, Ukraine and Yemen (scientific office)
> AstraZeneca AB: Egypt (scientific office) and Slovakia (branch office)
> AstraZeneca Singapore Pte Limited: Vietnam
> Astra Export & Trading AB: United Arab Emirates (branch office).

Distributions to shareholders – dividends for 2017

Details of our distribution policy are set out in the Financial Review from page 66 and Notes 22 and 23 to the Financial Statements from page 171.

The Company's dividend for 2017 of $2.80 (202.5 pence, SEK 22.37) per Ordinary Share amounts to, in aggregate, a total dividend payment to shareholders of $3,545 million. An employee share trust, AstraZeneca Share Retention Trust, waived its right to a dividend on the Ordinary Shares that it holds and instead received a nominal dividend.

A shareholders' resolution was passed at the 2017 AGM authorising the Company to purchase its own shares. The Company did not purchase any of its own shares in 2017. On 31 December 2017, the Company did not hold any shares in treasury.

Going concern accounting basis

Information on the business environment in which AstraZeneca operates, including the factors underpinning the industry's future growth prospects, is included in the Strategic Report. Details of the product portfolio of the Group are contained in both the Strategic Report (in the Therapy Area Review from page 46) and the Directors' Report. Information on patent expiry dates for key marketed products is included in Patent Expiries of Key Marketed Products from page 208. Our approach to product development and our development pipeline are also covered in detail with additional information by therapy area in the Strategic Report.

The financial position of the Group, its cash flows, liquidity position and borrowing facilities are described in the Financial Review from page 66. In addition, Note 26 to the Financial Statements from page 175 includes the Group's objectives, policies and processes for managing capital; financial risk management objectives; details of its financial instruments and hedging activities; and its exposures to credit, market and liquidity risk. Further details of the Group's cash balances and borrowings are included in Notes 16 and 17 to the Financial Statements from page 160.

Having assessed the principal risks and other matters considered in connection with the viability statement on page 63, the Directors consider it appropriate to adopt the going concern basis of accounting in preparing the Annual Report and Financial Statements.

Changes in share capital

Changes in the Company's Ordinary Share capital during 2017, including details of the allotment of new shares under the Company's share plans, are given in Note 22 to the Financial Statements on page 171.

Directors' shareholdings

The Articles require each Director to be the beneficial owner of Ordinary Shares in the Company with an aggregate nominal value of $125 (which currently represents at least 500 shares because each Ordinary Share has a nominal value of $0.25). Such holding must be obtained within two months of the date of the Director's appointment. At 31 December 2017, all of the Directors complied with this requirement and full details of each Director's interests in shares of the Company are set out in Directors' interests in shares on pages 116 and 117, along with information about the shareholding expectations of the Remuneration Committee (in respect of Executive Directors and SET members) and the Board (in respect of Non-Executive Directors).

Political donations

Neither the Company nor its subsidiaries made any EU political donations or incurred any EU political expenditure in 2017 and they do not intend to do so in the future in respect of which shareholder authority is required, or for which disclosure in this Annual Report is required, under the Companies Act 2006. However, to enable the Company and its subsidiaries to continue to support interest groups or lobbying organisations concerned with the review of government policy or law reform without inadvertently breaching the Companies Act 2006, which defines political donations and other political expenditure in broad terms, a resolution will be put to shareholders at the 2018 AGM, similar to that passed at the 2017 AGM, to authorise the Company and its subsidiaries to:

- make donations to political parties or independent election candidates
- make donations to political organisations other than political parties
- incur political expenditure, up to an aggregate limit of $250,000.

Corporate political contributions in the US are permitted in defined circumstances under the First Amendment of the US Constitution and are subject to both federal and state laws and regulations. In 2017, the Group's US legal entities made contributions amounting in aggregate to $1,282,250 (2016: $1,568,250) to national political organisations, state-level political party committees and to campaign committees of various state candidates. No corporate donations were made at the federal level and all contributions were made only where allowed by US federal and state law. We publicly disclose details of our corporate US political contributions, which can be found on our website, www.astrazeneca-us.com/sustainability/corporate-transparency. The annual corporate contributions budget is reviewed and approved by the US Vice-President, Corporate Affairs and the President of our US business to ensure robust governance and oversight. US citizens or individuals holding valid green cards exercised decision making over the contributions and the funds were not provided or reimbursed by any non-US legal entity. Such contributions do not constitute political donations or political expenditure for the purposes of the Companies Act 2006 and were made without any involvement of persons or entities outside the US.

Significant agreements

There are no significant agreements to which the Company is a party that take effect, alter or terminate on a change of control of the Company following a takeover bid. There are no persons with whom we have contractual or other arrangements, who are deemed by the Directors to be essential to our business.

Use of financial instruments

The Notes to the Financial Statements, including Note 26 from page 175, include further information on our use of financial instruments.

Annual General Meeting

The Company's AGM will be held on 18 May 2018. The meeting place will be in London, UK. A Notice of AGM will be sent to all registered holders of Ordinary Shares and, where requested, to the beneficial holders of shares.

External auditor

A resolution will be proposed at the AGM on 18 May 2018 for the re-appointment of PricewaterhouseCoopers LLP (PwC) as auditor of the Company. PwC was first appointed as auditor of the Company in 2017, in succession to KPMG LLP. During 2017, KPMG and PwC undertook various non-audit services. More information about this work and the audit and non-audit fees that we have paid are set out in Note 30 to the Financial Statements on page 189. The external auditor is not engaged by AstraZeneca to carry out any non-audit work in respect of which it might, in the future, be required to express an audit opinion. As explained more fully in the Audit Committee Report from page 100, the Audit Committee has established pre-approval policies and procedures for audit and non-audit work permitted to be carried out by the external auditor and has carefully monitored the objectivity and independence of the external auditor throughout 2017.

Directors' Report

The Directors' Report, which has been prepared in accordance with the requirements of the Companies Act 2006, comprises the following sections:

- Chairman's Statement
- Chief Executive Officer's Review
- Business Review
- Therapy Area Review
- Financial Review: Financial risk management
- Corporate Governance: including the Audit Committee Report and Corporate Governance Report
- Directors' Responsibility Statement
- Development Pipeline
- Sustainability: supplementary information
- Shareholder Information

and has been approved by the Board and signed on its behalf.

The Board considers this Annual Report, taken as a whole, to be fair, balanced and understandable, and provides the necessary information for shareholders to assess AstraZeneca's position and performance, business model and strategy.

On behalf of the Board
A C N Kemp
Company Secretary

2 February 2018

Audit Committee Report

In this Report, we describe the work of the Audit Committee (the Committee) and the significant issues it considered in 2017. Our main priorities were to receive assurance on the soundness of financial reporting, effective risk identification and management, and compliance with the AstraZeneca Code of Ethics and relevant legislation.

"The integrity of AstraZeneca's financial reporting is underpinned by effective internal controls, appropriate accounting practices and policies, and the exercise of good judgement."

Financial reporting

The integrity of AstraZeneca's financial reporting is underpinned by effective internal controls, appropriate accounting practices and policies, and the exercise of good judgement. The Committee reviewed, at least quarterly, the Company's significant accounting matters, including contingent liabilities, revenue recognition, and deferred tax and, where appropriate, challenged management's decisions before approving the accounting policies applied. During 2017, the Committee reviewed significant restructuring programmes initiated from 2013 onwards, including accounting for restructuring charges, control over capital expenditure and the projection for their completion. The Committee continued to monitor the inclusion of Externalisation Revenue in AstraZeneca's Statement of Comprehensive Income. For more information on Externalisation Revenue, please refer to the Financial Review from page 66. The Committee also looked closely at intangible asset impairment reviews, legal provisions and other related charges, to ensure that items are appropriately accounted for in 'Reported' and 'Core' results.

Following the competitive tender of the Company's external audit services in 2015, PwC were appointed as the Company's external auditor for the year commencing on 1 January 2017 having received shareholder approval at the Company's AGM. The Committee monitored PwC's review of the Group's historical accounting practices, policies and processes to understand any difference in approach or interpretation of relevant standards and support continuous improvement.

Risk identification and management

During the year, the Committee regularly reviewed the Company's approach to risk management, its risk reporting framework and risk mitigation. When identifying risks, we consider the total landscape of enduring risks which are long-standing and business-as-usual in nature. We then consider more specific and current risks – key active risks – which are challenging our business presently. Finally, in order that we scan the horizon and identify risks which may challenge us in the future, we also consider emerging risks. These deliberations provided a framework for the Committee's activities in 2017 and

provided the context for the Committee's consideration of the Company's viability statement and the 'stress test' analysis that underpins the assurance provided by it under which key profitability, liquidity and funding metrics are tested against a severe downside scenario which assumes that the significant risks modelled in the planning process will crystallise. For more detail on the viability statement, please refer to the Risk Overview from page 63.

The Committee's consideration of risk management was supported by 'deep dive' reviews of key activities such as:

- cyber defence capability and the continuous enhancements to safeguard critical applications, information assets and business continuity
- supply capability necessary for the successful delivery of the Company's biologics portfolio
- a review of commercial operations in Middle East and Africa and Latin America
- the approach to pricing, reimbursement and market access for oncology medicines
- post-acquisition reviews of Acerta Pharma and ZS Pharma including the circumstances connected with the two FDA Complete Response Letters relating to ZS-9.

In addition to these deep dive reviews, during visits to the Company's businesses in Brazil, Germany and the UK, the Committee increased its understanding of the business, environment and associated risks in each location, together with the action taken to ensure a good compliance culture is maintained. Further information on the Company's Principal Risks can be found in the Risk Overview from page 63.

Compliance with the Code of Ethics

The Committee's priorities continue to include maintaining compliance with the Company's Code of Ethics (which replaced our Code of Conduct in 2017), high ethical standards, and operating within the law in all countries where we conduct business or have interactions. The new Code of Ethics, the underlying principles for which have not changed, is written in more simple and accessible language to empower decision making that reflects our Company Values, expected behaviours and key policy principles. Further information on our Code of Ethics is set out from page 40. The Committee monitored and reviewed compliance with our Code of Ethics, including the effectiveness of our anti-bribery and anti-corruption controls, across the Group. The Committee prioritises its focus on countries/regions where we have significant operations and countries in which doing business is generally considered to pose higher compliance risks such as Argentina, China, Germany, Malaysia, Mexico, Sub-Saharan Africa, the UK and the US.

Engagement with senior leaders

The Committee considers it important to interact with members of management below the SET and to have wider engagement with the Company's employees. In November, members of the Committee visited the Company's Commercial leadership team in Cotia, Brazil. The Committee members discussed the opportunities and challenges the local marketing company faces, and the current and emerging risks arising from the development and successful delivery to patients of mature medicines, as well as those from our rapidly evolving pipeline. The Committee also met informally with senior leaders from the Operations, IS/IT, Finance, Legal and Oncology pricing and reimbursement teams. In October, I visited marketing company sites in Germany and the UK to discuss risk management, compliance controls and compliance culture with the management teams there, and I also held 'town hall' meetings with the employees at each site.

Changes to the membership of the Committee

Finally, the membership of the Committee underwent change during the year. Bruce Burlington and Ann Cairns retired from the Board and Committee, and I would like to offer my sincere thanks to Bruce for his valued diligence and commitment to the work of the Committee since 2011 and to Ann for her contribution over the last three years.

The Committee was also strengthened by the appointments of Philip Broadley and Sheri McCoy who between them bring extensive and relevant international business, pharmaceutical and accounting experience to the work of the Committee.

We hope that you find this information helpful in understanding the work of the Committee. Our dialogue with our shareholders is valued greatly and we welcome your feedback on this Audit Committee Report.

Yours sincerely

Rudy Markham
Chairman of the Audit Committee

Audit Committee Report *continued*

Committee membership and attendance

All Committee members are Non-Executive Directors and considered by the Board to be independent under the UK Corporate Governance Code. The Committee's members are Rudy Markham (Committee Chairman), Philip Broadley, Sheri McCoy and Shriti Vadera. Bruce Burlington and Ann Cairns were members of the Committee until they retired from the Board and Committee on 31 August and 27 April 2017, respectively.

In December 2017, the Board determined that, for the purposes of the UK Corporate Governance Code, at least one member of the Committee has recent and relevant financial experience, and Rudy Markham and Philip Broadley were determined to be financial experts for the purposes of the Sarbanes-Oxley Act. In February 2018, the Board determined that the members of the Committee as a whole have competence relevant to the sector in which the Company operates as Rudy Markham and Shriti Vadera have served as Non-Executive Directors of the Company for nine and seven years respectively, and Sheri McCoy has had a 30-year career in the pharmaceutical industry. The Board of Directors' biographies on pages 88 and 89 contain details of each Committee member's skills and experience.

The Committee held five meetings in 2017 and Committee members' attendance is set out in the table on page 87.

Role and operation of the Committee

The Committee's terms of reference are available on our website, www.astrazeneca.com.

The Committee regularly reports to the Board on how it discharges its main responsibilities, which include:

- monitoring the integrity of the Company's financial reporting and formal announcements relating to its financial performance, and reviewing significant financial reporting judgements contained within them
- ensuring the Company's Annual Report and Accounts present a fair, balanced and understandable assessment of the Company's position and prospects by carrying out a formal review of the documentation and receiving a year-end report from management on the internal controls, governance, compliance, assurance and risk management activities that support the assessment
- reviewing the effectiveness of the Company's internal financial controls, internal non-financial controls, risk management systems (including whistleblowing procedures) and compliance with laws and the AstraZeneca Code of Ethics
- monitoring and reviewing the role, resources and effectiveness of the Company's IA function, its Compliance function, the external audit process and the Company's relationship with its external auditor
- monitoring and reviewing the external auditor's independence and objectivity
- ensuring the provision of non-audit services by the external auditor are appropriate and in accordance with the policy approved by the Committee
- making recommendations to the Board for seeking shareholder approval relating to the appointment, reappointment and removal of the external auditor, and to approve the remuneration and terms of engagement of the external auditor
- monitoring the Company's response to any external enquiries and investigations regarding matters within the Committee's area of responsibility.

Following each Committee meeting, the Committee Chairman informs the Board of the principal matters the Committee considered and of any significant concerns it has or that have been reported by the external auditor, the Vice-President, IA or the Chief Compliance Officer. The Committee identifies matters that require action or improvement and makes recommendations on the steps to be taken. The Committee's meeting minutes are circulated to the Board.

The Committee's work is supported by valuable insight gained from its interactions with other Board Committees, senior executives, managers and external experts. The Committee meetings are routinely attended by the CFO; the General Counsel; the Chief Compliance Officer; the Vice-President, IA; the Vice-President, Group Financial Controller; and the Company's external auditor. The CEO attends on an agenda-driven basis.

In addition, the Committee and separately the Committee Chairman, meet privately with the CFO; Chief Compliance Officer; General Counsel; Vice-President, IA; and the Company's external auditor on an individual basis to ensure the effective flow of material information between the Committee and management.

Activities of the Committee in 2017

During 2017 and in January 2018, the Committee considered and discussed the following standing items:

Financial reporting

- key elements of the Financial Statements and the estimates and judgements contained in the Company's financial disclosures. Accounting matters considered included the areas described in the Financial Review under 'Critical accounting policies and estimates' (with a focus on accounting issues relevant to revenue recognition, litigation and taxation matters, goodwill and intangible asset impairment) from page 79 and other important matters such as monitoring the accounting for Externalisation Revenue in the Group's Consolidated Statement of Comprehensive Income
- the Company's presentation of deferred tax assets and collateral balances, and foreign exchange gains and losses relating to the classification of certain non-structural intra-Group loans, in each case supported by papers prepared by management and the external auditor
- the external auditor's reports on its audit of the Group Financial Statements, and reports from management, IA, Global Compliance and the external auditor on the effectiveness of our system of internal controls and, in particular, our internal control over financial reporting
- the going concern assessment and adoption of the going concern basis in preparing this Annual Report and the Financial Statements. More information on the basis of preparation of Financial Statements on a going concern basis is set out in the Financial Statements on page 139
- the preparation of the Directors' viability statement and the adequacy of the analysis supporting the assurance provided by that statement
- compliance with applicable provisions of the Sarbanes-Oxley Act. In particular, the status of compliance with the programme of internal controls over financial reporting implemented pursuant to Section 404 of the Sarbanes-Oxley Act. The Committee continued its focus on IT controls in the context of the changes to the Group's IT environment. More information about this is set out in the Sarbanes-Oxley Act Section 404 section of the Financial Review on page 83.

Risk and Compliance

- the Company's principal, enduring and emerging risks, including the Company's risk management approach, risk reporting framework and risk mitigation. More information about the Principal Risks faced by the Company is set out in the Risk Overview section from page 63
- quarterly reports from the General Counsel on the status of significant litigation matters and governmental investigations
- quarterly reports of work carried out by IA and Finance including the status of follow-up actions with management
- quarterly reports from Global Compliance regarding key compliance incidents (both substantiated and unsubstantiated), trends arising and dispersion of incidents across the Group's business functions including any corrective actions taken so that the Committee could assess the effectiveness of controls, and monitor and ensure the timeliness of remediation
- data from reports made by employees via the AZethics helpline, online facilities and other routes regarding potential breaches of the Code of Ethics, together with the results of enquiries into those matters
- reports from the Group Treasury function, in particular, concerning the Company's liquidity and cash position, credit risk and the appropriateness of its investment management policy in the context of the current economic situation

- the preparation of the Directors' Modern Slavery Act Statement and the adequacy of the monitoring, review and education relating to modern slavery risks conducted across the organisation during the year.

External audit

- audit and non-audit fees of the external auditor during 2017, including the objectivity and independence of the external auditor through the application of the Audit and Non-Audit Services Pre-Approval Policy as described further below. Further information about the audit and non-audit fees for 2017 is disclosed in Note 30 to the Financial Statements on page 189.

Performance assessment

- effectiveness review of IA by considering its performance against the internal audit plan and key activities. The Committee noted how IA had delivered value to the business during the year by providing assurance over compliance with significant policies, plans, procedures, laws and regulations, as well as risk-based audits across a broad range of key business activities, introducing thematic reporting to the business, and adapting the audit plan to respond to new or arising risks over the year
- the Committee conducted the annual evaluation of its own performance with each Committee member responding to a web-based questionnaire prepared by an external third party. The effectiveness review of the Committee was assessed as high, with the Committee continuing to provide challenge and assurance over key accounting areas of judgement. A feature of the Committee's oversight was said to be its targeting of 'deep dive' sessions to further its understanding of the challenges facing parts of the business as well as risk management and its visibility to different stakeholders through site visits and informal discussions with employees.

Matters considered and discussed by the Committee in addition to its usual business as described above included:

Business updates

- regular updates from the IT/IS team on matters including: the alignment of critical systems and information assets to the Group's cyber defence capability; enhancing segregated networks; mandatory training on cyber security to support effective risk identification and mitigation; and learning from a simulated global cyber security crisis exercise, and from high-profile cyber-attacks affecting other large organisations during 2017
- reviews of the Company's significant restructuring programmes initiated from 2013 onwards, including accounting for restructuring charges, control over capital expenditure and the projection for their completion
- supply chain readiness for launching new products, a review of the Group's biologics capability and manufacturing capacity, and an overview of manufacturing site-preparedness for an increasingly complex regulatory environment
- review and mitigation for Brexit scenarios, in particular, funding sources, cash management activities, insurance and derivative contracts in the context of the UK losing passporting rights for banking services
- key compliance risks arising from our activities in MEA and Latin America and the programme of strengthening controls and processes, streamlining geographical and organisational structures, and creating a culture of accountability
- consideration of major trends regarding pricing, reimbursement and market access in oncology, and the key external and internal risks the Company faces in this context
- post-acquisition reviews of Acerta Pharma and ZS Pharma including the circumstances connected with the two FDA CRLs relating to ZS-9
- a review of the arrangements, activities and operation of the Group's Global Business Services unit.

External audit, accounting and regulatory changes

- monitoring the external audit transition process to ensure an effective transition of the Group's external auditor
- a review of the governance arrangements for the Pensions Trustee of the AstraZeneca UK Pension Fund
- preparation and policy changes required for the implementation of IFRS 9 and IFRS 15 with effect from 1 January 2018
- preparation for compliance with the General Data Protection Regulation which is due to come into force on 25 May 2018.

Significant financial reporting issues considered by the Committee in 2017

Revenue recognition

The US is our largest single market and sales accounted for 30.6% of our Product Sales in 2017. Revenue recognition, particularly in the US, is impacted by rebates, chargebacks, cash discounts and returns (for more information, please see the Financial Review from page 66). The Committee pays particular attention to management's estimates of these items, its analysis of any unusual movements and their impact on revenue recognition informed by commentary from the external auditor.

Valuation and possible impairment of intangible assets

The Group carries significant intangible assets on its balance sheet arising from the acquisition of businesses and IP rights to medicines in development and on the market. Each quarter, the CFO outlines the carrying value of the Group's intangible assets and, in respect of those intangible assets that are identified as at risk of impairment, the difference between the carrying value and management's current estimate of discounted future cash flows for 'at risk' products (the headroom). Products will be identified as 'at risk' because the headroom is small or, for example, in the case of a medicine in development, there is a significant development milestone such as the publication of clinical trial results which could significantly alter management's forecasts for the product.

In 2017, the Committee considered the annual impairment reviews of the Group's intangible assets, including *Byetta*, *FluMist*, *Movantik*/*Moventig*, ZS-9 and tralokinumab. The considerations of the *Byetta* and *Movantik*/*Moventig* impairment reviews covered anticipated generic entry in the US, and a re-assessment of the market opportunity in the context of the OIC indication respectively. The *FluMist* impairment review included the impact of the announcement in June 2017 by the Advisory Committee on Immunization Practices of the Center for Disease Control and Prevention of an interim recommendation on the use of *FluMist Quadrivalent* in the US during the 2017/2018 influenza season, which followed a similar announcement in 2016 in respect of the 2016/2017 influenza season. The Committee also assessed the impact of the second CRL received from the FDA for ZS-9.

Impairments were taken on *Byetta*, *FluMist* and *Movantik/Moventig*, and tralokinumab was fully impaired following the disappointing clinical read out for the Phase III programme in severe, uncontrolled asthma in November.

Litigation and contingent liabilities

The Committee was regularly informed by the General Counsel and external auditor about IP litigation, product liability actions and governmental investigations that might result in fines or damages against the Company, to assess whether provisions should be taken and, if so, when and in what amount. Of the matters the Committee considered in 2017, the more significant included: the Texas Attorney General matters regarding *Crestor* and *Seroquel*; and the *Nexium* and *Prilosec* product liability litigation in the US. The Company has had success in defending the *Nexium* substance patent in the Canadian Supreme Court by overturning invalidity decisions from lower courts but it is also managing third party patent infringement challenges in the US for *Calquence* and *Imfinzi* (products which received FDA approval during the year). The Company continues to defend claims by generics companies for damages relating to the US *Pulmicort* patent litigation. Further information about the Company's litigation and contingent liabilities is set out in Note 28 to the Financial Statements from page 182.

Tax accounting

The Committee reviews the Company's approach to tax including governance, risk management and compliance, tax planning,

dealings with tax authorities and the level of tax risk the Company is prepared to accept. The full statement, which was published in December 2017, can be found at www.astrazeneca.com.

The Committee also reviewed the impact of the reduction in US federal tax rates as a result of tax reform in the US, which resulted in a reduction of deferred tax balances of $617 million.

Retirement benefits

Pension accounting continues to be an important area of focus recognising the level of pension fund deficit and its sensitivity to small changes in interest rates, which the Committee continues to monitor carefully. The Committee reviewed the Company's defined benefit pension global funding objective and principles, focusing in particular on the Company's main defined benefit pensions obligations in Sweden, the UK and the US.

Internal controls

The Committee receives a report of the matters considered by the Disclosure Committee during each quarter. During the year, a number of internal control weaknesses were reported relating to a new IT system implemented in January 2017 (used to manage customer deduction programmes in the US) and over the completeness of reports used to validate the adequacy of supporting documentation and approval of manual journals. These were remediated in-year with validation testing performed to ensure operational effectiveness. Across the wider internal control environment, a large number of design improvements have been implemented to further strengthen, enhance and de-risk our internal control over financial reporting. At the January 2018 meeting, the CFO presented to the Committee the conclusions of the CEO and the CFO following the evaluation of the effectiveness of our disclosure controls and procedures required by Item 15(a) of Form 20-F at 31 December 2017. Based on their evaluation, the CEO and the CFO concluded that, as at that date, we maintained an effective system of disclosure controls and procedures.

For further information on the Company's internal controls, please refer to the Accountability section in the Corporate Governance Report on page 96.

External auditor

Following a competitive tender carried out in 2015, a resolution to approve the appointment of PwC for the financial year ending 31 December 2017 was passed by shareholders at the Company's AGM in April 2017. KPMG LLP (KPMG), who formerly held office, worked with PwC to ensure an orderly transition during the first half of the year. Richard Hughes is the lead partner at PwC.

Non-audit services and safeguards

The Committee maintains a policy (the Audit and Non-Audit Services Pre-Approval Policy) for the pre-approval of all audit services and permitted non-audit services undertaken by the external auditor, the principal purpose of which is to ensure that the independence of the external auditor is not impaired. The policy covers three categories of work: audit services; audit-related services; and tax services, the latter of which is significantly restricted such that no tax services are pre-approved under the policy. The policy defines the type of work that falls within each of these categories and the non-audit services that the external auditor is prohibited from performing under the rules of the SEC and other relevant UK and US professional and regulatory requirements.

The pre-approval procedures permit certain audit and audit-related services to be performed by the external auditor during the year, subject to annual fee limits agreed with the Committee in advance. Pre-approved audit and audit-related services below the clearly trivial threshold (within the overall annual fee limit) are subject to case-by-case approval by the Vice-President, Group Financial Controller.

The pre-approved audit services included services in respect of the annual financial statement audit (including quarterly and half-year reviews), attestation opinions under section 404 of the Sarbanes-Oxley Act, statutory audits for subsidiary entities, and other procedures to be performed by the independent auditor to be able to form an opinion on the Company's consolidated financial statements. The pre-approved audit-related services, which the Committee believes are services reasonably related to the performance of the audit or review of the Company's financial statements, included certain services related to acquisitions and disposals, financial statement audits of employee benefit plans, and internal controls reviews. The Committee is mindful of the 70% non-audit services fee cap under EU regulation, together with the overall proportion of fees for audit and non-audit services in determining whether to pre-approve such services.

The CFO (supported by the Vice-President, Group Financial Controller), monitors the status of all services being provided by the external auditor. Authority to approve work exceeding the pre-agreed annual fee limits and for any individual service above the clearly trivial threshold is delegated to the Chairman of the Committee together with one other Committee member in the first instance. A standing agenda item at Committee meetings covers the operation of the pre-approval procedures and regular reports are provided to the full Committee.

All non-audit services other than the pre-approved audit and audit-related services are approved by the Audit Committee on a case-by-case basis. In 2017, non-audit services provided to the Company by KPMG (prior to their cessation of appointment as the Group's auditor in April) included services provided in respect of the audit transition, interim review of the results of the Group for the quarter ended 31 March 2017 and provision of a comfort letter for the Company's capital market debt issuance. Following their appointment, PwC provided non-audit services including an interim review of the results of the Group for the six months ended 30 June 2017. Fees for non-audit services amounted to 4% of the fees paid to PwC for audit, audit-related and other services in 2017. A similar statistic has not been provided for KPMG for 2017 as this would not be meaningful given that no Group audit services were provided during the year.

In each case, KPMG and PwC were considered better placed than any alternative audit firm to provide these services in terms of their familiarity with the Company's business, skills, capability and efficiency. All such services were either within the scope of the pre-approved services set out in the Non-Audit Services Policy or were presented to Committee members for pre-approval.

Further information on the fees paid to PwC for audit, audit-related and other services is provided in Note 30 to the Financial Statements on page 189.

Assessing external audit effectiveness

In accordance with its normal practice, the Committee considered the performance of PwC and its compliance with the independence criteria under the relevant statutory, regulatory and ethical standards applicable to auditors.

The Committee assessed effectiveness taking into account the views of senior management within the finance function and regular Committee attendees, in particular, against five key factors namely: judgement; mind-set & culture; skills, character & knowledge; and quality control. The Committee felt that the first full year audit had been comprehensive; that the change of auditors had, as anticipated, brought a fresh approach and provided robust challenge to management proposals, and had led to improvements being incorporated throughout the control environment. Accordingly, the Committee was satisfied that there had been an effective transition of the Group's external auditor and concluded that the PwC audit was effective for the financial year commencing 1 January 2017.

In February 2018, the Committee recommended and the Board agreed to the reappointment of PwC as the Company's auditor for 2018. Accordingly, a resolution to re-appoint PwC as auditors will be put to shareholders at the Company's AGM in 2018.

Regulation

The Committee considers that the Company has complied with the Competition and Markets Authority's Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 in respect of its financial year commencing 1 January 2017.

Directors' Remuneration Report

As AstraZeneca's pipeline-driven transformation continues, and the Company is focused on its return to growth, the Remuneration Committee has taken care to ensure that the Company's remuneration arrangements remain aligned to its strategy.

Contents

As Chairman of the Remuneration Committee (the Committee), I am pleased to present AstraZeneca's Directors' Remuneration Report for the year ended 31 December 2017.

As AstraZeneca's pipeline-driven transformation continues and the Company is focused on its return to growth, the Committee has taken care to ensure that the Company's remuneration arrangements remain aligned to its strategy with strong links between long-term performance and our shareholders' experience. The Committee also considers the approach to remuneration arrangements across the business as part of ensuring we are able to attract, motivate and retain the talented employees needed to execute the strategy successfully.

Our Remuneration Policy, which aims to align the remuneration of Executive Directors with the long-term strategy of the business and wider shareholder experience, took effect from last year's AGM. The Remuneration Policy was approved by 96% of our shareholders, and I would like to thank shareholders for their support of the remuneration arrangements in place. We are not proposing to make any changes to the Remuneration Policy for 2018.

Our Remuneration Policy can be viewed on our website, www.astrazeneca.com/remunerationpolicy2017

Directors' Remuneration Report *continued*

Shareholder engagement

The Committee was disappointed with the level of support received in favour of the Annual Report on Remuneration for the year ended 31 December 2016. During 2017, the Committee Chairman engaged with shareholders and proxy voting agencies to set out the Committee's remuneration proposals for 2018 and to gather feedback ahead of this report being published.

In response to this feedback, we have increased the level of annual bonus disclosure and are proposing a number of changes to the bonus operation for 2018, as follows:

- The operation of the 2017 annual bonus – we have provided a detailed explanation of the three stages that the Committee goes through when determining annual bonus outcomes.
- The operation of the 2018 annual bonus – the Committee has reviewed the operation of the annual bonus plan. From 2018, performance will be assessed for each metric in the Group scorecard on a standalone basis for each Executive Director.
- Enhanced disclosure of pay-out ranges – we have disclosed the threshold and maximum performance hurdles for the Achieve Group Financial Targets and Achieve Scientific Leadership metrics for the 2017 performance year and are committed to disclosing those hurdles for Return to Growth metrics in next year's report.
- Simplification of measures – we have reduced the number of measures used for the 2018 annual bonus, including adopting a consolidated Return to Growth measure for which we will disclose the threshold and maximum performance hurdles immediately following payment.

We hope these improvements will increase shareholders' understanding of how our annual bonus scheme operates and demonstrate how actual performance and corresponding pay-outs align with both Company performance and the stretching targets set by the Committee.

The Committee also considered the concerns raised by some shareholders in relation to the AZIP, which were reflected in the level of shareholder support for the Annual Report on Remuneration for the year ended 31 December 2016. These concerns about the proposed change in operation of AZIP performance measures were balanced against concerns raised by other shareholders about the potential for the AZIP, in its existing form, to incentivise a focus on short-term performance.

Taking into account the differing shareholder views and noting that the AZIP is now a legacy plan under which no further awards will be granted, the Committee determined that the performance measures attached to extant AZIP awards should be operated as proposed, and as set out in the Remuneration Policy, reflecting the support given by the majority of those shareholders voting at the 2017 AGM.

Principal activities focused on by the Committee during 2017

2016 Directors' Remuneration Report and Remuneration Policy	> Preparation, review and approval of the 2016 Directors' Remuneration Report and Remuneration Policy > Consultation with shareholders and shareholder representative bodies on remuneration proposal ahead of 2017 AGM > Consideration of the low level of shareholder support received for the 2016 Directors' Remuneration Report at the AGM and how to address concerns raised > Consideration of the Committee Chairman's consultation with shareholders and shareholder representative bodies following the 2017 AGM
Annual bonus	> Approval of the 2016 Group scorecard outcome and determination of Executive Directors' annual bonus awards for 2016 > Review of bonuses granted to executives below SET level > Approval of Group scorecard targets used to assess 2017 annual bonus performance
Share plans	> Approval of 2014 PSP and 2013 AZIP performance outcomes > Approval of LTI grants > Approval of performance measures to attached to PSP awards granted in 2017 > Review and simplification of LTI rules > Review of projected outcomes for outstanding LTI awards
Other matters	> Approval of compensation arrangements for Executive Directors and SET members for 2017 > Review of AstraZeneca's compensation strategy > Review of analysis of key aspects of reward across the wider Group > Review of Chairman's fee > Review of compensation arrangements for companies acquired by AstraZeneca > Consideration of AstraZeneca's gender pay gap data and draft disclosure to be made in 2018 > Discussion of remuneration trends and shareholder views > Review of the Committee's performance, including comments arising from the annual Board evaluation > Review of the Committee's terms of reference

2017 performance highlights and remuneration outcomes

2017 performance

Pipeline delivery in 2017 was strong and AstraZeneca's Products Sales performance improved over the course of the year reflecting the focus on commercial execution as we continue to implement our strategy. We made encouraging progress across the main therapy areas. Our CVMD medicines *Brilinta* and *Farxiga* reached blockbuster status, we launched our first Respiratory biologic medicine, *Fasenra,* and new cancer medicines, *Imfinzi* and *Calquence*. As well as bringing five new medicines to patients in 2017, we continued to find more potential uses for existing treatments, including *Lynparza* and *Tagrisso*.

During the year, we successfully accelerated a number of significant opportunities, not expected to be achieved in 2017. For example, the accelerated approval for *Calquence*, the FDA regulatory submission for *Tagrisso* following its Breakthrough Therapy Designation and Priority Review status previously granted by the FDA, and the Breakthrough Therapy Designation granted by the FDA for *Imfinzi* on the basis of the interim results from the Phase III PACIFIC trial. The progression-free survival results of the MYSTIC Phase III trial, which showed that the combination of *Imfinzi* and tremelimumab did not meet a primary endpoint in 1st line Stage 4 NSCLC were disappointing, as was the delay to our plans for the launch of ZS-9. However, the number of successes far outweighed the disappointments, as we delivered a record number of approvals in major markets, including first approvals for *Imfinzi*, *Calquence*, *Fasenra* and *Bevespi*.

During 2017, we made encouraging progress on commercial execution and cost discipline. The Growth Platforms represented 68% of Total Revenue and grew by 5% (at actual exchange rates). Total Revenue (Product Sales and Externalisation Revenue) declined by 2% (at actual exchange rates), reflecting the impact of *Crestor*'s and *Seroquel XR*'s loss of exclusivity in the US. Externalisation Revenue grew by 37% (at actual exchange rates). Of particular significance was our global strategic collaboration with MSD to co-develop and co-commercialise *Lynparza* for multiple cancer types. This strategic collaboration between two global oncology leaders, will increase the possibilities for more treatment options for more cancers and is expected to provide a significant amount of income in the years to come, as well as a favourable impact on development costs. Our gross margin ratio for the year fell by one percentage point, impacted by the decline of sales on medicines where we have lost exclusivity and the ramp-up of manufacturing capacity for new medicines. Core R&D and SG&A costs each reduced by 4% (at actual exchange rates) in the year reflecting our continued focus on cost discipline.

2017 remuneration outcomes

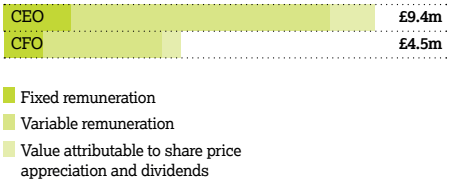
The performance measures used in our variable remuneration are closely aligned with Company strategy, ensuring our Executive Directors are only rewarded for delivery of stretching and appropriately balanced financial, non-financial and individual performance targets. The Committee's evaluation has ensured that executive reward reflects the overall performance of the business and shareholder experience. Valuable insight was provided by the Science Committee for the assessment of science-related matters and by the two Committee members who are also members of the Audit Committee.

When considering business performance together with the Executive Directors' individual performance, annual bonus awards equivalent to 157% of base salary and 141% of base salary were awarded to Mr Soriot and Mr Dunoyer respectively, reflecting the Group scorecard outcome of 157% of target bonus. The Committee determined that this outcome was appropriate having considered the Group scorecard outcome in the context of overall business and individual performance over 2017. One third of the bonus is converted into AstraZeneca shares that are deferred for three years to ensure further alignment with shareholders.

The three-year performance period for PSP awards granted to Executive Directors in 2015 ended on 31 December 2017. Performance against the targets attached to those awards will result in the awards vesting at 77% of maximum. The shares are subject to a further two-year holding period before vesting and being released. The two performance tests (progressive dividend and 1.5 times dividend cover) attached to AZIP awards granted to Executive Directors in 2014 were met in all four years of the performance period which ended on 31 December 2017, with the result that 100% of this award will vest. The shares are subject to a further four-year holding period and are due to vest and be released on 1 January 2022.

The resultant single total figures of remuneration for both Mr Soriot and Mr Dunoyer are set out on page 110. The following chart breaks down their single figure totals into fixed and variable pay with the proportion attributable to share price appreciation and dividends highlighted. As can be seen, the majority of the single total figure comes from variable pay which is linked to the performance of the business and shareholder experience. In the case of the CEO, 12% of the single figure total is as a direct result of the growth in value of our shares and dividends paid since awards were made, further demonstrating the link between the remuneration of the Executive Directors and the experience of our shareholders.

2017 single total figure of remuneration



Remuneration in 2018

The Committee considers that rewarding the Executive Directors appropriately is key to the continued success of the Company and has reviewed the 2018 remuneration arrangements for both Executive Directors.

The Committee is mindful of the tension between the UK executive pay environment and the highly competitive global market for talented executives capable of leading a global innovative biopharmaceutical company to deliver sustainable value for its shareholders. In determining the remuneration packages for Executive Directors, the Committee aims to find the right balance to incentivise, reward and retain highly talented individuals appropriately. Mr Soriot and Mr Dunoyer will each receive a salary increase of 2.5%, effective from 1 January 2018. The average annual increase awarded to the wider UK employee population is also 2.5%.

The Committee also reviewed the annual bonus and PSP performance measures for 2018. As mentioned earlier, we are proposing to change the bonus operation for the 2018 financial year to address a concern that underperformance in one metric can potentially be compensated for by overperformance in another metric. Building on the simplification of previous years, the Committee has reduced the number of annual bonus measures for 2018, by reducing the number of Achieve Scientific Leadership measures from five to four and by combining the five Return to Growth metrics into one measure. The Committee considers that the PSP measures used in 2017 remain appropriate, and therefore no changes are proposed to these for awards to be made in 2018.

With effect from January 2018, in recognition of the steady increase in the Chairman's and the Board's workload and responsibilities, the Chairman of the Company's fee, and certain other fees for other Non-Executive Directors have been revised. No Board member participated in any decision relating to their own fees. Further detail is provided on page 123.

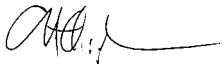
Next steps

The Committee continues to monitor the various developments in corporate governance relating to remuneration matters. In particular, the Committee is considering the proposed changes to the UK Corporate Governance Code. We are committed to ensuring that our remuneration processes and practices support our strategy and deliver sustainable value to our shareholders, and the Committee will remain attentive to further advances in best practice. The Company's UK Gender Pay Gap Report will be issued shortly.

I hope that you find this report clear in explaining the operation of our Remuneration Policy and that it gives you the information you need to be able to support the remuneration resolution that will be put forward to a shareholder vote at the 2018 AGM on the Annual Report on Remuneration for the year ending 31 December 2017.

Our ongoing dialogue with shareholders is valued greatly and, as always, we welcome your feedback on this Directors' Remuneration Report.

Yours faithfully



Graham Chipchase
Chairman of the Remuneration Committee
2 February 2018

Remuneration at a glance

How pay is aligned to strategy

The annual bonus and long-term incentive awards support the delivery of our strategy. The levels of remuneration received are dependent on performance against stretching targets which are linked to our strategic priorities and designed to promote the long-term success of the Company and deliver sustainable value to shareholders.

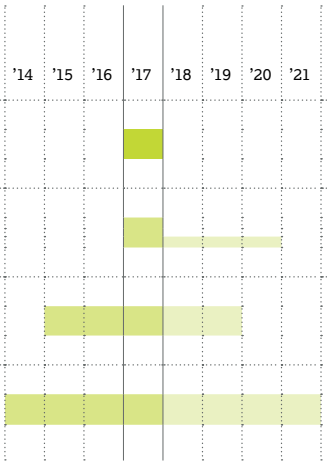
		Achieve Scientific Leadership	Return to Growth	Achieve Group Financial Targets
Annual bonus		✓	✓	✓
Long-term incentives	PSP	✓	✓	✓
	AZIP (legacy LTI)	–	–	✓

For more information on our Strategy and Key Performance Indicators, see page 17.

What our Executive Directors earned in 2017

Performance period and remuneration summary

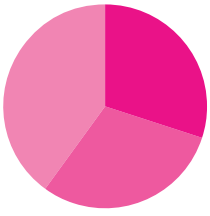
Fixed remuneration
Performance period
Holding period



		2017 remuneration Pascal Soriot £'000	Marc Dunoyer £'000	Description
Fixed remuneration		1,708	987	> Base salary, taxable benefits and pension allowance
Annual bonus		1,916	1,025	> One third of annual bonus deferred into shares, to be held for three years
Long-term incentives	PSP			> Subject to a two-year holding period before vesting
	AZIP	5,718	2,484	> Subject to a four-year holding period before vesting

Annual bonus outcome

Metric weightings (%)



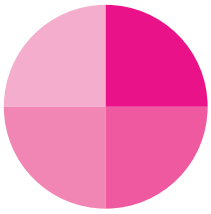
Achieve Scientific Leadership 30%
Return to Growth 30%
Achieve Group Financial Targets 40%

Group scorecard outcome	Achieve Scientific Leadership > 5 metrics	52.8% of target bonus pays out
	Return to Growth > 5 metrics	27.6% of target bonus pays out
	Achieve Group Financial Targets > Cash flow (10%) > Core EPS (20%) > Total Revenue (10%)	76.9% of target bonus pays out
Committee considerations	Overall business and individual performance assessment	The Committee determined the Group scorecard outcome appropriately reflects individual and overall business performance
	Overall outcome	Pascal Soriot 87% max 157% salary Marc Dunoyer 94% max 141% salary

For more information on: 2017 annual bonus award, pages 110, 112 and 113; Annual bonus measures for 2018, page 122.

Long-term incentive outcome – PSP (2015-17)

Metric weightings (%)



- Achieve Scientific Leadership **25%**
- Return to Growth **25%**
- Cash flow **25%**
- Relative TSR **25%**

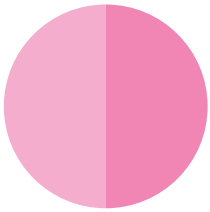
For more information on: 2015-17 PSP outcome, pages 111 and 114; PSP award granted in 2017, page 118; PSP measures for 2018 grants, page 123.

Achieve Scientific Leadership > 5 metrics	100% of maximum vests
Return to Growth > 6 metrics	77% of maximum vests
Achieve Group Financial Targets > Cash flow	89% of maximum vests
Relative TSR	42% of maximum vests
Overall outcome	

Pascal Soriot	77% max
Marc Dunoyer	77% max

Long-term incentive outcome – AZIP (2014-17)

Metric weightings (%)



- Dividend cover **50%**
- Dividend level **50%**

For more information on 2014-17 AZIP outcome, pages 111 and 114.

Achieve Group Financial Targets > Dividend cover > Dividend level	100% of maximum vests
Overall outcome	

Pascal Soriot	100% max
Marc Dunoyer	100% max

How we'll apply our Remuneration Policy in 2018

Directors' Remuneration Policy

Our Remuneration Policy for Directors was approved by 96% of shareholders at the AGM on 27 April 2017 and took effect on that date.

		2018 opportunity	Change from 2017
Fixed remuneration	Consists of base salary, taxable benefits and pension allowance	Base salaries: CEO – £1,251,000 CFO – £743,000	2.5% increase in base salary No change in provision of taxable benefits and pension allowance
Annual bonus	Quantum determined by performance over one year. Two thirds paid as cash and one third deferred into shares with a three-year holding period.	CEO – maximum 180% base salary CFO – maximum 150% base salary	No change
Long-term incentive	Share awards granted under PSP. Proportion vesting determined by performance over a three-year period. Two-year holding period applies after performance period.	CEO – maximum 500% base salary CFO – maximum 400% base salary	No change

The full Remuneration Policy can be viewed on our website, www.astrazeneca.com/remunerationpolicy2017.

Annual Report on Remuneration

This section of the report sets out how we applied our Remuneration Policy during 2017.

Single total figure of remuneration: Executive Directors (Audited)

The table below sets out all of the elements of remuneration receivable by the Executive Directors in respect of the year ended 31 December 2017, alongside comparative figures for the prior year. The following notes explain what is included, how values have been calculated and, for annual bonus and long-term incentives, how the Committee has assessed performance.

		Fixed			Variable (performance related)				
		Base salary	Taxable benefits	Pension	Annual bonus	Long-term incentives		Other	Total
£'000						Regular	Buy-out		
Pascal Soriot	**2017**	**1,220**	**122**	**366**	**1,916**	**5,718**	**–**	**93**	**9,435**
	2016	1,190	121	357	1,167	7,525	3,961	21	14,342
Marc Dunoyer	**2017**	**725**	**88**	**174**	**1,025**	**2,484**	**–**	**16**	**4,512**
	2016	707	71	170	624	3,134	–	–	4,706

Notes to the single total figure of remuneration table

Fixed

Base salary

When awarding salary increases, the Committee considers, among other factors, the salary increases applied across the UK employee population. In 2017, both Executive Directors received a salary increase of 2.5%, which was in line with increases for the UK workforce.

£'000	Increase from 2016	Base salary 2017
Pascal Soriot	2.5%	**1,220**
Marc Dunoyer	2.5%	**725**

Taxable benefits

The Executive Directors may select benefits within AstraZeneca's UK Flexible Benefits Programme and may choose to take their allowance, or any proportion remaining after the selection of benefits, in cash. In 2017, the Executive Directors selected benefits including healthcare insurance, death-in-service provision and advice in relation to tax and took their remaining allowances in cash.

2017 £'000	Benefits	Taken as cash	Total benefits
Pascal Soriot	17	105	**122**
Marc Dunoyer	33	55	**88**

Pension

The Executive Directors receive a pension allowance, calculated as a percentage of base salary. During 2017, both Executive Directors took their pension allowance as a cash alternative to participation in a defined contribution pension scheme. Neither Executive Director has a prospective entitlement to a defined benefit pension by reason of qualifying service.

2017 £'000	Pensionable salary	Pension allowance	Cash in lieu of pension
Pascal Soriot	1,220	30%	**366**
Marc Dunoyer	725	24%	**174**

Variable (performance related)

Annual bonus (summary)

Annual bonus targets are set at the beginning of the year and are closely aligned to our strategic priorities. Awards are determined following year-end, using a robust three stage process. Following feedback from our shareholders, we have this year included a more detailed description of the process for assessing performance and calculating outcomes to enhance transparency.
One third of each Executive Director's pre-tax bonus is deferred into Ordinary Shares which are released three years from the date of deferral, subject to continued employment. Bonuses are not pensionable.

	Bonus potential as % of salary						2017 bonus £'000
2017	Target	Maximum	% of salary	% of maximum	Taken as cash	Deferred into shares	Total
Pascal Soriot	100%	180%	157%	87%	1,277	639	**1,916**
Marc Dunoyer	90%	150%	141%	94%	683	342	**1,025**

Annual bonus operation and performance in detail, pages 112–113.

Long-term incentives (summary)

For 2017, the figures include Performance Share Plan (PSP) awards granted in 2015 and AstraZeneca Investment Plan (AZIP) awards granted in 2014. Performance periods for both awards ended on 31 December 2017 but shares will not be released and dividend equivalents will not be paid out to the Directors until the awards vest at the end of their respective holding periods. The award values have been calculated using the average closing share price over the three-month period ended 31 December 2017 (4999.4 pence).

The long-term incentive figures for 2016 include shares awarded to Mr Soriot in 2013 under the AZIP to compensate him for long-term incentive awards from previous employment which were forfeited on his recruitment as AstraZeneca's CEO, in addition to regular AZIP and PSP awards granted in 2013 and 2014 respectively. Performance periods for these awards ended on 31 December 2016 at which point the PSP awards vested. Shares under the AZIP awards will not be released and dividend equivalents will not be paid out to the Directors until the awards vest at the end of the four-year holding period.

The AZIP award values for 2016 have been recalculated using the average closing share price over the three-month period ended 31 December 2017 (4999.4 pence). The PSP award values for 2016 have been recalculated using the closing share price on the date of vesting (4960.0 pence). Figures disclosed in last year's Remuneration Report were based on the average closing share price over the three-month period ended 31 December 2016 (4510.6 pence). As the share price used to calculate the value of these awards has increased, the 2016 long-term incentive award values are higher than those disclosed in last year's Remuneration Report, as are the single total figures of remuneration for 2016.

The long-term incentive figures also include the value of dividend equivalents accrued during the relevant performance periods.

2015 PSP performance

77% of the PSP awards granted to Mr Soriot and Mr Dunoyer on 27 March 2015 in respect of the 2015-2017 performance period are due to vest on completion of the holding period on 27 March 2020. Vesting is ordinarily subject to continued employment.

	Ordinary Shares granted	Performance outcome	Shares due to vest	Value of shares due to vest £'000	Dividend equivalent accrued over performance period £'000	**Total £'000**
Pascal Soriot	104,764	77%	80,668	4,033	492	**4,525**
Marc Dunoyer	45,880	77%	35,327	1,766	215	**1,982**

2014 AZIP performance

100% of the AZIP awards granted to Mr Soriot and Mr Dunoyer on 28 March 2014 in respect of the 2014-2017 performance period are due to vest on completion of the holding period on 1 January 2022. Vesting is ordinarily subject to continued employment.

	Ordinary Shares granted	Performance outcome	Shares due to vest	Value of shares due to vest £'000	Dividend equivalent accrued over performance period £'000	**Total £'000**
Pascal Soriot	20,677	100%	20,677	1,034	159	**1,193**
Marc Dunoyer	8,709	100%	8,709	435	67	**503**

Long-term incentives performance in detail, page 114.

Other

Other items in the nature of remuneration

Deferred shares granted to the Executive Directors under the Deferred Bonus Plan (DBP) in respect of the withheld proportion of their annual bonuses awarded for performance during the year ended 31 December 2013 were released during 2017, on completion of the three-year holding period. The dividend equivalents accrued on the deferred shares during the holding period and paid to the Executive Directors at the time of release are included in the Other column.

Annual Report on Remuneration *continued*

Annual bonus (in detail)

Our bonus process explained	
Stage 1 – Group scorecard outcome assessment	The Committee assesses the Company's performance against the measures contained in the Group scorecard. The Group scorecard for 2017 contained metrics under three performance measures: Achieve Scientific Leadership, Return to Growth and Achieve Group Financial Targets. Each Group scorecard metric had a defined payout range, with 100% target bonus pay-out for on-target performance and 200% of target bonus pay-out for the maximum level of performance. A threshold level of performance is set for each metric and performance at or below threshold level will result in 0% payout for that metric. Performance against each metric is assessed and the Group scorecard outcome overall is the result of the combined weighted outcomes for each metric. Information on the operation of the annual bonus scheme in 2018 is provided on page 122.
Stage 2 – Overall business and individual performance assessment	The Committee assesses the Group scorecard outcome to ensure that it accurately reflects business performance and the experience of shareholders over the year of assessment. The Committee also carries out an assessment of each Executive Director's personal performance. Taking these factors into account, the Committee determines the level of bonus that represents a fair and balanced reflection of the individual Executive Director's performance during the year.
Stage 3 – Final individual bonus determination	Bonuses for Executive Directors will not normally exceed the historical maximum opportunities of 180% of base salary for the CEO and 150% of base salary for the CFO. Ordinarily, if the assessment at Stage 2 exceeds these amounts, the Executive Director's bonus is capped at the relevant historical maximum amount. If the Committee believes it will be in the interests of shareholders to award a bonus in excess of these historical limits (up to the maximum permitted under our Directors' Remuneration Policy), major shareholders would be consulted in advance. Each Executive Director's annual bonus is determined upon completion of this third stage.

2017 bonus outcome (Audited)

	Stage 1 – Group scorecard outcome assessment				Stage 2 – Overall business and individual performance assessment		Stage 3 – Final individual bonus determination
	Achieve Scientific Leadership	Return to Growth	Achieve Group Financial Targets	Total			
Group scorecard outcome as % of target bonus	52.8%	27.6%	76.9%	157%			
Pascal Soriot bonus as % of base salary	52.8%	27.6%	76.9%	157%	⇔	157%	⇔ **157%**
Marc Dunoyer bonus as % of base salary	47.5%	24.8%	69.2%	141%	⇔	141%	⇔ **141%**

⇔ Unchanged

1. Group scorecard outcome assessment

Performance against the 2017 Group scorecard is set out below.

2017 Group scorecard performance measures and metrics	Weighting	Threshold	Target	Maximum	Outcome	Group scorecard outcome
Achieve Scientific Leadership						
NME Phase II starts/progressions	6% per measure	5	10	15	14	Met target
NME and major life-cycle management Phase III investment decisions		3	6	9	9	Max
NME and major life-cycle management regional submissions		6	9	11	13	Max
NME and major life-cycle management regional approvals		9	13	16	19	Max
Acquisitions, licensing and divestment deals		7	10	13	10*	Met target
Return to Growth						
New CVMD (including *Brilinta*/*Brilique*)	6% per measure	Commercially sensitive: will be disclosed in our 2018 Annual Report			$3,563m	Below threshold
Respiratory					$4,609m	Below target
New Oncology					$1,330m	Max
Emerging Markets					$5,870m	Met target
Japan					$2,335m	Met target
Achieve Group Financial Targets						
Cash flow	10%	$2.9bn	$3.2bn	$3.8bn	$3.6bn	Met target
Core EPS	20%	$3.51	$3.90	$4.29	$4.47	Max
Total Revenue	10%	$21.3bn	$22.0bn	$22.7bn	$22.7bn	Max

* The Committee determined that following completion of the *Lynparza* collaboration with MSD the financial basis for which this metric is a proxy had been achieved.

Achieve Scientific Leadership

These targets reflect the Company's ability to deliver innovation to the market. In 2017, we continued to make progress towards achieving scientific leadership. The AstraZeneca pipeline includes 144 projects, of which 132 are in the clinical phase of development. There are 11 NME projects currently in late-stage development, either in Phase III/pivotal Phase II studies or under regulatory review. During 2017, across the portfolio, 80 projects successfully progressed to the next phase. This included eight first approvals in a major market and 12 NME progressions. In addition, 18 projects have entered Phase I and 10 have been discontinued. The Committee and the Science Committee assessed the substance of the achievements during the year and concluded that the results disclosed in the 2017 Group scorecard table represent a fair and balanced outcome. The acquisitions, divestment and licensing target was set to reflect the estimated number of deals required to deliver a given level of value during the year. Seven significant deals were completed during 2017, however the value delivered by the completion of the *Lynparza* collaboration with MSD was significantly ahead of that anticipated at the start of the year when targets were set. The Group scorecard outcome reflects achievement of the target in respect of this metric.

Return to Growth

These targets are based on quantitative sales targets for 2017 and relate to the Company's Growth Platforms. The Return to Growth targets are set at budget exchange rates at the beginning of the performance period and evaluated at those rates at the end of the performance period; they are not directly comparable year to year. Targets reflect acquisitions and disposals and take into account known events such as the biennial price reviews in Japan, which impacted 2016. In 2017, the New Oncology therapy area and Emerging Markets region performed well, exceeding target, and Japan met its target. New CVMD and Respiratory were below target reflecting a number of challenges in meeting these stretching targets.

The target, threshold and maximum performance hurdles for the 2017 individual Growth Platforms are currently deemed to be commercially sensitive as our competitors may use this detailed information to help predict what our targets and expectations are for growth products for future performance years and refine their competitive response. We will disclose this information in the 2018 Remuneration Report.

Achieve Group Financial Targets

These targets are based on the Company's key financial measures. The cash flow measure is evaluated by reference to net cash flow from operating activities less capital expenditure adding back proceeds from disposal of intangible assets. The Core EPS and Revenue measures are evaluated by reference to budget exchange rates such that beneficial or adverse movements in currency, which are outside the Company's control, do not impact reward outcomes. During 2017, all measures within the Group financial targets exceeded target with a strong performance.

Based on performance against the weighted measures, the Group scorecard outcome for 2017 was 157% of target bonus.

2. Overall business and individual performance assessment

The Committee reviewed the Group scorecard outcome in the context of overall business performance and the Executive Directors' individual performance. Over the course of 2017, AstraZeneca made encouraging progress in our main therapy areas, particularly pipeline performance, as well as in commercial execution and cost discipline. The Committee considered shareholder experience, noting that TSR performance over the year was ahead of the market (FTSE30/FTSE100) and peers, and that Core Earnings Per Share (EPS) for 2017 was above target. The Committee was also mindful that the results of the MYSTIC Phase III trial, which showed that the combination of *Imfinzi* and tremelimumab did not meet a primary endpoint progression-free survival in 1st line Stage 4 NSCLC were disappointing, as was the delay to our plans for the launch of ZS-9. However, the Committee determined that the number of successes far outweighed the disappointments.

The assessments of the CEO and CFO's individual performance over 2017 included measures reinforcing aspects of the Group scorecard, supporting our Be a Great Place to Work strategic priority and measuring the success of initiatives to drive productivity and innovation within the business. The assessment of Mr Soriot's individual performance included progress in increasing diversity in leadership roles across AstraZeneca; achievement of key sustainability targets, including rankings within the Global 100, FTSE4Good and DJSI indices; and strong scores from quarterly employee surveys in relation to personal development and growth opportunities and establishing AstraZeneca as a Great Place to Work. The assessment of Mr Dunoyer's performance included delivery of Growth Platforms and revenues; performance against financial targets balancing short-term goals with supporting longer-term R&D investment; ongoing internal productivity programmes; and good progress in decreasing our operating cost base.

In the context of overall business and individual performance during 2017, the Group scorecard outcome is considered to be an appropriate reflection of key achievements and the level of bonus awarded to each Executive Director has been set at 157% of target bonus.

3. Final individual bonus assessment

The Executive Directors' target bonuses for 2017 were 100% of base salary for the CEO and 90% of base salary for the CFO. The level of bonus determined under Stage 2, the overall business and individual performance assessment, equates to bonus payouts below the historical levels of maximum opportunity for Executive Directors and therefore the level of bonus awards does not need to be moderated under this final individual bonus assessment.

Long-term incentives (in detail)

2015 PSP performance

The TSR and cash flow targets and payout profiles were disclosed at the time of award, on page 111 of the 2015 Annual Report. The Achieve Scientific Leadership and Return to Growth targets are no longer deemed to be commercially sensitive and are disclosed below.

2015 PSP performance measures and metrics	Weighting	Threshold (25% vesting)	Maximum (100% vesting)	Outcome	Vesting (% of maximum)
Achieve Scientific Leadership					
NME approvals	5% per measure	3	7	9	100%
Major life-cycle management approvals		4	9	10	100%
Phase III/registration NME volume		6	11	11	100%
Prospective peak-year sales for approvals from NME & major life-cycle management approvals		3	6	9	100%
Phase II starts		13	18	36	100%
Return to Growth					
Brilinta/Brilique	4.16% per measure	$0.8bn	$1.2bn	$1.2bn	97%
Diabetes franchise		$2.7bn	$3.8bn	$2.7bn	0%
Respiratory		$4.94bn	$5.2bn	$5.2bn	97%
Oncology launch		$0.35bn	$0.5bn	$1.4bn	100%
Emerging Markets		$5.7bn	$8.1bn	$7.0bn	77%
Japan		$1.6bn	$2.3bn	$2.2bn	93%
TSR rank relative to peer group	25%	Median	Above upper quartile (2nd or above, at the discretion of the Committee)	5th	42%
Adjusted cumulative cash flow	25%	$9.0bn	$13.0bn	$12.1bn	89%

The Return to Growth targets are set at budget exchange rates at the beginning of the performance period and evaluated at those rates at the end of the performance period. The Adjusted cumulative cash flow measure is evaluated by reference to net cash flow before distributions and other adjustments required by the performance conditions. More information about the TSR performance of the Company is set out on page 120. The TSR peer group against which performance has been assessed for the 2015 PSP was set at the time of grant and is detailed on page 113 of the 2015 Annual Report.

2014 AZIP performance

The AZIP targets were disclosed at the time of award, on page 109 of the 2014 Annual Report. The operation of the targets was revised in 2017 to address shareholder concerns that the original structure could incentivise too great a focus on short-term earnings. The original cliff vesting approach was replaced with a sliding-scale, whereby 25% of the award will lapse in respect of any year in the performance period in which either of the performance targets are not achieved.

2014 AZIP performance measures	2014	2015	2016	2017
Annual dividend per share at or above $2.80	$2.80	$2.80	$2.80	$2.80
Dividend cover of 1.5 calculated on the basis of Core EPS	1.53	1.52	1.54	1.53

Single total figure of remuneration: Non-Executive Directors (Audited)

The single total figure table sets out all elements of remuneration receivable by the Non-Executive Directors in respect of the year ended 31 December 2017, alongside comparative figures for the prior year.

	2017 Fees £'000	2016 Fees £'000	**2017 Other £'000**	2016 Other £'000	**2017 Total £'000**	2016 Total £'000
Leif Johansson	**575**	575	**39**	36	**614**	611
Geneviève Berger	**87**	87	**–**	–	**87**	87
Philip Broadley – *elected 27 April 2017*	**64**	–	**–**	–	**64**	–
Graham Chipchase	**115**	115	**–**	–	**115**	115
Deborah DiSanzo – *appointed 1 December 2017*	**25**	–	**–**	–	**25**	–
Rudy Markham	**165**	165	**–**	–	**165**	165
Sheri McCoy – *appointed 1 October 2017*	**43**	–	**–**	–	**43**	–
Nazneen Rahman – *appointed 1 June 2017*	**61**	–	**–**	–	**61**	–
Shriti Vadera	**110**	110	**–**	–	**110**	110
Marcus Wallenberg	**87**	87	**–**	–	**87**	87
Former Non-Executive Directors						
Cori Bargmann – *retired 1 October 2016*	**–**	65	**–**	–	**–**	65
Bruce Burlington – *retired 31 August 2017*	**78**	117	**–**	–	**78**	117
Ann Cairns – *retired 24 April 2017*	**31**	95	**–**	–	**31**	95
Jean-Philippe Courtois – *retired 1 December 2016*	**–**	87	**–**	–	**–**	87
Total	**1,441**	1,503	**39**	36	**1,480**	1,539

Notes to the Non-Executive Directors' single total figure of remuneration table

Board fees and office costs

The Chairman's single total figure includes office costs (invoiced in Swedish krona) of £39,000 for 2017 and £36,000 for 2016. Further information on the Non-Executive Directors' fee structure can be found on page 123.

A new Non-Executive Director receives one third of their annual fee in the first month of service following appointment, to recognise the additional work and time involved in finalising their appointment, including activities associated with their induction as a Director. The balance of the annual fee is paid in equal monthly instalments over the remainder of the Director's first year of service. In the second and subsequent years of service, the annual fee is paid in equal monthly instalments.

Payments to former Directors (Audited)

During 2017 no payments were made to former Directors.

Payments for loss of office (Audited)

No payments were made for loss of office during 2017.

Directors' interests in shares

Directors' interests as at 31 December 2017 (Audited)

Minimum shareholding requirements apply to the Executive Directors and SET members. The CEO is required to build a shareholding and hold shares amounting to 300% of base salary and the CFO is required to hold shares amounting to 200% of base salary, each within five years of their dates of appointment. All other SET members are required to build a shareholding over time and hold 125% of base salary as shares while in office. As at 31 December 2017, Mr Soriot and Mr Dunoyer had fulfilled the minimum shareholding requirement.

Non-Executive Directors are encouraged to build up, over a period of three years, a shareholding in the Company with a value approximately equivalent to the basic annual fee for a Non-Executive Director (£75,000 during 2017) or, in the case of the Chairman, approximately equivalent to his basic annual fee (£575,000 during 2017). All Non-Executive Directors who had served for a period of three years or more as at 31 December 2017 held sufficient shares to fulfil this expectation.

The Company's Articles of Association require all Directors to acquire a beneficial interest in 500 shares in the Company within two months of appointment. All Directors met their requirement at the date of this Remuneration Report.

The following tables show the interests of the Directors (including the interests of their connected persons) in Ordinary Shares as at 31 December 2017, as well as details of any Director's interests in options over the Company's shares. No Director or senior executive beneficially owns, or has options over, 1% or more of the issued share capital of the Company, nor do they have different voting rights from other shareholders. None of the Directors has a beneficial interest in the shares of any of the Company's subsidiaries. Between 31 December 2017 and 1 February 2018, there was no change in the interests in Ordinary Shares shown in the following tables.

Executive Directors

Executive Directors' interests in Ordinary Shares as at 31 December 2017	Pascal Soriot	Marc Dunoyer
Share interests not subject to performance conditions		
Beneficially held	500	127,931
DBP shares in deferral period[1]		
2015 Award	13,482	7,111
2016 Award	17,352	8,798
2017 Award	7,968	4,262
LTI shares in holding period (performance period completed)[1]		
2013 AZIP Award	89,960	8,176
Total share interests not subject to performance conditions	129,262	156,278
Value as at 31 December 2017	£6,619,507	£8,002,996
Value as a percentage of base salary	**543%**	**1,104%**
Share interests subject to performance conditions[1]		
2015 PSP Award	104,764	45,880
2016 PSP Award	129,713	54,101
2017 PSP Award	125,009	59,439
2014 AZIP Award	20,677	8,709
2015 AZIP Award	17,460	7,646
2016 AZIP Award	21,618	9,016
	419,241	184,791
Share options (unexercisable)		
2015 Sharesave Scheme	–	544

[1] Figures shown are gross values before taxation.

In the period between his appointment on 1 October 2012 and 31 December 2017, Mr Soriot acquired 250,100 Ordinary Shares using his own resources and received 263,099 Ordinary Shares on the vesting of awards granted under the Company's share plans. Over that period Mr Soriot has gifted 512,699 beneficially owned Ordinary Shares to family members for nil consideration, the value of that number of shares being equivalent to 2,152% of Mr Soriot's 2017 base salary as at 31 December 2017. The family members to whom the shares have been gifted do not constitute connected persons for the purposes of this disclosure, so are not included within Mr Soriot's beneficial shareholding figure in the above table. A detailed breakdown of the Executive Directors' interests under Company share schemes is set out on page 124.

Non-Executive Directors

The Non-Executive Directors are not eligible to receive shares in the Company that are the subject of performance conditions and have acquired their beneficial interests in the Company's shares using their own resources.

Non-Executive Director	**Beneficial interest in Ordinary Shares at 31 December 2017 or (if earlier) date of retirement**	Beneficial interest in Ordinary Shares at 31 December 2016 or (if later) appointment date
Leif Johansson	**39,009**	39,009
Geneviève Berger	**2,090**	2,090
Philip Broadley – *elected 27 April 2017*	**4,800**	2,500
Graham Chipchase	**3,100**	3,100
Deborah DiSanzo – *appointed 1 December 2017*	**500**	500
Rudy Markham	**2,452**	2,452
Sheri McCoy – *appointed 1 October 2017*	**500**	500
Nazneen Rahman – *appointed 1 June 2017*	**500**	–
Shriti Vadera	**10,000**	10,000
Marcus Wallenberg	**63,646**	63,646
Former Non-Executive Directors		
Bruce Burlington – *retired 31 August 2017*	**3,349**	3,349
Ann Cairns – *retired 24 April 2017*	**2,325**	2,325

Share interests granted in 2017 (Audited)

Deferred Bonus Plan (DBP)

Shares were granted under the DBP following the deferral of one third of the pre-tax annual bonus paid in respect of performance during 2016. Face value has been calculated using the grant price, being the average share price over the three dealing days preceding grant. No further performance conditions apply to DBP shares, but release at the end of the three-year holding period is ordinarily subject to continued employment.

	Ordinary Shares granted	Grant date	Grant price (pence per share)	Face value £'000	End of holding period
Pascal Soriot	7,968	24 March 2017	4880	389	24 March 2020
Marc Dunoyer	4,262	24 March 2017	4880	208	24 March 2020

Performance Share Plan (PSP)

Conditional awards of shares were granted under the PSP with face values at grant equivalent to 500% of base salary for Mr Soriot and 400% base salary for Mr Dunoyer. Face value is calculated using the grant price, being the average share price over the three dealing days preceding grant. The proportion of each award that vests will depend on performance over a three-year period against the measures set out below. A holding period applies following the performance period, meaning that vesting will take place on the fifth anniversary of grant, ordinarily subject to continued employment.

	Ordinary Shares granted	Grant date	Grant price (pence per share)	Face value £'000	End of performance period	End of holding period
Pascal Soriot	125,009	24 March 2017	4880	6,100	31 December 2019	24 March 2022
Marc Dunoyer	59,439	24 March 2017	4880	2,901	31 December 2019	24 March 2022

The PSP performance measures focus on scientific, commercial and financial performance over the three-year performance period. The five equally weighted performance measures attached to 2017 PSP awards are detailed below. 20% of the award will vest if the threshold level of performance is achieved; the maximum level of performance must be achieved under each measure for 100% of the award to vest.

Relative total shareholder return (TSR)

TSR performance of the Company is assessed against a predetermined peer group of global pharmaceutical companies. The rank which the Company's TSR achieves over the performance period will determine how many shares will vest under this measure, as detailed below:

TSR ranking of the Company	% of award that vests
Below median	0%
Median	20%
Between median and upper quartile	*Pro rata*
Upper quartile	100%

More information about the TSR performance of the Company, including the Company's peer group, is set out on page 120.

EBITDA

Vesting under this measure is based on the achievement of threshold performance against a target of cumulative Reported EBITDA excluding non-cash movements on fair value of contingent consideration on business combinations and gains on disposals of intangible assets. The level of award vesting under this measure is based on a scale between a threshold target and an upper target, as detailed below:

EBITDA	% of award that vests
$12.0bn	20%
$18.0bn	100%

Cash flow

The cash flow measure is assessed using cumulative net cash flow from operating activities less capital expenditure adding back proceeds from disposal of intangible assets. The level of award vesting under this measure is based on a sliding scale between a threshold target and an upper target, as detailed below:

Cash flow	% of award that vests
Less than $8.5bn	0%
$8.5bn	20%
Between $8.5bn and $10.5bn	*Pro rata*
$10.5bn	75%
Between $10.5bn and $12bn	*Pro rata*
$12bn and above	100%

Return to Growth: total Product Sales from Growth Platforms

Vesting under this measure is based on the achievement of threshold performance for an aggregate revenue target in the final year of the period relating to the Company's Growth Platforms. The level of award vesting under this measure is based on a scale between a threshold target and an upper target, as detailed below:

Aggregate revenue of Growth Platforms	% of award that vests
$16.5bn	20%
$19.5bn[1]	100%

[1] The hurdle of $19.5bn was agreed by the Committee in January 2017 but incorrectly reported in the 2016 Remuneration Report due to an administrative error.

Achieve Scientific Leadership

The Achieve Scientific Leadership measure covers three areas: NME approvals (reflecting the Company's ability to deliver innovation to the market), major life-cycle management approvals (which represent a good proxy for near-to-mid term growth) and the volume of NMEs in Phase III and their registration. These three metrics are equally weighted. As the PSP performance measures related to Achieve Scientific Leadership are an indicator of the Company's longer-term strategic priorities, we believe that the targets and target ranges associated with them are commercially sensitive. We will make retrospective disclosure when the targets are deemed to be no longer commercially sensitive, which we currently anticipate to be following the end of the performance period.

More information about the PSP performance measures is set out within the Remuneration Policy available at www.astrazeneca.com/remunerationpolicy2017.

Annual Report on Remuneration *continued*

Other disclosures

Change in CEO remuneration compared to other employees

	Percentage change for CEO against 2016	Average percentage change for employees against 2016
Salary	2.5%	4.1%
Taxable benefits	0.4%	4.1%
Annual bonus	64.2%	70%

The employee comparator group comprises employees in the UK, US and Sweden. We consider this to be an appropriate comparator group because it is representative of the Group's major science, business and enabling units, and the employee populations are well balanced in terms of seniority and demographics. To provide a meaningful comparison of salary increases, a consistent employee comparator group is used by which the same individuals appear in the 2016 and 2017 group.

CEO total remuneration table

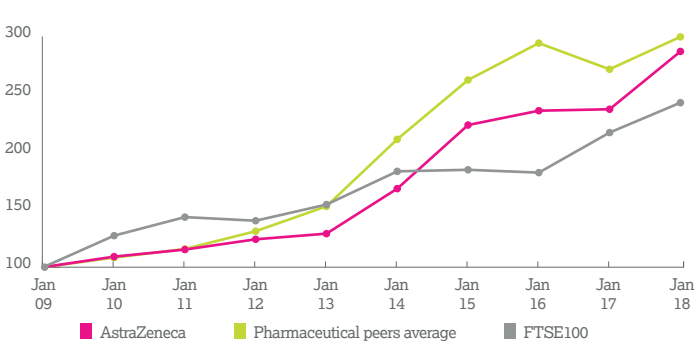
Year	CEO	CEO single total figure of remuneration £'000	Annual bonus payout against maximum opportunity %	LTI vesting rates against maximum opportunity %
2017	Pascal Soriot	9,435[1]	87	81
2016	Pascal Soriot	14,342[2,3]	54	95
2015	Pascal Soriot	7,963	97	78
2014	Pascal Soriot	3,507	94	–
2013	Pascal Soriot	3,344	94	–
2012	Pascal Soriot[4]	3,693[5]	68	–
2012	Simon Lowth[6]	3,289	86	38[7]
2012	David Brennan[8]	4,147[9]	–[10]	38
2011	David Brennan	7,863	74	62
2010	David Brennan	9,690	90	100
2009	David Brennan	5,767	100	62

1 The components of the 2017 single total figure of remuneration are outlined on pages 110 to 114.
2 This figure includes shares awarded to Mr Soriot in 2013 under the AZIP to compensate him for LTIs from previous employment forfeited on his recruitment as the Company's CEO.
3 This figure has been revised using the average closing share price over the three-month period to 31 December 2017, as explained on page 111.
4 Mr Soriot was appointed CEO with effect from 1 October 2012.
5 This figure includes £991,000 paid to compensate Mr Soriot in respect of his forfeited bonus opportunity for 2012 and an award of £2,000,000 to compensate him for his loss of LTI awards, both in respect of his previous employment.
6 Mr Lowth acted as Interim CEO from June to September 2012 inclusive.
7 Mr Lowth's LTI awards which vested during 2012 were not awarded or received in respect of his performance as Interim CEO.
8 Mr Brennan ceased to be a Director on 1 June 2012.
9 This figure includes Mr Brennan's pay in lieu of notice of £914,000.
10 Mr Brennan informed the Committee that he did not wish to be considered for a bonus in respect of that part of 2012 in which he was CEO. The Committee determined that no such bonus would be awarded and also that there should be no bonus award relating to his contractual notice period.

Total shareholder return (TSR)

The graph below compares the TSR performance of the Company over the past nine years with the TSR of the FTSE100 Index. This graph is re-based to 100 at the start of the relevant period. As a constituent of the FTSE100, this index represents an appropriate reference point for the Company. We have also included a 'Pharmaceutical peers average', which reflects the TSR of our current comparator group and provides shareholders with additional context. This comparator group was adopted in 2017 and is used to assess relative TSR performance for PSP awards granted from 2017 onwards. The comparator group consists of AbbVie, Amgen, Astellas, BMS, Celgene, Daiichi Sankyo, Lilly, Gilead, GSK, Johnson & Johnson, MSD, Novo Nordisk, Novartis, Pfizer, Roche, Sanofi, Shire and Takeda.

TSR over a nine-year period



Relative importance of spend on remuneration (Audited)

The table below shows the remuneration paid to all employees in the Group and expenditure on shareholder distributions through dividends. The figures have been calculated in accordance with the Group Accounting Policies and drawn from either the Company's Consolidated Statement of Comprehensive Income on page 135, or its Consolidated Statement of Cash Flows on page 138. Further information on the Group's Accounting Policies can be found from page 139.

	2017 $m	2016 $m	Difference in spend between years $m	Difference in spend between years %
Total employee remuneration	**6,486**	6,284	202	3.2
Distributions to shareholders: dividends paid	**3,519**	3,561	(42)	(1.2)

Disclosure of historical performance targets

Annual bonus

In accordance with our commitment to disclosure, the Committee has determined that the 2015 targets relating to the Achieve Scientific Leadership and Return to Growth elements of the annual bonus are no longer commercially sensitive and can therefore be disclosed. The Committee has also determined that the 2016 targets relating to Achieve Scientific Leadership and Return to Growth are no longer commercially sensitive, ahead of the timeline originally anticipated. Targets for the Achieve Group Financial Targets elements of the 2015 and 2016 annual bonus awards were disclosed in the 2015 and 2016 Directors' Remuneration Reports, respectively.

In response to feedback given in the Committee's discussions with shareholders and to enhance the transparency of our disclosures, the threshold and maximum levels of performance are included in the below disclosures in addition to performance targets. For each metric, the threshold level of performance must be exceeded for bonus to be awarded in respect of that metric.

2015 Group scorecard performance measures and metrics not previously disclosed	Weighting	Threshold	Target	Maximum	Outcome
Achieve Scientific Leadership					
NME Phase II starts/progressions	6% per measure	5	9	13	11
NME and major life-cycle management Phase III investment decisions		2	5	8	6
NME and major life-cycle management regional submissions		8	11	14	12
NME and major life-cycle management regional approvals		2	3	4	5
Acquisitions, licensing and divestment deals		0	2	4	10
Return to Growth					
Deliver *Brilinta* target	5% per measure	$615m	$647m	$679m	$668m
Deliver Diabetes franchise target		$2,152m	$2,265m	$2,378m	$2,323m
Deliver Respiratory growth target		$4,336m	$4,564m	$4,792m	$5,014m
Deliver Oncology growth target		$54m	$67m	$80m	$123m
Deliver targeted sales growth in Emerging Markets		$5,995m	$6,310m	$6,626m	$6,314m
Deliver Japan growth target		$2,091m	$2,201m	$2,311m	$2,191m

2016 Group scorecard performance measures and metrics not previously disclosed	Weighting	Threshold	Target	Maximum	Outcome
Achieve Scientific Leadership					
NME Phase II starts/progressions	6% per measure	8	15	22	15
NME and major life-cycle management Phase III investment decisions		3	6	8	7
NME and major life-cycle management regional submissions		10	14	18	13
NME and major life-cycle management regional approvals		6	9	12	11
Acquisitions, licensing and divestment deals		5	7	9	10
Return to Growth					
Brilinta target	5% per measure	$846m	$891m	$935m	$869m
New CVMD target		$2,748m	$2,893m	$3,038m	$2,474m
Respiratory Therapy Area target		$5,029m	$5,248m	$5,563m	$4,903m
Oncology growth target		$464m	$516m	$567m	$657m
Targeted sales growth in Emerging Markets		$6,205m	$6,531m	$6,858m	$6,285m
Japan growth target		$1,764m	$1,857m	$1,950m	$1,894m

Annual Report on Remuneration *continued*

How we'll apply the Directors' Remuneration Policy during 2018

Summary of potential policy outcomes

The below scenario charts illustrate the Executive Directors' remuneration potential for 2018 under our Directors' Remuneration Policy, for minimum and maximum levels of performance and for performance that is in line with the Company's expectations. These scenarios assume a constant share price and do not take into account dividends paid.

Minimum performance

Fixed remuneration has been calculated based on the base salary applicable in 2018, the value of taxable benefits reported in the 2017 single total figure of remuneration and pension allowances equivalent to 30% of base salary for the CEO and 24% of base salary for the CFO. No annual bonus or LTI will pay out if threshold levels of performance are not met.

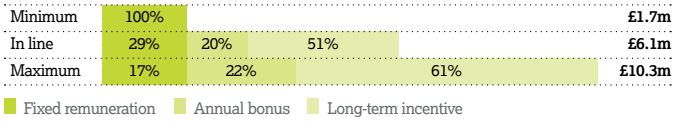
Performance in line with expectations

Annual bonus equivalent to 100% of base salary for the CEO and 90% of base salary for the CFO. LTI award vesting with a value equivalent to 250% of base salary for the CEO and 200% of base salary for the CFO.

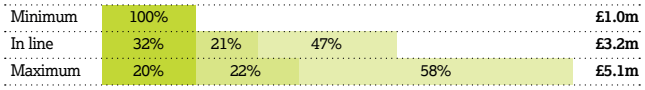
Maximum performance

Annual bonus equivalent to 180% of base salary for the CEO and 150% of base salary for the CFO. LTI award vesting with a value equivalent to 500% of base salary for the CEO and 400% of base salary for the CFO.

Pascal Soriot



Marc Dunoyer



Executive Directors

Executive Directors' salaries for 2018 have increased by 2.5%, which is the same as the increase for the UK workforce. Pension provision, target levels of annual bonus and PSP award levels remain unchanged.

	Pascal Soriot	Marc Dunoyer
Base salary	£1,251,000	£743,000
Pension provision	30% of base salary	24% of base salary
Target annual bonus	100% of base salary	90% of base salary
Face value of PSP award	500% of base salary	400% of base salary

The annual bonus measures and weightings for 2018 are set out below. These are broadly consistent with those applicable in 2017, the changes being:

> The Acquisition, licensing and divestment deals metric has been removed from the Achieve Scientific Leadership measure. The impact of this activity is captured in the Group financial targets which better reflects the results, rather than a separate measure for the number of deals.
> The underlying Growth Platforms for the Return to Growth measure remain the same; however, from 2018, the Committee has determined that performance should be assessed against one single consolidated measure, simplifying the overall bonus calculation and enabling more immediate disclosure of targets.
> The Total Revenue measure has been replaced with Total Product Sales, being Group Global Consolidated Product Sales with performance measured at constant exchange rates. This aligns to the Company's external guidance and focus on commercial execution to drive product sales growth.

The measure for the Cash flow target remains as net cash flow from operating activities less capital expenditure adding back proceeds from disposal of intangible assets.

Annual bonus performance measures	Measure weighting	Underlying metrics (if applicable)	Metric weighting
Achieve Scientific Leadership	30%	NME Phase II starts	6%
		NME and life-cycle management positive Phase III investment decisions	8%
		NME and life-cycle management regional submissions	8%
		NME and life-cycle management regional approvals	8%
Return to Growth	30%		
Achieve Group Financial Targets	40%	Cash flow	10%
		Core EPS	20%
		Total Product Sales	10%

We intend to disclose the 2018 Group scorecard outcome and details of the performance hurdles and targets in the 2018 Remuneration Report, following the end of the performance period. Individual performance for each of the Executive Directors will be assessed by reference to individual objectives in line with the Company's objectives for the year.

In response to a suggestion that under the type of bonus structure in place up to 2017, underperformance under one metric could potentially be compensated for by overachievement under another metric, from 2018 this possibility will be removed. Under the 2018 Group scorecard, the achievement for each Executive Director will be assessed for each metric on a stand-alone basis.

The PSP measures and weightings for 2018 are set out below and are consistent with those applicable to PSP awards granted in 2017.

PSP performance measure	Measure weighting	Underlying metrics (if applicable)	Metric weighting	Threshold (20% vesting)	Maximum (100% vesting)
Achieve Scientific Leadership	20%	NME approvals	6.67%	Commercially sensitive: will be disclosed in our 2018 Annual Report	
		Major life-cycle management approvals	6.67%		
		Phase III registration	6.67%		
Return to Growth	20%				
Cash flow	20%			$8.0bn	$12.0bn
EBITDA	20%			$13.0bn	$18.5bn
Relative TSR	20%			Median	Upper quartile

The Achieve Scientific Leadership metrics are an indicator of the Company's longer-term strategic priorities. Given the proportion of AstraZeneca's revenue that is now represented by our Growth Platforms, disclosing the threshold and maximum hurdles for the Return to Growth measure could be considered to be guidance, which is not the Company's intention. Both the Achieve Scientific Leadership metrics and Return to Growth measure are thus considered to be commercially sensitive and will be disclosed following the end of the performance period.

The Return to Growth and EBITDA measures are evaluated by reference to budget exchange rates such that beneficial or adverse movements in currency, which are outside the Company's control, do not impact reward outcomes. The EBITDA measure is assessed using cumulative Reported EBITDA excluding non-cash movements on fair value of contingent consideration on business combinations and gains on disposals of intangible assets. The Cash flow measure is evaluated using net cumulative cash flow from operating activities less capital expenditure adding back proceeds from disposal of intangible assets. The companies in the TSR comparator group are AbbVie, Amgen, Astellas, BMS, Celgene, Daiichi Sankyo, Lilly, Gilead, GSK, Johnson & Johnson, MSD, Novo Nordisk, Novartis, Pfizer, Roche, Sanofi, Shire and Takeda.

Non-Executive Directors

The Non-Executive Directors' fee structure for 2018 is set out in the table below, alongside the structure in place during 2017. Further information on the Non-Executive Directors' fee structure can be found within the Remuneration Policy, available at www.astrazeneca.com/remunerationpolicy2017.

The Non-Executive Directors' fees are reviewed, but not necessarily increased, every two years. Certain of the fees were increased with effect from January 2015 following a review in late 2014. All fees were reviewed in 2016, but no changes were proposed then. The last increase in the basic Board fee was in 2010. With effect from January 2018, the Chairman's fee, the basic Board fee for other Non-Executive Directors and Science Committee fees have been increased to recognise the steady increase in the Chairman's and the Board's workload and responsibilities, and the importance of the Science Committee's work, which reflects our commitment to science, and ensures that the level of fees do not hinder the recruitment of Directors of the right experience and calibre in a global market. In addition, a new fee has been introduced for the Non-Executive Director who oversees sustainability matters on behalf of the Board to reflect the increasing importance of this area for many stakeholders, including shareholders and employees. No Board member participated in any decision relating to their own fees.

Non-Executive Director fees	2018 £'000	2017 £'000
Chairman's fee[1]	625	575
Basic Non-Executive Director's fee	88	75
Senior independent Non-Executive Director	30	30
Membership of the Audit Committee	20	20
Membership of the Remuneration Committee	15	15
Chairman of the Audit Committee or the Remuneration Committee[2]	25	25
Membership of the Science Committee	15	12
Chairman of the Science Committee[2]	15	10
Non-Executive Director responsible for overseeing sustainability matters on behalf of the Board	7.5	–

[1] The Chairman does not receive any additional fees for chairing, or being a member of, a committee.
[2] This fee is in addition to the fee for membership of the relevant committee.

Executive Directors' share plan interests (Audited)

The following tables set out the Executive Directors' interests in Ordinary Shares under the Company's share plans in detail.

Pascal Soriot

Share scheme interests	Grant date	Shares outstanding at 1 January 2017	Grant price (pence)	Shares granted in 2017	Shares released in 2017	Shares lapsed in 2017	Shares outstanding at 31 December 2017: Shares subject to performance	Shares outstanding at 31 December 2017: Shares in holding period	Performance period end	Vesting and release date
DBP	28/03/2014	15,966	3904	–	15,966	–	**n/a**	**–**	n/a	28/03/2017[1]
	27/03/2015	13,482	4762	–	–	–	**n/a**	**13,482**	n/a	27/03/2018
	24/03/2016	17,352	3923	–	–	–	**n/a**	**17,352**	n/a	24/03/2019
	24/03/2017	–	4880	7,968	–	–	**n/a**	**7,968**	n/a	24/03/2020[2]
PSP	28/03/2014	124,066	3904	–	114,140	9,926	**–**	**–**	31/12/2016	28/03/2017[1,3]
	27/03/2015	104,764	4762	–	–	–	**104,764**	**–**	31/12/2017	27/03/2020
	24/03/2016	129,713	3923	–	–	–	**129,713**	**–**	31/12/2018	24/03/2021
	24/03/2017	–	4880	125,009	–	–	**125,009**	**–**	31/12/2019	24/03/2022
AZIP	11/06/2013	89,960	3297	–	–	–	**–**	**89,960**	31/12/2016	01/01/2021[4]
	28/03/2014	20,677	3904	–	–	–	**20,677**	**–**	31/12/2017	01/01/2022
	27/03/2015	17,460	4762	–	–	–	**17,460**	**–**	31/12/2018	01/01/2023
	24/03/2016	21,618	3923	–	–	–	**21,618**	**–**	31/12/2019	01/01/2024
		555,058		**132,977**	**130,106**	**9,926**	**419,241**	**128,762**		

Marc Dunoyer

Share scheme interests	Grant date	Shares outstanding at 1 January 2017	Grant price (pence)	Shares granted in 2017	Shares released in 2017	Shares lapsed in 2017	Shares outstanding at 31 December 2017: Shares subject to performance	Shares outstanding at 31 December 2017: Shares in holding period	Performance period end	Vesting and release date
DBP	28/03/2014	2,679	3904	–	2,679	–	**n/a**	**–**	n/a	28/03/2017[1]
	27/03/2015	7,111	4762	–	–	–	**n/a**	**7,111**	n/a	27/03/2018
	24/03/2016	8,798	3923	–	–	–	**n/a**	**8,798**	n/a	24/03/2019
	24/03/2017	–	4880	4,262	–	–	**n/a**	**4,262**	n/a	24/03/2020[2]
PSP	28/03/2014	52,254	3904	–	48,073	4,181	**–**	**–**	31/12/2016	28/03/2017[1,3]
	27/03/2015	45,880	4762	–	–	–	**45,880**	**–**	31/12/2017	27/03/2020
	24/03/2016	54,101	3923	–	–	–	**54,101**	**–**	31/12/2018	24/03/2021
	24/03/2017	–	4880	59,439	–	–	**59,439**	**–**	31/12/2019	24/03/2022
AZIP	01/08/2013	8,176	3302	–	–	–	**–**	**8,176**	31/12/2016	01/01/2021
	28/03/2014	8,709	3904	–	–	–	**8,709**	**–**	31/12/2017	01/01/2022
	27/03/2015	7,646	4762	–	–	–	**7,646**	**–**	31/12/2018	01/01/2023
	24/03/2016	9,016	3923	–	–	–	**9,016**	**–**	31/12/2019	01/01/2024
		204,370		**63,701**	**50,752**	**4,181**	**184,791**	**28,347**		

Interests over share options	Grant date	Options outstanding at 1 January 2017	Exercise price (pence)	Options granted in 2017	Options matured in 2017	Options exercised in 2017	Options outstanding at 31 December 2017: Unexercisable	Options outstanding at 31 December 2017: Available to exercise	Maturity date (first date exercisable)	Last date exercisable
SAYE	28/09/2015	544	3307	–	–	–	**544**	**–**	01/12/2018	31/05/2019
		544		**–**	**–**	**–**	**544**	**–**		

[1] Market price on release date was 4960.0 pence.
[2] Award granted following deferral of one third of the annual bonus paid in respect of performance during 2016.
[3] Award vested at 92%.
[4] Mr Soriot's 2013 AZIP award comprises 20,852 shares granted as a regular AZIP award and a previously announced buy-out award which replaces that originally made when Mr Soriot joined the Company in October 2012.

Governance

Committee membership

The Committee members are Graham Chipchase (Chairman of the Committee), Leif Johansson, Rudy Markham and Shriti Vadera. The Deputy Company Secretary acts as the secretary to the Committee.

The Committee met five times in 2017. The individual attendance records of Committee members are set out on page 87. During the year the Committee was materially assisted, except in relation to their own remuneration, by the CEO; the CFO; the Vice-President, Group Financial Controller; the EVP, GMD; the EVP, Human Resources; the Human Resources Vice-President, Centre of Excellence; the Company Secretary; the Deputy Company Secretary and the Non-Executive Directors forming the Science Committee. The Committee's independent adviser, Nicki Demby, Deloitte LLP (Deloitte) attended all Committee meetings.

Terms of reference

A copy of the Committee's terms of reference is available on our website, www.astrazeneca.com. The Committee conducted a review of its terms of reference during 2017 and recommended minor changes; the Board approved the recommendation. The Committee intends to review its terms of reference during 2018 with a particular focus on the anticipated changes to the UK Corporate Governance Code.

Independent adviser to the Committee

The Committee reappointed Deloitte as its independent adviser following a tender process undertaken in 2013, which involved interviews with both the Company's management and the Chairman of the Committee. The role of independent adviser will be re-tendered no later than the end of 2018. Deloitte's service to the Committee was provided on a time-spent basis at a cost to the Company of £72,650 excluding VAT. During the year, Deloitte also provided taxation advice, internal audit services and other specific non-audit advisory services to the Group. The Committee reviewed the potential for conflicts of interest and judged that there were no conflicts. Deloitte is a member of the Remuneration Consultants' Group, which is responsible for the stewardship and development of the voluntary code of conduct in relation to executive remuneration consulting in the UK. The principles on which the code is based are transparency, integrity, objectivity, competence, due care and confidentiality. Deloitte adheres to the code.

Shareholder voting at the AGM

At the Company's AGM held on 27 April 2017, shareholders voted in favour of resolutions to approve the Directors' Remuneration Policy and the Annual Report on Remuneration for the year ended 31 December 2016.

Resolution	Votes for	% for	Votes against	% against	Total votes cast	% of Issued Share Capital voted	Withheld votes
Ordinary Resolution to approve the Directors' Remuneration Policy	877,620,302	96.08	35,804,933	3.92	913,425,235	72.17	15,539,511
Ordinary Resolution to approve the Annual Report on Remuneration for the year ended 31 December 2016	560,051,300	61.17	355,474,215	38.83	915,525,515	72.34	13,439,230

The level of support for the resolution to approve the Annual Report on Remuneration for the year ended 31 December 2016, and the Committee's response, is discussed within the letter from the Chairman of the Committee from page 105.

Directors' service contracts and letters of appointment

The notice periods and unexpired terms of Executive Directors' service contracts at 31 December 2017 are shown in the table below. AstraZeneca or the Executive Director may terminate the service contract on 12 months' notice.

Executive Director	Date of service contract	Unexpired term at 31 December 2017	Notice period
Pascal Soriot	15 December 2016	12 months	12 months
Marc Dunoyer	6 December 2016	12 months	12 months

None of the Non-Executive Directors has a service contract but each has a letter of appointment. In accordance with the Company's Articles, following their appointment all Directors must retire at each AGM and may present themselves for re-election. The Company is mindful of the director independence provisions of the UK Corporate Governance Code and, in this regard, a Non-Executive Director's overall tenure will not normally exceed nine years. The Chairman of the Company may terminate his appointment at any time, on three months' notice. None of the other Non-Executive Directors has a notice period or any provision in their letters of appointment giving them a right to compensation upon early termination of appointment.

Basis of preparation of this Directors' Remuneration Report

This Directors' Remuneration Report has been prepared in accordance with the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013 (the Regulations) and meets the relevant requirements of the Financial Conduct Authority's Listing Rules. As required by the Regulations, a resolution to approve the Annual Report on Remuneration will be proposed at the AGM on 18 May 2018.

On behalf of the Board

A C N Kemp
Company Secretary
2 February 2018

can

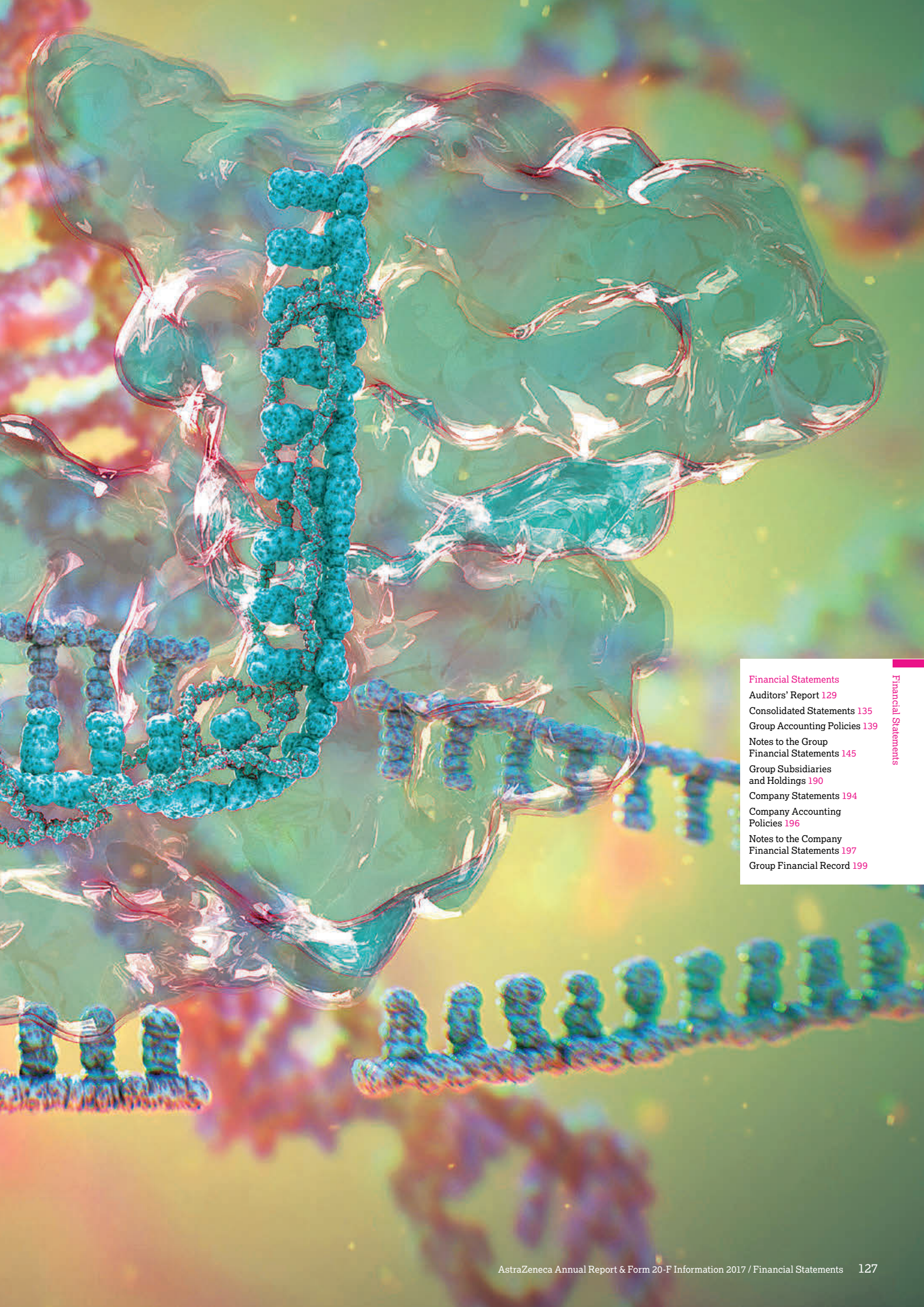
Science

improve the search for novel drug targets

CRISPR (clustered regularly interspaced short palindromic repeats) is a genome-editing tool, which allows scientists to make changes in specific genes faster and in a more precise way than before. The technology has two components – a homing device to a specific section of DNA (guide-RNA) and enzymatic 'scissors' that cut DNA (Cas9 nuclease). In the cell nucleus, the guide-RNA sequence directs the Cas9 nuclease to cause double-stranded breaks in the target DNA sequence. By harnessing the cell's own DNA-repair apparatus, the gene being targeted can be altered, either by deleting it, adding nucleotides to it, or by turning its activity on or off.

CRISPR is a powerful tool that enables us to manipulate genes of potential importance in disease pathways and examine the impact of these modifications in a highly precise way. Integrating this technology into our research helps accelerate the discovery of novel treatments for patients.

For more information, please see our website, www.astrazeneca.com, CRISPR Cas9.



Preparation of the Financial Statements and Directors' Responsibilities

The Directors are responsible for preparing this Annual Report and Form 20-F Information and the Group and Parent Company Financial Statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and Parent Company Financial Statements for each financial year. Under that law they are required to prepare the Group Financial Statements in accordance with IFRSs as issued by the IASB and adopted by the EU, and applicable law, and have elected to prepare the Parent Company Financial Statements in accordance with UK Accounting Standards, including FRS 101 'Reduced Disclosure Framework' and applicable law.

Under company law, the Directors must not approve the Financial Statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Parent Company and of their profit or loss for that period. In preparing each of the Group and Parent Company Financial Statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently
- make judgements and estimates that are reasonable and prudent
- for the Group Financial Statements, state whether they have been prepared in accordance with IFRSs as adopted by the EU
- for the Parent Company Financial Statements, state whether FRS 101 has been followed, subject to any material departures disclosed and explained in the Parent Company Financial Statements
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Group and the Parent Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the Parent Company and enable them to ensure that its Financial Statements comply with the Companies Act 2006. They have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a Directors' Report, Strategic Report, Directors' Remuneration Report, Corporate Governance Report and Audit Committee Report that comply with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on our website. Legislation in the UK governing the preparation and dissemination of Financial Statements may differ from legislation in other jurisdictions.

Directors' responsibility statement pursuant to DTR 4

The Directors confirm that to the best of our knowledge:

- The Financial Statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole
- The Directors' Report includes a fair review of the development and performance of the business and the position of the issuer and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

On behalf of the Board of Directors on 2 February 2018

Pascal Soriot
Director

Directors' Annual Report on Internal Controls over Financial Reporting

The Directors are responsible for establishing and maintaining adequate internal control over financial reporting. AstraZeneca's internal control over financial reporting is designed to provide reasonable assurance over the reliability of financial reporting and the preparation of consolidated Financial Statements in accordance with generally accepted accounting principles.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

The Directors assessed the effectiveness of AstraZeneca's internal control over financial reporting as at 31 December 2017 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013). Based on this assessment, the Directors believe that, as at 31 December 2017, the internal control over financial reporting is effective based on those criteria.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the effectiveness of internal control over financial reporting as at 31 December 2017 and has issued an unqualified report thereon.

Independent Auditors' Report to the Members of AstraZeneca PLC

Report on the audit of the financial statements

Opinion

In our opinion:

- AstraZeneca PLC's Group Financial Statements and Parent Company Financial Statements (the 'financial statements') give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 December 2017 and of the Group's profit and cash flows for the year then ended;
- the Group Financial Statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- the Parent Company Financial Statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 101 'Reduced Disclosure Framework', and applicable law); and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group Financial Statements, Article 4 of the IAS Regulation.

We have audited the financial statements, included within the Annual Report and Form 20-F Information 2017, which comprise: the Consolidated Statement of Financial Position as at 31 December 2017, the Consolidated Statement of Comprehensive Income for the year ended 31 December 2017, the Consolidated Statement of Cash Flows for the year ended 31 December 2017, the Consolidated Statement of Changes in Equity for the year ended 31 December 2017, the Company Balance Sheet as at 31 December 2017, the Company Statement of Changes in Equity for the year ended 31 December 2017; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Separate opinion in relation to IFRSs as issued by the IASB

As explained in the Group Accounting Policies to the financial statements, the Group, in addition to applying IFRSs as adopted by the European Union, has also applied IFRSs as issued by the International Accounting Standards Board (IASB).

In our opinion, the Group Financial Statements have been properly prepared in accordance with IFRSs as issued by the IASB.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ('ISAs (UK)') and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Parent Company.

Other than those disclosed in Note 30 to the financial statements, we have provided no non-audit services to the Group or the Parent Company in the period from 1 January 2017 to 31 December 2017.

Our audit approach – overview

Materiality

- Overall Group materiality: $160 million, based on 5% of profit before taxation after adding back (i) asset impairment charges and (ii) fair value movements and discount unwind on contingent consideration, as disclosed in Notes 9 and 18 respectively.
- Overall Parent Company materiality: $75 million, based on 1% of net assets.

Audit scope

- We identified eleven reporting components which required a full scope audit of their complete financial information, either due to their size or risk characteristics. These components are AstraZeneca PLC, AstraZeneca Treasury Limited as well as operating units in the US, UK, Sweden, China, Japan, France, Germany, Russia and Brazil.
- We also identified a further six reporting components which had one or more individual balances that were considered significant to the Group's Financial Statements. For these components our work was solely focussed on balances related to revenue, research & development expense or property, plant and equipment as appropriate.
- Audit procedures were performed centrally over certain shared service functions for transaction processing, IT and in relation to various Group functions, including taxation, pensions, goodwill and intangible assets, treasury and litigation matters, as well as the consolidation.
- Taken together, the components at which audit work was performed accounted for 71% of consolidated revenue and, for full scope audits only, 52% of consolidated profit before taxation.

Key audit matters

- Revenue recognition – rebates, chargebacks and returns
- Carrying value of intangible assets
- Externalisation and collaboration arrangements
- Uncertain tax positions
- Litigation and contingent liabilities
- Impact of finance transformation and other change programs

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at where the directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits we also addressed the risk of management override of internal controls, including evaluating whether there was evidence of bias by the directors that represented a risk of material misstatement due to fraud.

We gained an understanding of the legal and regulatory framework applicable to the Group and the industry in which it operates, and considered the risk of acts by the Group which were contrary to applicable laws and regulations, including fraud. We designed audit procedures to respond to the risk, recognising that the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion. We designed audit procedures that focused on the risk of non-compliance related to laws and regulations, particularly focussing on defence of product, pricing and practices litigation. Our tests included discussions with in-house legal counsel, supplemented with external legal counsel correspondence for certain legal cases. We also inspected underlying support and calculations and assessed and tested the design and operating effectiveness of controls around this process. We did not identify any key audit matters relating to irregularities, including fraud.

Independent Auditors' Report to the Members of AstraZeneca PLC *continued*

Key audit matters
Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Key audit matter	How our audit addressed the key audit matter
Revenue recognition – rebates, chargebacks and returns Refer to page 103 (Audit Committee Report), page 140 (Accounting Policies) and page 145 (Note 1) in the Group Financial Statements. In the US the Group sells to customers under various commercial and government mandated contracts and reimbursement arrangements that include rebates, chargebacks and provide a right of return for certain products, of which the most significant are Medicare Part D, Managed Care and Medicaid. These arrangements lead to large deductions to gross sales in arriving at revenue to recognise the obligations for the Group to provide customers with rebates, discounts, allowances and the right of return, for which unsettled amounts are provided for. We focused on this area because rebate, discount, allowance and return arrangements are complex and establishing an appropriate accrual requires significant estimates by the directors. The directors have determined an accrual of $2,606 million to be necessary at 31 December 2017 (31 December 2016: $3,285 million).	We assessed and tested the design and operating effectiveness of the Group's controls over the completeness, assessment for recognition and measurement of rebates, chargebacks and returns and concluded that these operated effectively at year end. We obtained management's calculations for accruals under applicable schemes and assessed the assumptions used by reference to the Group's stated commercial policies, the terms of the applicable contracts, third party data related to patient enrolment in US government funded benefit schemes and historical levels of product returns. We compared the assumptions to contracted prices, historical rebates, discounts, allowances and returns levels (where relevant) and to current payment trends. We also considered the historical accuracy of the Group's estimates in previous years and any prior year true-ups. We formed an independent expectation of the largest elements of the accrual at 31 December 2017 using third party data (where relevant) and compared this expectation to the actual accrual recognised by the Group. Based on the procedures performed, we did not identify any material misstatements in the rebate, chargebacks or return accruals.
Carrying value of intangible assets Refer to page 103 (Audit Committee Report), page 140 (Accounting Policies) The Group has $26,188 million of intangible assets at 31 December 2017 (31 December 2016: $27,586 million), comprising significant product, marketing and distribution rights, licences and software development costs. The carrying values of intangible assets are contingent on future cash flows and there is a risk that the assets will be impaired if cash flows are not in line with expectations. The projections in management's impairment models contain a number of significant judgements and estimates including peak year and erosion sales curves, probability of technical and regulatory success factors and discount rates. Changes in these assumptions could lead to an impairment to the carrying value of intangible assets. As noted in Note 9, assets with minimal headroom are sensitive to relatively small changes in the assumptions.	Our work on intangible assets focussed on assets which were individually significant, had lower levels of headroom or where there have been concerns over assets in previous periods. For these assets we obtained the Group's impairment analyses and tested the reasonableness of key assumptions including revenue growth or decline, the impact of probability of technical and regulatory success factors, the expected loss of drug exclusivity and discount rates applied. We challenged management to substantiate its assumptions including comparing certain assumptions to industry and economic forecasts. We also verified the expected performance of certain assets to the Board approved long range plan. We assessed the integrity of supporting calculations and used our valuation specialists to help us assess the valuation methodology applied by management including the integrity of the underlying models. We assessed management's sensitivity analysis and performed our own for significant assets where headroom was limited, focusing on what we consider to be reasonably possible changes in the key assumptions. As a result of our work, we determined that the impairment charge of $491 million recorded for intangible assets was appropriate. For those intangible assets where management determined that only partial impairments were required, the assumptions made were corroborated with certain information including historical market trends and performance analogues of similar products already in the market. We also evaluated the design and tested the operating effectiveness of management's controls in assessing the carrying value of goodwill and intangible assets. We determined that the controls were designed and operating effectively. We reviewed the disclosures made in the financial statements, including sensitivity analysis and the reasonably possible downsides. We are satisfied that these disclosures are appropriate.

Key audit matter	How our audit addressed the key audit matter
Externalisation and collaboration arrangements Refer to page 102 (Audit Committee Report), page 140 (Accounting Policies) and page 145 (Note 1) in the Group Financial Statements. The Group routinely enters into development and commercialisation arrangements and collaborations with pharmaceutical companies. These include in-license and out-licensing arrangements and other types of complex agreements. The nature of these arrangements mean that the accounting is often inherently complex and judgemental, unusual by definition and presents a higher level of risk. At 31 December 2017, the Group had recognised externalisation revenue of $2,313 million (31 December 2016: $1,683 million).	For each material externalisation revenue transaction we reviewed the underlying contract and management's accounting analysis to understand both the formal terms of the agreement and its commercial substance. We assessed whether components of the transaction were at fair value and whether the rights transferred under the arrangement qualified for revenue recognition having regard to the remaining performance obligations under the arrangement. Where there were ongoing performance obligations we assessed whether an appropriate proportion of revenue had been deferred, including an appropriate margin for the work yet to be performed. Where there was a related intangible asset we assessed whether an appropriate amount of that intangible asset has been derecognised on transfer of the relevant rights. Based on the procedures performed, we consider management judgements reasonable and did not identify any material misstatements.
Uncertain tax positions Refer to page 103 (Audit Committee Report), page 141 (Accounting Policies) and page 188 (Note 28) in the Group Financial Statements. The Group operates in a complex multinational tax environment and is subject to a range of tax risks during the normal course of business including transaction related tax matters and transfer pricing arrangements. Where the amount of tax payable is uncertain, the Group establishes provisions based on management's judgement of the probable amount of the future liability. At 31 December 2017, the Group has recorded provisions of $1,166 million in respect of uncertain tax positions (31 December 2016: $1,166 million).	With the assistance of our local and international tax specialists, we evaluated management's judgements in respect of estimates of tax exposures and contingencies in order to assess the adequacy of the Group's tax provisions. In understanding and evaluating management's judgements, we considered the status of recent and current tax authority audits and enquiries, judgemental positions taken in tax returns and current year estimates and developments in the tax environment. Where appropriate, we also read appropriate documentation to understand the positions reached. We noted that the assumptions and judgements that are required to formulate the provisions mean that there is a broad range of possible outcomes. However, from the evidence obtained, we considered the level of provisioning to be acceptable in the context of the Group Financial Statements taken as a whole. We assessed and tested the design and operating effectiveness of the Group's controls over provisions for uncertain tax positions and concluded that these operated effectively.
Litigation and contingent liabilities Refer to page 103 (Audit Committee Report), page 143 (Accounting Policies) and page 183 (Note 28) in the Group Financial Statements. The pharmaceuticals industry is heavily regulated which increases inherent litigation risk. The Group is engaged in a number of legal actions, including patent litigation, product liability, anti-trust and related litigation. At 31 December 2017, the Group held provisions of $654 million in respect of legal claims (31 December 2016: $438 million). These provisions are based on judgements and accounting estimates made by management in determining the likelihood and magnitude of claims. Accordingly, unexpected adverse outcomes could significantly impact the Group's reported profit and balance sheet position.	We evaluated the design and tested the operating effectiveness of controls in respect of the determination of the provisions. We determined that the operation of the controls provided us with evidence over the completeness, accuracy and valuation of the provisions. We read the summary of litigation matters provided by management and held discussions with the Group's legal counsel. We requested legal letters from some of the Group's external legal advisors with respect to the matters included in the summary. Where appropriate we examined correspondence connected with the cases. For litigation provisions, we tested the calculation of the provisions, assessed the assumptions against third party data, where available, and assessed the estimates against historical trends. We considered management's judgements on the level of provisioning to be appropriate. We also evaluated the appropriateness of the disclosures in Note 19 and Note 28 which we considered appropriate.
Finance transformation and other change programmes During the year the Group's finance transformation and related change programmes continued including the implementation of a new gross to net system, Model N, in the US, the migration of certain management accounting functions to in-house shared service centres and decentralisation of payroll to local territories. Each of these changes poses a potential risk to the continued effective operation of the financial reporting and control environment due to their impact on finance people, processes and systems. The transfer of data and operation of new systems needs to be carefully managed during the transition period to ensure that the integrity and accuracy of data is maintained and the new system operates as intended. Similarly, the transfer of established processes to new locations operated by new people has required close management and control.	We centrally managed the work performed by component audit teams at in-house shared service centres. We performed walkthrough procedures and controls testing both pre and post transition to ensure the effective transition of the processes to shared service centres. We also conducted oversight visits to both in-house and third party shared service centre sites in Group audit scope (namely Poland and Malaysia). Component teams performed audit procedures around the payroll in local territory. We evaluated the design and tested the operating effectiveness of controls around Model N and the centralised processing environment, including IT general controls and controls in respect of data migration between systems. We also substantively tested the accuracy and completeness of data migration into the new systems along with the controls over this process. During the year, a number of internal control weaknesses were identified related to Model N. These were remediated in-year with validation testing performed to ensure operational effectiveness.

Independent Auditors' Report to the Members of AstraZeneca PLC *continued*

We determined that there were no key audit matters applicable to the Parent Company to communicate in our report.

How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the Group and the Parent Company, the accounting processes and controls, and the industry in which they operate.

In establishing the overall approach to the Group audit, we determined the type of work that needed to be performed by us, as the Group engagement team, or component auditors within PwC UK and other PwC network firms operating under our instruction. Where the work was performed by component auditors, we determined the level of involvement we needed to have in the audit work in these territories to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the Group Financial Statements as a whole.

The Group operates in over 100 countries and the size of operations within each territory varies. We identified eleven reporting components in scope for Group reporting. These include AstraZeneca PLC, AstraZeneca Treasury Limited as well as the US, UK, Sweden, China, Japan, France, Germany, Russia and Brazil. These alone represented 71% and 52% of the Group's revenue and absolute profit before tax. We identified these eleven reporting components as those that, in our view, required an audit of their complete financial information, due to their size or risk characteristics.

We also identified a further six reporting components which had one or more individual balances that were considered significant to the Group's Financial Statements. For these components our work solely focussed on balances related to revenue, research & development expense or property, plant and equipment as appropriate.

Audit procedures were performed centrally over certain shared service functions for transaction processing, IT and in relation to various Group functions, including taxation, pensions, goodwill and intangible assets, treasury and litigation matters, as well as the consolidation.

The procedures performed above increased the coverage of Group assets to 85%, the revenue coverage to 83% and the coverage of profit before tax increased to 70%.

In addition, audits for local statutory purposes were accelerated to coincide with the Group reporting timetable at a further three locations with significant findings reported to the Group engagement team.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group Financial Statements	Parent Company Financial Statements
Overall materiality	$160 million	$75 million
How we determined it	5% of profit before tax, after adding back asset impairment charges, fair value movements and interest on contingent consideration as disclosed in Notes 9 and 18.	1% of net assets
Rationale for benchmark applied	The reported profit of the Group can fluctuate due to asset impairment charges and fair value and interest movements on contingent consideration. These amounts are prone to year on year volatility and are not necessarily reflective of the operating performance of the Group and as such they have been excluded from the benchmark amount.	We have considered the nature of the business in AstraZeneca PLC (investing activities) and have determine that net assets is most appropriate as a basis for the calculation of the overall materiality level.

For each component in the scope of our Group audit, we allocated a materiality that is less than our overall Group materiality. The range of materiality allocated across components was between $10 million and $100 million.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above $7 million (Group audit) and $7 million (Parent Company audit) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Going concern

In accordance with ISAs (UK) we report as follows:

Reporting obligation	Outcome
We are required to report if we have anything material to add or draw attention to in respect of the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the directors' identification of any material uncertainties to the Group's and the Parent Company's ability to continue as a going concern over a period of at least twelve months from the date of approval of the financial statements.	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's and Parent Company's ability to continue as a going concern.
We are required to report if the directors' statement relating to going concern in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	We have nothing to report.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic Report and Directors' Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, the Companies Act 2006, (CA06), ISAs (UK) and the Listing Rules of the Financial Conduct Authority (FCA) require us also to report certain opinions and matters as described below (required by ISAs (UK) unless otherwise stated).

Strategic Report and Chairman's Statement

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic Report and Chairman's Statement for the year ended 31 December 2017 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements (CA06).

In light of the knowledge and understanding of the Group and Parent Company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic Report and Chairman's Statement (CA06).

The directors' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

We have nothing material to add or draw attention to regarding:

- The directors' confirmation on page 63 of the Annual Report that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity.
- The disclosures in the Annual Report that describe those risks and explain how they are being managed or mitigated.
- The directors' explanation on page 63 of the Annual Report as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We have nothing to report having performed a review of the directors' statement that they have carried out a robust assessment of the principal risks facing the Group and statement in relation to the longer-term viability of the Group. Our review was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the UK Corporate Governance Code (the 'Code'); and considering whether the statements are consistent with the knowledge and understanding of the Group and Parent Company and their environment obtained in the course of the audit. (Listing Rules).

Other Code Provisions

We have nothing to report in respect of our responsibility to report when:

- The statement given by the directors, on page 128, that they consider the Annual Report taken as a whole to be fair, balanced and understandable, and provides the information necessary for the members to assess the Group's and Parent Company's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and Parent Company obtained in the course of performing our audit.
- The section of the Annual Report on pages 102–104 describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.
- The directors' statement relating to the Parent Company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified, under the Listing Rules, for review by the auditors.

Directors' Remuneration

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006 (CA06).

Responsibilities for the financial statements and the audit

Responsibilities of the directors for the financial statements

As explained more fully in the Preparation of the Financial Statements and Directors' Responsibilities set out on page 128, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Parent Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Independent Auditors' Report to the Members of AstraZeneca PLC *continued*

Use of this report

This report, including the opinions, has been prepared for and only for the Parent Company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the Parent Company Financial Statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the audit committee, we were appointed by the shareholders on 27 April 2017 to audit the financial statements for the year ended 31 December 2017 and subsequent financial periods. This is therefore our first year of uninterrupted engagement.

Richard Hughes (Senior Statutory Auditor)
for and on behalf of
PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London
2 February 2018

Consolidated Statement of Comprehensive Income

for the year ended 31 December

	Notes	2017 $m	2016 $m	2015 $m
Product Sales	1	**20,152**	21,319	23,641
Externalisation Revenue	1	**2,313**	1,683	1,067
Total Revenue		**22,465**	23,002	24,708
Cost of sales		**(4,318)**	(4,126)	(4,646)
Gross profit		**18,147**	18,876	20,062
Distribution costs		**(310)**	(326)	(339)
Research and development expense	2	**(5,757)**	(5,890)	(5,997)
Selling, general and administrative costs	2	**(10,233)**	(9,413)	(11,112)
Other operating income and expense	2	**1,830**	1,655	1,500
Operating profit		**3,677**	4,902	4,114
Finance income	3	**113**	67	46
Finance expense	3	**(1,508)**	(1,384)	(1,075)
Share of after tax losses in associates and joint ventures	10	**(55)**	(33)	(16)
Profit before tax		**2,227**	3,552	3,069
Taxation	4	**641**	(146)	(243)
Profit for the period		**2,868**	3,406	2,826
Other comprehensive income:				
Items that will not be reclassified to profit or loss:				
Remeasurement of the defined benefit pension liability	20	**(242)**	(575)	652
Fair value movements related to own credit risk on bonds designated as fair value through profit and loss		**(9)**	–	–
Tax on items that will not be reclassified to profit or loss	4	**16**	136	(199)
		(235)	(439)	453
Items that may be reclassified subsequently to profit or loss:				
Foreign exchange arising on consolidation	21	**536**	(1,050)	(528)
Foreign exchange arising on designating borrowings in net investment hedges	21	**505**	(591)	(333)
Fair value movements on cash flow hedges		**311**	(115)	–
Fair value movements on cash flow hedges transferred to profit and loss		**(315)**	195	–
Fair value movements on derivatives designated in net investment hedges	21	**(48)**	(4)	14
Amortisation of loss on cash flow hedge		**1**	1	1
Net available for sale (losses)/gains taken to equity		**(83)**	139	(32)
Tax on items that may be reclassified subsequently to profit or loss	4	**(33)**	86	87
		874	(1,339)	(791)
Other comprehensive income/(loss) for the period, net of tax		**639**	(1,778)	(338)
Total comprehensive income for the period		**3,507**	1,628	2,488
Profit attributable to:				
Owners of the Parent		**3,001**	3,499	2,825
Non-controlling interests	24	**(133)**	(93)	1
Total comprehensive income attributable to:				
Owners of the Parent		**3,640**	1,722	2,488
Non-controlling interests	24	**(133)**	(94)	–
Basic earnings per $0.25 Ordinary Share	5	**$2.37**	$2.77	$2.23
Diluted earnings per $0.25 Ordinary Share	5	**$2.37**	$2.76	$2.23
Weighted average number of Ordinary Shares in issue (millions)	5	**1,266**	1,265	1,264
Diluted weighted average number of Ordinary Shares in issue (millions)	5	**1,267**	1,266	1,265
Dividends declared and paid in the period	23	**3,543**	3,540	3,537

All activities were in respect of continuing operations.

$m means millions of US dollars.

Consolidated Statement of Financial Position
at 31 December

	Notes	2017 $m	2016 $m	2015 $m
Assets				
Non-current assets				
Property, plant and equipment	7	**7,615**	6,848	6,413
Goodwill	8	**11,825**	11,658	11,800
Intangible assets	9	**26,188**	27,586	22,646
Investments in associates and joint ventures	10	**103**	99	85
Other investments	11	**933**	727	458
Derivative financial instruments	12	**504**	343	446
Other receivables	13	**847**	901	907
Deferred tax assets	4	**2,189**	1,102	1,294
		50,204	49,264	44,049
Current assets				
Inventories	14	**3,035**	2,334	2,143
Trade and other receivables	15	**5,009**	4,573	6,622
Other investments	11	**1,230**	884	613
Derivative financial instruments	12	**28**	27	2
Income tax receivable		**524**	426	387
Cash and cash equivalents	16	**3,324**	5,018	6,240
		13,150	13,262	16,007
Total assets		**63,354**	62,526	60,056
Liabilities				
Current liabilities				
Interest-bearing loans and borrowings	17	**(2,247)**	(2,307)	(916)
Trade and other payables	18	**(11,641)**	(10,486)	(11,663)
Derivative financial instruments	12	**(24)**	(18)	(9)
Provisions	19	**(1,121)**	(1,065)	(798)
Income tax payable		**(1,350)**	(1,380)	(1,483)
		(16,383)	(15,256)	(14,869)
Non-current liabilities				
Interest-bearing loans and borrowings	17	**(15,560)**	(14,501)	(14,137)
Derivative financial instruments	12	**(4)**	(117)	(1)
Deferred tax liabilities	4	**(3,995)**	(3,956)	(2,665)
Retirement benefit obligations	20	**(2,583)**	(2,186)	(1,974)
Provisions	19	**(347)**	(353)	(444)
Other payables	18	**(7,840)**	(9,488)	(7,457)
		(30,329)	(30,601)	(26,678)
Total liabilities		**(46,712)**	(45,857)	(41,547)
Net assets		**16,642**	16,669	18,509
Equity				
Capital and reserves attributable to equity holders of the Company				
Share capital	22	**317**	316	316
Share premium account		**4,393**	4,351	4,304
Capital redemption reserve		**153**	153	153
Merger reserve		**448**	448	448
Other reserves	21	**1,428**	1,446	1,435
Retained earnings	21	**8,221**	8,140	11,834
		14,960	14,854	18,490
Non-controlling interests	24	**1,682**	1,815	19
Total equity		**16,642**	16,669	18,509

The Financial Statements from pages 135 to 193 were approved by the Board on 2 February 2018 and were signed on its behalf by

Pascal Soriot — Director

Marc Dunoyer — Director

Consolidated Statement of Changes in Equity

for the year ended 31 December

	Share capital $m	Share premium account $m	Capital redemption reserve $m	Merger reserve $m	Other reserves $m	Retained earnings $m	Total attributable to owners $m	Non-controlling interests $m	Total equity $m
At 1 January 2015	316	4,261	153	448	1,420	13,029	19,627	19	19,646
Profit for the period	–	–	–	–	–	2,825	2,825	1	2,826
Other comprehensive income	–	–	–	–	–	(337)	(337)	(1)	(338)
Transfer to other reserves[1]	–	–	–	–	15	(15)	–	–	–
Transactions with owners									
Dividends	–	–	–	–	–	(3,537)	(3,537)	–	(3,537)
Issue of Ordinary Shares	–	43	–	–	–	–	43	–	43
Share-based payments charge for the period (Note 27)	–	–	–	–	–	211	211	–	211
Settlement of share plan awards	–	–	–	–	–	(342)	(342)	–	(342)
Net movement	–	43	–	–	15	(1,195)	(1,137)	–	(1,137)
At 31 December 2015	316	4,304	153	448	1,435	11,834	18,490	19	18,509
Profit for the period	–	–	–	–	–	3,499	3,499	(93)	3,406
Other comprehensive income	–	–	–	–	–	(1,777)	(1,777)	(1)	(1,778)
Transfer to other reserves[1]	–	–	–	–	11	(11)	–	–	–
Transactions with owners									
Dividends	–	–	–	–	–	(3,540)	(3,540)	–	(3,540)
Dividends paid by subsidiary to non-controlling interest	–	–	–	–	–	–	–	(13)	(13)
Acerta put option (Note 24)	–	–	–	–	–	(1,825)	(1,825)	–	(1,825)
Changes in non-controlling interest (Note 25)	–	–	–	–	–	–	–	1,903	1,903
Issue of Ordinary Shares	–	47	–	–	–	–	47	–	47
Share-based payments charge for the period (Note 27)	–	–	–	–	–	241	241	–	241
Settlement of share plan awards	–	–	–	–	–	(281)	(281)	–	(281)
Net movement	–	47	–	–	11	(3,694)	(3,636)	1,796	(1,840)
At 31 December 2016	316	4,351	153	448	1,446	8,140	14,854	1,815	16,669
Profit for the period	**–**	**–**	**–**	**–**	**–**	**3,001**	**3,001**	**(133)**	**2,868**
Other comprehensive income	**–**	**–**	**–**	**–**	**–**	**639**	**639**	**–**	**639**
Transfer to other reserves[1]	**–**	**–**	**–**	**–**	**(18)**	**18**	**–**	**–**	**–**
Transactions with owners									
Dividends	**–**	**–**	**–**	**–**	**–**	**(3,543)**	**(3,543)**	**–**	**(3,543)**
Issue of Ordinary Shares	**1**	**42**	**–**	**–**	**–**	**–**	**43**	**–**	**43**
Share-based payments charge for the period (Note 27)	**–**	**–**	**–**	**–**	**–**	**220**	**220**	**–**	**220**
Settlement of share plan awards	**–**	**–**	**–**	**–**	**–**	**(254)**	**(254)**	**–**	**(254)**
Net movement	**1**	**42**	**–**	**–**	**(18)**	**81**	**106**	**(133)**	**(27)**
At 31 December 2017	**317**	**4,393**	**153**	**448**	**1,428**	**8,221**	**14,960**	**1,682**	**16,642**

[1] Amounts charged or credited to other reserves relate to exchange adjustments arising on goodwill.

Consolidated Statement of Cash Flows

for the year ended 31 December

	Notes	2017 $m	2016 $m	2015 $m
Cash flows from operating activities				
Profit before tax		**2,227**	3,552	3,069
Finance income and expense	3	**1,395**	1,317	1,029
Share of after tax losses of associates and joint ventures	10	**55**	33	16
Depreciation, amortisation and impairment		**3,036**	2,357	2,852
Decrease in trade and other receivables		**83**	1,610	152
Increase in inventories		**(548)**	(343)	(315)
Increase/(decrease) in trade and other payables and provisions		**415**	(341)	114
Gains on disposal of intangible assets	2	**(1,518)**	(1,301)	(961)
Fair value movements on contingent consideration arising from business combinations	18	**109**	(1,158)	(432)
Non-cash and other movements	16	**(524)**	(492)	(350)
Cash generated from operations		**4,730**	5,234	5,174
Interest paid		**(698)**	(677)	(496)
Tax paid		**(454)**	(412)	(1,354)
Net cash inflow from operating activities		**3,578**	4,145	3,324
Cash flows from investing activities				
Non-contingent payments on business combinations		**(1,450)**	(2,564)	(2,446)
Payment of contingent consideration from business combinations	18	**(434)**	(293)	(579)
Purchase of property, plant and equipment		**(1,326)**	(1,446)	(1,328)
Disposal of property, plant and equipment		**83**	82	47
Purchase of intangible assets		**(294)**	(868)	(1,460)
Disposal of intangible assets		**1,376**	1,427	1,130
Purchase of non-current asset investments		**(96)**	(230)	(57)
Disposal of non-current asset investments		**70**	3	93
Movement in short-term investments and fixed deposits		**(345)**	(166)	283
Payments to joint ventures	10	**(76)**	(41)	(45)
Interest received		**164**	140	123
Payments made by subsidiaries to non-controlling interests		**–**	(13)	–
Net cash outflow from investing activities		**(2,328)**	(3,969)	(4,239)
Net cash inflow/(outflow) before financing activities		**1,250**	176	(915)
Cash flows from financing activities				
Proceeds from issue of share capital		**43**	47	43
Issue of loans		**1,988**	2,491	5,928
Repayment of loans		**(1,750)**	–	(884)
Dividends paid		**(3,519)**	(3,561)	(3,486)
Hedge contracts relating to dividend payments		**(20)**	18	(51)
Repayment of obligations under finance leases		**(14)**	(16)	(42)
Movement in short-term borrowings		**336**	(303)	(630)
Net cash (outflow)/inflow from financing activities		**(2,936)**	(1,324)	878
Net decrease in cash and cash equivalents in the period		(1,686)	(1,148)	(37)
Cash and cash equivalents at the beginning of the period		**4,924**	6,051	6,164
Exchange rate effects		**(66)**	21	(76)
Cash and cash equivalents at the end of the period	16	**3,172**	4,924	6,051

Group Accounting Policies

Basis of accounting and preparation of financial information

The Consolidated Financial Statements have been prepared under the historical cost convention, modified to include revaluation to fair value of certain financial instruments as described below, in accordance with the Companies Act 2006 and International Financial Reporting Standards (IFRSs) as adopted by the EU (adopted IFRSs) in response to the IAS regulation (EC 1606/2002). The Consolidated Financial Statements also comply fully with IFRSs as issued by the International Accounting Standards Board (IASB).

During the year, the Group has adopted the amendments to IAS 12 Recognition of Deferred Tax Assets for Unrealised Losses and the amendments to IAS 7 Disclosure Initiative. In 2017, the Group also early adopted the revised IFRS 9 'Financial Instruments' treatment of impact of changes in the Group's own credit risk on the measurement of liabilities held at fair value. The adoptions have not had a significant impact on the Group's profit for the period, net assets or cash flows.

In addition to the above standard amendments and new adoptions, the Group has revised the Statement of Financial Position presentation for the following items:

> With effect from 1 January 2017, the Group has revised the Statement of Financial Position presentation of Deferred tax for one Group entity. This presentation change has resulted in the Group showing gross, rather than net, Deferred tax assets and Deferred tax liabilities of the individual entity. The revised presentation has no impact on net Deferred tax, the Group's Net assets, the Statement of Cash Flows or the Statement of Comprehensive Income. The change has been made as the Group entity has transactions that are subject to tax by two different taxation authorities and has the effect of separately disclosing the deferred tax effects for each country. The Group has assessed this presentational change as not material for revision under IAS 8 'Accounting Polices, Changes in Accounting Estimates and Errors' as the Group has concluded that the user of the accounts would not be adversely impacted and, therefore, the comparative Statement of Financial Position has not been revised for this presentational change. If the 31 December 2016 and 31 December 2015 balances were presented in a comparable way, the Deferred tax assets would have been $2,093m and $1,872m, respectively and the Deferred tax liabilities would have been $4,947m and $3,243m, respectively.

> As detailed in Note 26 to the Financial Statements, the Group has entered into financial derivative transactions with commercial banks. The Group has agreements with some bank counterparties whereby the parties agree to post cash collateral, for the benefit of the other, equivalent to the market valuation of the derivative positions above a predetermined threshold. With effect from the 1 January 2017, the Group has revised the Statement of Financial Position presentation of these collateral balances, so that the cash collateral is included in Cash and cash equivalents, with an offsetting liability presented in current Interest-bearing loans and borrowings and the movement presented in movement in short-term borrowings in the Statement of Cash Flows. This revision has no impact on the Group's Net assets, or the Statement of Comprehensive Income. The Group has assessed this presentational change as not material for revision under IAS 8 as the Group has concluded that the user of the accounts would not be adversely impacted and, therefore, the comparative Statement of Financial Position has not been revised for this presentational change. If the 31 December 2016 and 31 December 2015 balances were presented in a comparable way the Cash and cash equivalents balance would have been $5,260m and $6,691m, respectively. Current Interest-bearing loans and borrowings would have been $2,629m and $1,367m, respectively, and current investments would have been $964m and $613m, respectively.

> Following clarification by the IASB Interpretations Committee in September 2017, the Group has revised its presentation of interest on tax positions. Interest income and expense, which was previously presented in the tax charge in the Statement of Comprehensive Income, is now presented in Finance income and expense and corresponding assets and liabilities, which were previously presented as Income tax receivables and payables in the Statement of Financial Position, are now presented in Trade and other receivables and Trade and other payables. This revision has no impact on the Group's Net assets and cash flows or retained profit. The Group has assessed this presentational change as not material for revision under IAS 8 as the Group has concluded that the user of the accounts would not be adversely impacted and, therefore, the comparative Statement of Comprehensive Income and Statement of Financial Position have not been revised for this presentational change. If the 31 December 2016 and 31 December 2015 balances were presented in a comparable way, Finance income and expense would have been $1,239m and $1,001m, respectively, Tax (credit)/charge would have been $224m and $271m, respectively, Income tax payables would have been $1,287m and $1,291m, respectively and Trade and other payables would have been $10,579m and $11,855m, respectively.

The Company has elected to prepare the Company Financial Statements in accordance with UK Accounting Standards, including FRS 101 'Reduced Disclosure Framework'. These are presented on pages 194 to 198 and the Accounting Policies in respect of Company information is set out on page 196.

The Consolidated Financial Statements are presented in US dollars, which is the Company's functional currency.

In preparing their individual financial statements, the accounting policies of some overseas subsidiaries do not conform with IASB issued IFRSs. Therefore, where appropriate, adjustments are made in order to present the Consolidated Financial Statements on a consistent basis.

Basis for preparation of Financial Statements on a going concern basis

The Group has considerable financial resources available. As at 31 December 2017, the Group has $4.1bn in financial resources (cash balances of $3.3bn and undrawn committed bank facilities of $3.0bn that are available until April 2022, with only $2.2bn of debt due within one year). The Group's revenues are largely derived from sales of products which are covered by patents which provide a relatively high level of resilience and predictability to cash inflows, although our revenue is expected to continue to be significantly impacted by the expiry of patents over the medium term. In addition, government price interventions in response to budgetary constraints are expected to continue to adversely affect revenues in many of our mature markets. However, we anticipate new revenue streams from both recently launched medicines and products in development, and the Group has a wide diversity of customers and suppliers across different geographic areas. Consequently, the Directors believe that, overall, the Group is well placed to manage its business risks successfully. Accordingly, they continue to adopt the going concern basis in preparing the Annual Report and Financial Statements.

Estimates and judgements

The preparation of the Financial Statements in conformity with generally accepted accounting principles requires management to make estimates and judgements that affect the reported amounts of assets and liabilities at the date of the Financial Statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Judgements include matters such as the determination of operating segments while estimates focus on areas such as carrying values, estimated useful lives, potential obligations and contingent consideration.

AstraZeneca's management considers the following to be the most important accounting policies in the context of the Group's operations.

The accounting policy descriptions set out the areas where judgements and estimates need exercising, the most significant of which are revenue recognition, research and development (including impairment reviews of associated intangible assets), business combinations and goodwill (and contingent consideration arising from business combinations), litigation and environmental liabilities, employee benefits and taxation. Financial risk management policies are detailed in Note 26.

Revenue

Revenues comprise Product Sales and Externalisation Revenue.

Revenues exclude inter-company revenues and value-added taxes.

Product Sales

Product Sales represent net invoice value less estimated rebates, returns and chargebacks. Sales are recognised when the significant risks and rewards of ownership have been transferred to a third party. This is usually when title passes to the customer, either on shipment or on receipt of goods by the customer, depending on local trading terms. In markets where returns are significant, estimates of returns are accounted for at the point revenue is recognised.

For the markets where returns are significant, we estimate the quantity and value of goods which may ultimately be returned at the point of sale. Our returns accruals are based on actual experience over the preceding 12 months for established products together with market-related information such as estimated stock levels at wholesalers and competitor activity which we receive via third party information services. For newly launched products, we use rates based on our experience with similar products or a predetermined percentage.

When a product faces generic competition, particular attention is given to the possible levels of returns and, in cases where the circumstances are such that the level of returns (and hence revenue) cannot be measured reliably, revenues are only recognised when the right of return expires, which is generally on ultimate prescription of the product to patients.

Under certain collaboration agreements which include a profit sharing mechanism, our recognition of Product Sales depends on which party acts as principal in sales to the end customer. In the cases where AstraZeneca acts as principal, we record 100% of sales to the end customer.

Externalisation Revenue

Externalisation Revenue includes income from collaborative arrangements on the Group's products where the Group has sold certain rights associated with those products, but retains a significant ongoing economic interest, through for example the ongoing supply of finished goods or participation in profit share arrangements.

These agreements may include development arrangements, commercialisation arrangements and collaborations. Income may take the form of upfront fees, milestones, profit sharing and/or sales royalties. Generally, upfront fees are recognised upon transfer of the respective licence or other similar rights granted under the agreements. Where the Group provides ongoing services, revenue in respect of this element will be recognised over the duration of those services. Milestones and sales royalties are recognised when highly probable and the amount can be reliably estimated.

Where externalisation revenue is recorded and there is a related intangible asset, an appropriate amount of that intangible asset is charged to cost of sales based on an allocation of cost or value to the rights that have been sold.

Cost of sales

Cost of sales are recognised as the associated revenue is recognised. Cost of sales include manufacturing costs, royalties payable on revenues recognised, movements in provisions for inventories and inventory write offs. Cost of sales also includes partner profit shares arising from collaborations, and foreign exchange gains and losses arising from business trading activities.

Research and development

Research expenditure is recognised in profit in the year in which it is incurred.

Internal development expenditure is capitalised only if it meets the recognition criteria of IAS 38 'Intangible Assets'. Where regulatory and other uncertainties are such that the criteria are not met, the expenditure is recognised in profit and this is almost invariably the case prior to approval of the drug by the relevant regulatory authority. Where, however, recognition criteria are met, intangible assets are capitalised and amortised on a straight-line basis over their useful economic lives from product launch. At 31 December 2017, no amounts have met recognition criteria.

Payments to in-license products and compounds from third parties for new research and development projects (in process research and development) generally take the form of upfront payments, milestones and royalty payments. Where payments made to third parties represent future research and development activities, an evaluation is made as to the nature of the payments. Such payments are expensed if they represent compensation for sub-contracted research and development services not resulting in a transfer of intellectual property. By contrast, payments are capitalised if they represent compensation for the transfer of identifiable intellectual property developed at the risk of the third party. Development milestone payments relating to identifiable intellectual property are capitalised as the milestone is triggered. Any upfront or milestone payments for research activities where there is no associated identifiable intellectual property are expensed. Assets capitalised are amortised, on a straight-line basis, over their useful economic lives from product launch.

Intangible assets relating to products in development are subject to impairment testing annually. All intangible assets are tested for impairment when there are indications that the carrying value may not be recoverable. Any impairment losses are recognised immediately in profit. Intangible assets relating to products which fail during development (or for which development ceases for other reasons) are also tested for impairment and are written down to their recoverable amount (which is usually nil).

If, subsequent to an impairment loss being recognised, development restarts or other facts and circumstances change indicating that the impairment is less or no longer exists, the value of the asset is re-estimated and its carrying value is increased to the recoverable amount, but not exceeding the original value, by recognising an impairment reversal in profit.

Business combinations and goodwill

On the acquisition of a business, fair values are attributed to the identifiable assets and liabilities and contingent liabilities unless the fair value cannot be measured reliably, in which case the value is subsumed into goodwill. Where the Group fully acquires, through a business combination, assets that were previously held in joint operations, the Group has elected not to uplift the book value of the existing interest in the asset held in the joint operation to fair value at the date full control is taken. Where fair values of acquired contingent liabilities cannot be measured reliably, the assumed contingent liability is not recognised but is disclosed in the same manner as other contingent liabilities.

Where not all of the equity of a subsidiary is acquired, the non-controlling interest is recognised either at fair value or at the non-controlling interest's proportionate share of the net assets of the subsidiary, on a case-by-case basis. Put options over non-controlling interests are recognised as a financial liability, with a corresponding entry in either retained earnings or against non-controlling interest reserves on a case-by-case basis.

Future contingent elements of consideration, which may include development and launch milestones, revenue threshold milestones and revenue-based royalties, are fair valued at the date of acquisition using decision-tree analysis with key inputs including probability of success, consideration of potential delays and revenue projections based on the Group's internal forecasts. Unsettled amounts of consideration are held at fair value within payables with changes in fair value recognised immediately in profit.

Goodwill is the difference between the fair value of the consideration and the fair value of net assets acquired.

Goodwill arising on acquisitions is capitalised and subject to an impairment review, both annually and when there is an indication that the carrying value may not be recoverable.

The Group's policy up to and including 1997 was to eliminate goodwill arising upon acquisitions against reserves. Under IFRS 1 'First-time Adoption of International Financial Reporting Standards' and IFRS 3 'Business Combinations', such goodwill will remain eliminated against reserves.

Joint arrangements and associates

The Group has arrangements over which it has joint control and which qualify as joint operations or joint ventures under IFRS 11 'Joint Arrangements'. For joint operations, the Group recognises its share of revenue that it earns from the joint operations and its share of expenses incurred. The Group also recognises the assets associated with the joint operations that it controls and the liabilities it incurs under the joint arrangement. For joint ventures and associates, the Group recognises its interest in the joint venture or associate as an investment and uses the equity method of accounting.

Employee benefits

The Group accounts for pensions and other employee benefits (principally healthcare) under IAS 19 'Employee Benefits'. In respect of defined benefit plans, obligations are measured at discounted present value while plan assets are measured at fair value. The operating and financing costs of such plans are recognised separately in profit; current service costs are spread systematically over the lives of employees and financing costs are recognised in full in the periods in which they arise. Remeasurements of the net defined benefit pension liability, including actuarial gains and losses, are recognised immediately in other comprehensive income.

Where the calculation results in a surplus to the Group, the recognised asset is limited to the present value of any available future refunds from the plan or reductions in future contributions to the plan. Payments to defined contribution plans are recognised in profit as they fall due.

Taxation

The current tax payable is based on taxable profit for the year. Taxable profit differs from reported profit because taxable profit excludes items that are either never taxable or tax deductible or items that are taxable or tax deductible in a different period. The Group's current tax assets and liabilities are calculated using tax rates that have been enacted or substantively enacted by the reporting date.

Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the asset can be utilised. This requires judgements to be made in respect of the availability of future taxable income.

No deferred tax asset or liability is recognised in respect of temporary differences associated with investments in subsidiaries and branches where the Group is able to control the timing of reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

The Group's deferred tax assets and liabilities are calculated using tax rates that are expected to apply in the period when the liability is settled or the asset realised based on tax rates that have been enacted or substantively enacted by the reporting date.

Accruals for tax contingencies require management to make judgements and estimates of exposures in relation to tax audit issues. Tax benefits are not recognised unless the tax positions will probably be sustained based upon management's interpretation of applicable laws and regulations and the likelihood of settlement.

Once considered to be probable, management reviews each material tax benefit to assess whether a provision should be taken against full recognition of the benefit on the basis of potential settlement through negotiation and/or litigation. Accruals for tax contingencies are measured using the single best estimate of likely outcome approach.

Further details of the estimates and assumptions made in determining our recorded liability for transfer pricing contingencies and other tax contingencies are included in Note 28 to the Financial Statements.

Share-based payments

All plans are assessed and have been classified as equity settled. The grant date fair value of employee share plan awards is calculated using a modified version of the binomial model. In accordance with IFRS 2 'Share-based Payment', the resulting cost is recognised in profit over the vesting period of the awards, being the period in which the services are received. The value of the charge is adjusted to reflect expected and actual levels of awards vesting, except where the failure to vest is as a result of not meeting a market condition. Cancellations of equity instruments are treated as an acceleration of the vesting period and any outstanding charge is recognised in profit immediately.

Group Accounting Policies
continued

Property, plant and equipment
The Group's policy is to write off the difference between the cost of each item of property, plant and equipment and its residual value over its estimated useful life on a straight-line basis. Assets under construction are not depreciated.

Reviews are made annually of the estimated remaining lives and residual values of individual productive assets, taking account of commercial and technological obsolescence as well as normal wear and tear. It is impractical to calculate average asset lives exactly. However, the total lives range from approximately 10 to 50 years for buildings, and three to 15 years for plant and equipment. All items of property, plant and equipment are tested for impairment when there are indications that the carrying value may not be recoverable. Any impairment losses are recognised immediately in profit.

Borrowing costs
The Group has no borrowing costs with respect to the acquisition or construction of qualifying assets. All other borrowing costs are recognised in profit as incurred and in accordance with the effective interest rate method.

Leases
Leases are classified as finance leases if they transfer substantially all the risks and rewards incidental to ownership, otherwise they are classified as operating leases. Assets and liabilities arising on finance leases are initially recognised at fair value or, if lower, the present value of the minimum lease payments. The discount rate used in calculating the present value of the minimum lease payments is the interest rate implicit in the lease. Finance charges under finance leases are allocated to each reporting period so as to produce a constant periodic rate of interest on the remaining balance of the finance liability. Rentals under operating leases are charged to profit on a straight-line basis.

Subsidiaries
A subsidiary is an entity controlled, directly or indirectly, by AstraZeneca PLC. Control is regarded as the exposure or rights to the variable returns of the entity when combined with the power to affect those returns.

The financial results of subsidiaries are consolidated from the date control is obtained until the date that control ceases.

Inventories
Inventories are stated at the lower of cost and net realisable value. The first in, first out or an average method of valuation is used. For finished goods and work in progress, cost includes directly attributable costs and certain overhead expenses (including depreciation). Selling expenses and certain other overhead expenses (principally central administration costs) are excluded. Net realisable value is determined as estimated selling price less all estimated costs of completion and costs to be incurred in selling and distribution.

Write-downs of inventory occur in the general course of business and are recognised in cost of sales.

Trade and other receivables
Financial assets included in Trade and other receivables are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest rate method, less any impairment losses. Trade receivables that are subject to debt factoring arrangements are derecognised if they meet the conditions for derecognition detailed in IAS 39 'Financial Instruments: Recognition and Measurement'.

Trade and other payables
Financial liabilities included in Trade and other payables are recognised initially at fair value. Subsequent to initial recognition they are measured at amortised cost using the effective interest rate method.

Financial instruments
The Group's financial instruments include interests in leases, trade and other receivables and payables, liabilities for contingent consideration and put options under business combinations, and rights and obligations under employee benefit plans which are dealt with in specific accounting policies.

The Group's other financial instruments include:

> cash and cash equivalents
> fixed deposits
> other investments
> bank and other borrowings
> derivatives

Cash and cash equivalents
Cash and cash equivalents comprise cash in hand, current balances with banks and similar institutions, and highly liquid investments with maturities of three months or less when acquired. They are readily convertible into known amounts of cash and are held at amortised cost.

Fixed deposits
Fixed deposits, principally comprising funds held with banks and other financial institutions, are initially measured at fair value, plus direct transaction costs, and are subsequently measured at amortised cost using the effective interest rate method at each reporting date. Changes in carrying value are recognised in profit.

Other investments
Where investments have been classified as held for trading, they are measured initially at fair value and subsequently remeasured to fair value at each reporting date. Changes in fair value are recognised in profit.

In all other circumstances, the investments are classified as 'available for sale', initially measured at fair value (including direct transaction costs) and subsequently remeasured to fair value at each reporting date. Changes in carrying value due to changes in exchange rates on monetary available for sale investments or impairments are recognised in profit within Other operating income and expense. All other changes in fair value are recognised in Other comprehensive income.

Impairments are recorded in profit when there is a decline in the value of an investment that is deemed to be other than temporary. On disposal of the investment, the cumulative amount recognised in Other comprehensive income is recognised in profit as part of the gain or loss on disposal.

Bank and other borrowings

The Group uses derivatives, principally interest rate swaps, to hedge the interest rate exposure inherent in a portion of its fixed interest rate debt. In such cases the Group will either designate the debt as fair value through profit or loss when certain criteria are met or as the hedged item under a fair value hedge.

If the debt instrument is designated as fair value through profit or loss, the debt is initially measured at fair value (with direct transaction costs being included in profit as an expense) and is remeasured to fair value at each reporting date with changes in carrying value being recognised in profit (along with changes in the fair value of the related derivative), with the exception of changes in the fair value of the debt instrument relating to own credit risk which are recorded in Other comprehensive income in accordance with IFRS 9. Such a designation has been made where this significantly reduces an accounting mismatch which would result from recognising gains and losses on different bases.

If the debt is designated as the hedged item under a fair value hedge, the debt is initially measured at fair value (with direct transaction costs being amortised over the life of the debt) and is remeasured for fair value changes in respect of the hedged risk at each reporting date with changes in carrying value being recognised in profit (along with changes in the fair value of the related derivative).

If the debt is designated in a cash flow hedge, the debt is measured at amortised cost (with gains or losses taken to profit and direct transaction costs being amortised over the life of the debt). The related derivative is remeasured for fair value changes at each reporting date with the portion of the gain or loss on the derivative that is determined to be an effective hedge recognised in Other comprehensive income. The amounts that have been recognised in Other comprehensive income are reclassified to profit in the same period that the hedged forecast cash flows affect profit.

Other interest-bearing loans are initially measured at fair value (with direct transaction costs being amortised over the life of the loan) and are subsequently measured at amortised cost using the effective interest rate method at each reporting date. Changes in carrying value are recognised in profit.

Derivatives

Derivatives are initially measured at fair value (with direct transaction costs being included in profit as an expense) and are subsequently remeasured to fair value at each reporting date. Changes in carrying value are recognised in profit.

Foreign currencies

Foreign currency transactions, being transactions denominated in a currency other than an individual Group entity's functional currency, are translated into the relevant functional currencies of individual Group entities at average rates for the relevant monthly accounting periods, which approximate to actual rates.

Monetary assets and liabilities arising from foreign currency transactions are retranslated at exchange rates prevailing at the reporting date. Exchange gains and losses on loans and on short-term foreign currency borrowings and deposits are included within Finance expense. Exchange differences on all other foreign currency transactions are recognised in Operating profit in the individual Group entity's accounting records.

Non-monetary items arising from foreign currency transactions are not retranslated in the individual Group entity's accounting records.

In the Consolidated Financial Statements, income and expense items for Group entities with a functional currency other than US dollars are translated into US dollars at average exchange rates, which approximate to actual rates, for the relevant accounting periods. Assets and liabilities are translated at the US dollar exchange rates prevailing at the reporting date. Exchange differences arising on consolidation are recognised in Other comprehensive income.

If certain criteria are met, non-US dollar denominated loans or derivatives are designated as net investment hedges of foreign operations. Exchange differences arising on retranslation of net investments, and of foreign currency loans which are designated in an effective net investment hedge relationship, are recognised in Other comprehensive income in the Consolidated Financial Statements. Foreign exchange derivatives hedging net investments in foreign operations are carried at fair value. Effective fair value movements are recognised in Other comprehensive income, with any ineffectiveness taken to profit. Gains and losses accumulated in the translation reserve will be recycled to profit when the foreign operation is sold.

Litigation and environmental liabilities

AstraZeneca is involved in legal disputes, the settlement of which may involve cost to the Group. Provision is made where an adverse outcome is probable and associated costs, including related legal costs, can be estimated reliably. In other cases, appropriate disclosures are included.

Where it is considered that the Group is more likely than not to prevail, or in the rare circumstances where the amount of the legal liability cannot be estimated reliably, legal costs involved in defending the claim are charged to profit as they are incurred.

Where it is considered that the Group has a valid contract which provides the right to reimbursement (from insurance or otherwise) of legal costs and/or all or part of any loss incurred or for which a provision has been established, the best estimate of the amount expected to be received is recognised as an asset only when it is virtually certain.

AstraZeneca is exposed to environmental liabilities relating to its past operations, principally in respect of soil and groundwater remediation costs. Provisions for these costs are made when there is a present obligation and where it is probable that expenditure on remedial work will be required and a reliable estimate can be made of the cost. Provisions are discounted where the effect is material.

Group Accounting Policies
continued

Impairment

The carrying values of non-financial assets, other than inventories and deferred tax assets, are reviewed at least annually to determine whether there is any indication of impairment. For goodwill, intangible assets under development and for any other assets where such indication exists, the asset's recoverable amount is estimated based on the greater of its value in use and its fair value less cost to sell. In assessing the recoverable amount, the estimated future cash flows, adjusted for the risks specific to each asset, are discounted to their present value using a discount rate that reflects current market assessments of the time value of money, the general risks affecting the pharmaceutical industry and other risks specific to each asset. For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash flows of other assets. Impairment losses are recognised immediately in profit.

International accounting transition

On transition to using adopted IFRSs in the year ended 31 December 2005, the Group took advantage of several optional exemptions available in IFRS 1 'First-time Adoption of International Financial Reporting Standards'. The major impacts which are of continuing importance are detailed below:

- Business combinations – IFRS 3 'Business Combinations' has been applied from 1 January 2003, the date of transition, rather than being applied fully retrospectively. As a result, the combination of Astra and Zeneca is still accounted for as a merger, rather than through purchase accounting. If purchase accounting had been adopted, Zeneca would have been deemed to have acquired Astra.
- Cumulative exchange differences – the Group chose to set the cumulative exchange difference reserve at 1 January 2003 to nil.

Applicable accounting standards and interpretations issued but not yet adopted

IFRS 9 'Financial Instruments' is effective for accounting periods beginning on or after 1 January 2018 and will replace existing accounting standards. It is applicable to financial assets and liabilities, and will introduce changes to existing accounting concerning classification and measurement, impairment (introducing an expected-loss method), hedge accounting, and on the treatment of gains arising from the impact of own credit risk on the measurement of liabilities held at fair value. The standard was endorsed by the EU on 22 November 2016. The Group early adopted the treatment of fair value changes arising from changes in own credit risk from 1 January 2017 and will adopt the remainder of the standard from 1 January 2018. The principal impact will be that equity investments currently classified as available for sale will be re-categorised on initial application and the Group will elect to record fair value movements on certain non-current equity investments in Other comprehensive income. Fair value movements on other equity investments will be recorded in profit. The other changes introduced will have an insignificant impact on the Group. In particular, given the general quality and short-term nature of our trade receivables, there will be no material impact on the introduction of an expected-loss impairment method and, following a review of our existing hedging arrangements, these have been assessed as compliant with the new rules.

IFRS 15 'Revenue from Contracts with Customers' is effective for accounting periods beginning on or after 1 January 2018 and will replace existing accounting standards. It provides enhanced detail on the principle of recognising revenue to reflect the transfer of goods and services to customers at a value which the Company expects to be entitled to receive. The standard also updates revenue disclosure requirements. The standard was endorsed by the EU on 22 September 2016. The Group will retrospectively apply the standard from 1 January 2018 recognising the cumulative effect of initially applying the standard as an adjustment to the opening balance of retained earnings.

The standard will not have a material impact on our revenue streams from the supply of goods and associated rebates and returns provisions. The timing of the recognition of product sales and the basis for our estimates of sales deductions under IAS 18 are consistent with those to be adopted under IFRS 15.

Our present accounting for externalisation transactions under IAS 18 includes an analysis of the performance obligations under the arrangement and upfront revenue recognition requires the transfer of substantive rights, for example a licence to use our intellectual property and an appropriate allocation of revenue to the remaining performance obligations. While the basis for such allocation is different in IFRS 15, the impact of the adoption of the new standard on our historical allocations is not material. The licences we grant are typically rights to use our intellectual property, which does not change during the period of the licence. Those licences are generally unique and therefore the basis of allocation of revenue to performance obligations makes use of the residual approach as permitted by IFRS 15. The related sales milestones and royalties to these licences qualify for the royalty exemption available under IFRS 15 and will continue to be recognised as the underlying sales are made. Furthermore, there is no material change to the assessment of whether the performance obligations are distinct from applying the new standard.

IFRS 16 'Leases' is effective for accounting periods beginning on or after 1 January 2019 and will replace IAS 17 'Leases'. It will eliminate the classification of leases as either operating leases or finance leases and, instead, introduce a single lessee accounting model. The standard was endorsed by the EU on 31 October 2017. The adoption of IFRS 16 will result in the Group recognising lease liabilities, and corresponding 'right to use' assets, for agreements that are currently classified as operating leases. See Note 29 for further details on operating leases currently held.

In addition, the following amendments and interpretations have been issued:

- Amendments to IFRS 10 and IAS 28 Sale or Contribution of Assets between an Investor and its Associate or Joint Venture. The IASB has deferred these amendments until a date to be determined by the IASB.
- Amendments to IFRS 2 Classification and Measurement of Share-based Payment Transactions, effective for periods beginning on or after 1 January 2018.
- IFRIC 22 'Foreign Currency Transactions and Advance Consideration', effective for periods beginning on or after 1 January 2018.
- IFRIC 23 'Uncertainty over Income Tax Treatments', effective for periods beginning on or after 1 January 2019.

The above amendments and interpretations are not expected to have a significant impact on the Group's net results, net assets or disclosures although the impact of IFRIC 23 will be subject to further assessment in 2018. The amendments have yet to be endorsed by the EU.

1 Revenue

Product Sales

	2017 $m	2016 $m	2015 $m
Oncology:			
Tagrisso	**955**	423	19
Faslodex	**941**	830	704
Zoladex	**735**	816	816
Iressa	**528**	513	543
Lynparza	**297**	218	94
Arimidex	**217**	232	250
Casodex	**215**	247	267
Others	**136**	104	132
	4,024	3,383	2,825
Cardiovascular and Metabolic Diseases:			
Crestor	**2,365**	3,401	5,017
Brilinta	**1,079**	839	619
Farxiga	**1,074**	835	492
Seloken/Toprol-XL	**695**	737	710
Onglyza	**611**	720	786
Bydureon	**574**	578	580
Atacand	**300**	315	358
Byetta	**176**	254	316
Plendil	**110**	136	234
Others	**282**	301	377
	7,266	8,116	9,489
Respiratory:			
Symbicort	**2,803**	2,989	3,394
Pulmicort	**1,176**	1,061	1,014
Daliresp/Daxas	**198**	154	104
Tudorza/Eklira	**150**	170	190
Others	**379**	379	285
	4,706	4,753	4,987
Other:			
Nexium	**1,952**	2,032	2,496
Synagis	**687**	677	662
Seroquel XR	**332**	735	1,025
Losec/Prilosec	**271**	276	340
Local Anaesthetics	**228**	329	404
Seroquel IR	**179**	231	250
Movantik	**122**	91	29
FluMist/Fluenz	**78**	104	288
Diprivan	**64**	143	200
Merrem	**37**	201	241
Others	**206**	248	405
	4,156	5,067	6,340
Product Sales	**20,152**	21,319	23,641

Externalisation Revenue

Externalisation Revenue in 2017 was $2,313m (2016: $1,683m; 2015: $1,067m).

In 2017, Externalisation Revenue includes $1,247m from MSD for the global co-development and commercialisation of *Lynparza* and selumetinib, $250m from TerSera for the rights to *Zoladex* in the US and Canada, $150m milestone income from Aspen for our anaesthetics medicines portfolio, $150m milestone income on the out-licence of brodalumab to Valeant and LEO Pharma, and $127m from Sanofi for the co-development and co-commercialisation of MEDI8897.

In 2016, Externalisation Revenue includes $520m from Aspen for our anaesthetics medicines portfolio, $298m from the sale of commercialisation rights for *Plendil* in China to CMS, and $175m from Aralez for the US rights to *Toprol-XL*.

In 2015, Externalisation Revenue includes $450m on entering into a collaboration with Celgene on durvalumab, $200m on entering into a collaboration with Daiichi Sankyo on *Movantik* and $100m on entering into a collaboration with Valeant on brodalumab.

Royalty income of $108m (2016: $119m; 2015: $87m) is included in Externalisation Revenue.

2 Operating profit

Operating profit includes the following significant items:

Selling, general and administrative costs

In 2017, Selling, general and administrative costs includes a charge of $208m (2016: credit of $999m; 2015: credit of $378m) resulting from changes in the fair value of contingent consideration arising from the acquisition of the diabetes alliance from BMS. These adjustments reflect revised estimates for future sales performance for the products acquired and, as a result, revised estimates for future royalties payable.

In 2017, Selling, general and administrative costs also includes a credit of $209m (2016: credit of $41m; 2015: $nil) resulting from changes in estimates of the cash flows arising from the put option over the non-controlling interest in Acerta Pharma.

In 2017, Selling, general and administrative costs also includes a total of $241m (2016: $223m; 2015: $313m) of legal provisions relating to a number of legal proceedings in various jurisdictions in relation to several marketed products.

Further details of impairment charges for 2017, 2016 and 2015 are included in Notes 7 and 9.

Other operating income and expense

	2017 $m	2016 $m	2015 $m
Royalties			
Income	**132**	406	322
Amortisation	**(45)**	(86)	(114)
Gains on disposal of intangible assets	**1,518**	1,301	961
Gains on disposal of short-term investments	**161**	–	–
Net gains on disposal of other non-current assets	**24**	29	85
Impairment of property, plant and equipment	**(78)**	–	–
Impairment of intangible assets	**–**	–	(64)
Other income	**286**	146	327
Other expense	**(168)**	(141)	(17)
Other operating income and expense	**1,830**	1,655	1,500

Royalty amortisation relates to intangible assets recorded in respect of income streams acquired with MedImmune, and upon the restructuring of a historical joint venture with MSD.

Gains on disposal of intangible assets in 2017 includes $555m on the disposal of the remaining rights to the global anaesthetics portfolio, $301m on disposal of Europe rights to *Seloken* and $193m on disposal of the global rights to *Zomig*.

Gains on disposal of intangible assets in 2016 includes $368m on the disposal of the small molecule antibiotics assets in most markets outside the US, $321m on the disposal of Rest of World rights to *Rhinocort Aqua*, $231m on the disposal of global rights to MEDI2070 and $183m on the disposal of Rest of World rights to *Imdur*.

Gains on disposal of intangible assets in 2015 includes $380m on the disposal of US rights to *Entocort*, $215m on the disposal of Rest of World rights to *Entocort*, $193m on the disposal of global rights to *Myalept* and $165m on the disposal of global rights to *Caprelsa*.

Restructuring costs

The tables below show the costs that have been charged in respect of restructuring programmes by cost category and type. Severance provisions are detailed in Note 19.

	2017 $m	2016 $m	2015 $m
Cost of sales	**181**	130	158
Research and development expense	**201**	178	258
Selling, general and administrative costs	**347**	823	618
Other operating income and expense	**78**	(24)	–
Total charge	**807**	1,107	1,034

	2017 $m	2016 $m	2015 $m
Severance costs	**176**	505	298
Accelerated depreciation and impairment	**141**	46	81
Relocation costs	**6**	18	34
Other	**484**	538	621
Total charge	**807**	1,107	1,034

Other costs are those incurred in designing and implementing the Group's various restructuring initiatives, including costs of decommissioning sites impacted by changes to our global footprint, temporary lease costs during relocation, internal project costs, and external consultancy fees.

2 Operating profit *continued*

Financial instruments

Included within operating profit are the following net gains and losses on financial instruments:

	2017 $m	2016 $m	2015 $m
Losses on forward foreign exchange contracts	**(6)**	(216)	(22)
(Losses)/gains on receivables and payables	**(30)**	132	(36)
Gains on disposal of short-term investments	**161**	–	–
Gains on other available for sale investments	**34**	–	74
Total	**159**	(84)	16

Gains and losses on available for sale investments includes gains of $4m (2016: $nil; 2015: gains of $43m) which have been reclassified from other comprehensive income.

3 Finance income and expense

	2017 $m	2016 $m	2015 $m
Finance income			
Returns on fixed deposits and equity securities	**8**	8	8
Returns on short-term deposits	**62**	35	28
Fair value gains on debt and interest rate swaps	**4**	–	10
Net exchange gains	**–**	8	–
Discount unwind on other long-term assets	**10**	16	–
Interest on tax receivables	**29**	–	–
Total	**113**	67	46
Finance expense			
Interest on debt and commercial paper	**(612)**	(565)	(361)
Interest on overdrafts, finance leases and other financing costs	**(52)**	(52)	(31)
Net interest on post-employment defined benefit plan net liabilities (Note 20)	**(49)**	(63)	(77)
Net exchange losses	**(148)**	–	(36)
Discount unwind on contingent consideration arising from business combinations (Note 18)	**(402)**	(497)	(524)
Discount unwind on other long-term liabilities	**(245)**	(190)	(46)
Fair value losses on debt and interest rate swaps	**–**	(17)	–
Total	**(1,508)**	(1,384)	(1,075)
Net finance expense	**(1,395)**	(1,317)	(1,029)

Financial instruments

Included within finance income and expense are the following net gains and losses on financial instruments:

	2017 $m	2016 $m	2015 $m
Interest and fair value adjustments in respect of debt designated at fair value through profit or loss, net of derivatives	**8**	(14)	6
Interest and changes in carrying values of debt designated as hedged items, net of derivatives	**(35)**	(21)	(10)
Interest and fair value changes on fixed and short-term deposits, equity securities and other derivatives	**52**	74	46
Interest on debt, overdrafts, finance leases and commercial paper held at amortised cost	**(559)**	(553)	(384)

Fair value losses of $9m (2016: $29m fair value losses; 2015: $30m fair value losses) on interest rate fair value hedging instruments and $9m fair value gains (2016: $30m fair value gains; 2015: $30m fair value gains) on the related hedged items have been included within interest and changes in carrying values of debt designated as hedged items, net of derivatives. All fair value hedge relationships were effective during the year.

Fair value losses of $10m (2016: $12m fair value losses; 2015: $5m fair value losses) on derivatives related to debt instruments designated at fair value through profit or loss and $3m fair value gains (2016: $9m fair value gains; 2015: $15m fair value gains) on debt instruments designated at fair value through profit or loss have been included within interest and fair value adjustments in respect of debt designated at fair value through profit or loss, net of derivatives. Ineffectiveness on the net investment hedge taken to profit was $nil (2016: $nil; 2015: $nil).

4 Taxation

Taxation recognised in the consolidated statement of comprehensive income is as follows:

	2017 $m	2016 $m	2015 $m
Current tax expense			
Current year	**665**	384	1,037
Adjustment to prior years	**(287)**	(14)	(404)
Total	**378**	370	633
Deferred tax expense			
Origination and reversal of temporary differences	**(1,113)**	(94)	(482)
Adjustment to prior years	**94**	(130)	92
Total	**(1,019)**	(224)	(390)
Taxation recognised in the profit for the period	**(641)**	146	243

Taxation relating to components of other comprehensive income is as follows:

	2017 $m	2016 $m	2015 $m
Current and deferred tax			
Items that will not be reclassified to profit or loss:			
Remeasurement of the defined benefit liability	**24**	110	(133)
Share-based payments	**9**	51	(8)
Deferred tax impact of reduction in US and other tax rates	**(17)**	(25)	(58)
Total	**16**	136	(199)
Items that may be reclassified subsequently to profit or loss:			
Foreign exchange arising on consolidation	**(79)**	63	(8)
Foreign exchange arising on designating borrowings in net investment hedges	**14**	83	80
Net available for sale losses/(gains) recognised in other comprehensive income	**2**	(61)	14
Other	**–**	1	1
Deferred tax impact of reduction in US tax rate	**30**	–	–
Total	**(33)**	86	87
Taxation relating to components of other comprehensive income	**(17)**	222	(112)

The tax rate of (29)% in the year benefited from a favourable net adjustment of $617m to deferred taxes, reflecting the recently reduced US Federal Income Tax rate and non-taxable remeasurements of acquisition-related liabilities. Additionally, there was a $472m benefit to the tax rate, reflecting the favourable impact of UK Patent Box profits; the recognition of previously unrecognised tax losses; and reductions in tax provisions and provision to return adjustments arising on the expiry of statute of limitations and favourable progress of discussions with tax authorities.

Absent these benefits, the tax rate for the year would have been 22%.

The cash tax paid for the year was $454m which was 20% of profit before tax.

Taxation has been provided at current rates on the profits earned for the periods covered by the Group Financial Statements. The 2017 prior period current tax adjustment relates mainly to net reductions in provisions for tax contingencies totalling $105m and tax accrual to tax return adjustments. The 2016 prior period current tax adjustment relates mainly to net reductions in provisions for tax contingencies totalling $67m and tax accrual to tax return adjustments. The 2015 prior period current tax adjustment relates mainly to a $186m tax benefit following agreement of US federal tax liabilities of open years to 2008, net reductions in provisions for tax contingencies totalling $259m and tax accrual to tax return adjustments.

The 2017 prior period deferred tax adjustments relate mainly to tax accrual to return adjustments. The 2016 prior period deferred tax adjustments relate mainly to tax accrual to return adjustments and releases in provisions for tax contingencies. The 2015 prior period deferred tax adjustments relate mainly to tax accrual to return adjustments.

To the extent that dividends remitted from overseas subsidiaries, joint ventures and associates are expected to result in additional taxes, appropriate amounts have been provided for. No deferred tax has been provided for unremitted earnings of Group companies overseas as these are considered permanently employed in the business of these companies. Unremitted earnings may be liable to overseas taxes and/or UK taxation (after allowing for double tax relief) if distributed as dividends. The aggregate amount of temporary differences associated with investments in subsidiaries and branches for which deferred tax liabilities have not been recognised totalled approximately $8,359m at 31 December 2017 (2016: $6,884m; 2015: $6,957m).

Factors affecting future tax charges

As a group with worldwide operations, AstraZeneca is subject to several factors that may affect future tax charges, principally the levels and mix of profitability in different jurisdictions, transfer pricing regulations, tax rates imposed and tax regime reforms. In December 2017, the US tax regime was reformed through enactment of the Tax Cuts and Jobs Act. This included a substantial reduction to the federal tax rate from 35% to 21% along with other changes.

Details of the material tax exposures and items currently under audit, negotiation and review are set out in Note 28.

4 Taxation *continued*

Tax reconciliation to UK statutory rate

The table below reconciles the UK statutory tax charge to the Group's total tax charge/(credit):

	2017 $m	2016 $m	2015 $m
Profit before tax	**2,227**	3,552	3,069
Notional taxation charge at UK corporation tax rate of 19.25% (2016: 20%; 2015: 20.25%)	**429**	710	621
Differences in overseas tax rates	**(212)**	(233)	(144)
Deferred tax credit relating to reduction in US and other tax rates[1]	**(616)**	(16)	(25)
Unrecognised deferred tax asset[2]	**(105)**	242	149
Items not deductible for tax purposes	**203**	132	29
Items not chargeable for tax purposes	**(14)**	(7)	–
Other items[3]	**(133)**	(538)	(75)
Adjustments in respect of prior periods[4, 5]	**(193)**	(144)	(312)
Total tax (credit)/charge for the year	**(641)**	146	243

[1] The 2017 item relates to the reduction in the US Federal Income Tax rate from 35% to 21% effective from 1 January 2018 (credit of $617m) and other (charge of $1m). The 2016 item relates to the reduction in the UK Statutory Corporation Tax rate from 18% to 17% effective from 1 April 2020. The 2015 item relates to the reduction in the UK Statutory Corporation Tax rate from 20% to 18% previously announced to be effective from 1 April 2020.

[2] Includes an amount of $126m in relation to recognition of previously unrecognised net deferred tax assets.

[3] Other items in 2017 relate to the release of tax contingencies following the expiry of the relevant statute of limitations (credit $178m) partially offset by a provision build for transfer pricing and other contingencies (charge $45m). Other items in 2016 relate to the release of tax contingencies following agreements between the Canadian tax authority and UK and Swedish tax authorities in respect of transfer pricing arrangements for the 13 year period from 2004 to 2016 (credit $453m) and release of certain tax contingencies following the expiry of the relevant statute of limitations (credit $280m) partially offset by provision build for transfer pricing contingencies (charge $195m). Other items in 2015 included the impact of internal transfers of intellectual property (tax charge $181m) and the release of certain tax contingencies following the expiry of the relevant statute of limitations (tax credit $256m).

[4] Further details explaining the adjustments in respect of prior periods is set out above on page 148.

[5] Includes an adjustment of $17m to a pre-acquisition deferred tax asset following finalisation of relevant tax returns.

AstraZeneca is domiciled in the UK but operates in other countries where the tax rates and laws are different to those in the UK. The impact on differences in effective overseas tax rates on the Group's overall tax charge is noted above. Profits arising from our manufacturing operation in Puerto Rico are granted special status and are taxed at a reduced rate compared with the normal rate of tax in that territory under a tax incentive grant continuing until 2031.

Deferred tax

The movements in the net deferred tax balance during the year are as follows:

	Intangibles, property, plant & equipment[1] $m	Pension and post-retirement benefits $m	Inter-company inventory transfers $m	Untaxed reserves[2] $m	Losses and tax credits carried forward[3] $m	Accrued expenses and other $m	Total $m
Net deferred tax balance at 1 January 2015	(2,478)	628	630	(578)	525	696	(577)
Taxation expense	355	30	156	(156)	58	(53)	390
Other comprehensive income	80	(198)	–	–	–	(9)	(127)
Additions through business combinations[4]	(1,206)	–	–	–	229	–	(977)
Exchange	(12)	(33)	(48)	42	(8)	(21)	(80)
Net deferred tax balance at 31 December 2015	(3,261)	427	738	(692)	804	613	(1,371)
Taxation expense	(132)	11	314	(53)	151	(67)	224
Other comprehensive income	83	101	–	–	–	(24)	160
Additions through business combinations[5]	(1,827)	–	–	–	50	–	(1,777)
Exchange	(1)	(74)	(38)	48	(1)	(13)	(79)
Other movements[6]	(11)	–	–	–	–	–	(11)
Net deferred tax balance at 31 December 2016	(5,149)	465	1,014	(697)	1,004	509	(2,854)
Income statement	**1,393**	**(8)**	**(231)**	**159**	**(128)**	**(166)**	**1,019**
Other comprehensive income	**(84)**	**9**	**–**	**–**	**–**	**35**	**(40)**
Exchange	**(12)**	**43**	**48**	**(62)**	**30**	**22**	**69**
Net deferred tax balance at 31 December 2017[7]	**(3,852)**	**509**	**831**	**(600)**	**906**	**400**	**(1,806)**

[1] Includes deferred tax on contingent liabilities in respect of intangibles.

[2] Untaxed reserves relate to taxable profits where the tax liability is deferred to later periods.

[3] Includes losses and tax credits carried forward which will expire within 1 to 20 years.

[4] The deferred tax liability of $977m relates to the acquisition of ZS Pharma (see Note 25).

[5] The deferred tax liability of $1,777m relates to the acquisition of Acerta Pharma (see Note 25).

[6] Arising on the deconsolidation of Entasis as detailed in Note 10.

[7] The UK had a net deferred tax asset of $743m as at 31 December 2017, mainly in respect of losses and pensions and post-retirement benefits, which has been recognised on the basis of sufficient forecast future taxable profits against which the deductible temporary differences can be utilised.

4 Taxation *continued*

The net deferred tax balance, before the offset of balances within countries, consists of:

	Intangibles, property, plant & equipment $m	Pension and post-retirement benefits $m	Inter-company inventory transfers $m	Untaxed reserves $m	Losses and tax credits carried forward $m	Accrued expenses and other $m	Total $m
Deferred tax assets at 31 December 2015	1,055	430	780	–	804	732	3,801
Deferred tax liabilities at 31 December 2015	(4,316)	(3)	(42)	(692)	–	(119)	(5,172)
Net deferred tax balance at 31 December 2015	(3,261)	427	738	(692)	804	613	(1,371)
Deferred tax assets at 31 December 2016	875	465	1,014	–	1,004	629	3,987
Deferred tax liabilities at 31 December 2016	(6,024)	–	–	(697)	–	(120)	(6,841)
Net deferred tax balance at 31 December 2016	(5,149)	465	1,014	(697)	1,004	509	(2,854)
Deferred tax assets at 31 December 2017	**1,226**	**559**	**1,011**	**–**	**957**	**885**	**4,638**
Deferred tax liabilities at 31 December 2017	**(5,078)**	**(50)**	**(180)**	**(600)**	**(51)**	**(485)**	**(6,444)**
Net deferred tax balance at 31 December 2017	**(3,852)**	**509**	**831**	**(600)**	**906**	**400**	**(1,806)**

Analysed in the statement of financial position, after offset of balances within countries, as:

	2017 $m	2016 $m	2015 $m
Deferred tax assets	**2,189**	1,102	1,294
Deferred tax liabilities	**(3,995)**	(3,956)	(2,665)
Net deferred tax balance	**(1,806)**	(2,854)	(1,371)

Unrecognised deferred tax assets

Deferred tax assets of $420m have not been recognised in respect of deductible temporary differences, which include items which will expire within 1 to 20 years (2016: $542m; 2015: $414m) because it is not probable that future taxable profit will be available against which the Group can utilise the benefits therefrom.

5 Earnings per $0.25 Ordinary Share

	2017	2016	2015
Profit for the year attributable to equity holders ($m)	**3,001**	3,499	2,825
Basic earnings per Ordinary Share	**$2.37**	$2.77	$2.23
Diluted earnings per Ordinary Share	**$2.37**	$2.76	$2.23
Weighted average number of Ordinary Shares in issue for basic earnings (millions)	**1,266**	1,265	1,264
Dilutive impact of share options outstanding (millions)	**1**	1	1
Diluted weighted average number of Ordinary Shares in issue (millions)	**1,267**	1,266	1,265

The earnings figures used in the calculations above are post-tax.

6 Segment information

AstraZeneca is engaged in a single business activity of biopharmaceuticals and the Group does not have multiple operating segments. AstraZeneca's biopharmaceuticals business consists of the discovery and development of new products, which are then manufactured, marketed and sold. All of these functional activities take place (and are managed) globally on a highly integrated basis. These individual functional areas are not managed separately.

The SET, established and chaired by the CEO, is the vehicle through which he exercises the authority delegated to him from the Board for the management, development and performance of our business. It is considered that the SET is AstraZeneca's chief operating decision making body (as defined by IFRS 8). The operation of the SET is principally driven by the management of the commercial operations, R&D, and manufacturing and supply. In addition to the CEO, CFO, the General Counsel and the Chief Compliance Officer, the SET comprises ten Executive Vice Presidents representing IMED, MedImmune, Global Medicines Development, North America, Europe, International & GPPS, Asia Pacific, Oncology, Operations & Information Technology, and Human Resources. All significant operating decisions are taken by the SET. While members of the SET have responsibility for implementation of decisions in their respective areas, operating decision making is at SET level as a whole. Where necessary, these are implemented through cross-functional sub-committees that consider the Group-wide impact of a new decision. For example, product launch decisions would be initially considered by the SET and, on approval, passed to an appropriate sub team for implementation. The impacts of being able to develop, produce, deliver and commercialise a wide range of pharmaceutical products drive the SET decision making process.

In assessing performance, the SET reviews financial information on an integrated basis for the Group as a whole, substantially in the form of, and on the same basis as, the Group's IFRS Financial Statements. The high upfront cost of discovering and developing new products coupled with the relatively insignificant and stable unit cost of production means that there is not the clear link that exists in many manufacturing businesses between the revenue generated on an individual product sale and the associated cost and hence margin generated on a product. Consequently, the profitability of individual drugs or classes of drugs is not considered a key measure of performance for the business and is not monitored by the SET.

Resources are allocated on a Group-wide basis according to need. In particular, capital expenditure, in-licensing, and R&D resources are allocated between activities on merit, based on overall therapeutic considerations and strategy under the aegis of the Group's Early Stage Product Committees and a single Late Stage Product Committee.

Geographic areas

The following tables show information by geographic area and, for Total Revenue and property, plant and equipment, material countries. The figures show the Total Revenue, operating profit and profit before tax made by companies located in that area/country, together with segment assets, segment assets acquired, net operating assets, and property, plant and equipment owned by the same companies; export sales and the related profit are included in the area/country where the legal entity resides and from which those sales were made.

	Total Revenue		
	2017 $m	2016 $m	2015 $m
UK			
External	**3,240**	1,849	2,176
Intra-Group	**5,018**	7,503	6,001
	8,258	9,352	8,177
Continental Europe			
France	**701**	899	1,015
Germany	**541**	615	608
Italy	**514**	529	544
Spain	**447**	440	426
Sweden	**842**	1,522	645
Others	**1,512**	1,575	1,624
Intra-Group	**3,862**	4,108	4,664
	8,419	9,688	9,526
The Americas			
Canada	**482**	495	530
US	**6,666**	7,828	9,949
Others	**809**	846	1,018
Intra-Group	**2,446**	3,487	2,167
	10,403	12,656	13,664
Asia, Africa & Australasia			
Australia	**377**	385	435
China	**2,955**	2,650	2,548
Japan	**2,172**	2,145	1,985
Others	**1,207**	1,224	1,205
Intra-Group	**41**	85	46
	6,752	6,489	6,219
Continuing operations	**33,832**	38,185	37,586
Intra-Group eliminations	**(11,367)**	(15,183)	(12,878)
Total Revenue	**22,465**	23,002	24,708

6 Segment information *continued*

Export sales from the UK totalled $5,917m for the year ended 31 December 2017 (2016: $8,421m; 2015: $6,851m).

	Operating (loss)/profit			(Loss)/profit before tax		
	2017 $m	2016 $m	2015 $m	2017 $m	2016 $m	2015 $m
UK	**(694)**	(526)	(743)	**(1,146)**	(950)	(1,113)
Continental Europe	**2,482**	3,695	3,412	**1,918**	3,136	3,023
The Americas	**1,242**	1,259	1,101	**822**	919	821
Asia, Africa & Australasia	**647**	474	344	**633**	447	338
Continuing operations	**3,677**	4,902	4,114	**2,227**	3,552	3,069

	Non-current assets[1]			Total assets		
	2017 $m	2016 $m	2015 $m	2017 $m	2016 $m	2015 $m
UK	**5,371**	5,127	6,251	**12,842**	12,704	14,712
Continental Europe	**16,305**	15,731	8,690	**18,962**	18,174	10,636
The Americas	**24,811**	26,044	26,431	**28,180**	28,792	31,536
Asia, Africa & Australasia	**1,024**	917	937	**3,370**	2,856	3,172
Continuing operations	**47,511**	47,819	42,309	**63,354**	62,526	60,056

	Assets acquired[2]			Net operating assets[3]		
	2017 $m	2016 $m	2015 $m	2017 $m	2016 $m	2015 $m
UK	**400**	362	1,478	**3,351**	3,306	3,713
Continental Europe	**629**	8,494	653	**10,228**	8,479	3,704
The Americas	**585**	688	4,147	**20,339**	20,969	22,334
Asia, Africa & Australasia	**138**	129	172	**1,198**	1,030	1,458
Continuing operations	**1,752**	9,673	6,450	**35,116**	33,784	31,209

[1] Non-current assets exclude deferred tax assets and derivative financial instruments.
[2] Included in Assets acquired are those assets that are expected to be used during more than one period (property, plant and equipment, goodwill and intangible assets).
[3] Net operating assets exclude short-term investments, cash, short-term borrowings, loans, derivative financial instruments, retirement benefit obligations and non-operating receivables and payables.

	Property, plant and equipment		
	2017 $m	2016 $m	2015 $m
UK	**1,455**	1,026	1,024
Sweden	**1,508**	1,142	1,023
US	**3,055**	3,233	2,986
Rest of the world	**1,597**	1,447	1,380
Continuing operations	**7,615**	6,848	6,413

Geographic markets

The table below shows Product Sales in each geographic market in which customers are located.

	2017 $m	2016 $m	2015 $m
UK	**489**	487	588
Continental Europe	**4,712**	4,987	5,180
The Americas	**7,467**	8,717	11,031
Asia, Africa & Australasia	**7,484**	7,128	6,842
Continuing operations	**20,152**	21,319	23,641

Product Sales are recognised when the significant risks and rewards of ownership have been transferred to a third party. In general this is upon delivery of the products to wholesalers. No wholesaler (2016: one; 2015: two) individually represented greater than 10% of Product Sales. The value of these transactions recorded as Product Sales were $nil (2016: $2,851m; 2015: $3,458m and $2,757m).

7 Property, plant and equipment

	Land and buildings $m	Plant and equipment $m	Assets in course of construction $m	Total property, plant and equipment $m
Cost				
At 1 January 2015	4,912	7,712	1,120	13,744
Capital expenditure	23	223	1,155	1,401
Additions through business combinations (Note 25)	21	–	–	21
Transfer of assets into use	269	359	(628)	–
Disposals and other movements	(239)	(442)	(3)	(684)
Exchange adjustments	(174)	(384)	(76)	(634)
At 31 December 2015	4,812	7,468	1,568	13,848
Capital expenditure	29	206	1,214	1,449
Transfer of assets into use	222	109	(331)	–
Disposals and other movements	(236)	(700)	(16)	(952)
Exchange adjustments	(211)	(540)	(143)	(894)
At 31 December 2016	4,616	6,543	2,292	13,451
Capital expenditure	**39**	**198**	**1,074**	**1,311**
Transfer of assets into use	**525**	**567**	**(1,092)**	**–**
Disposals and other movements	**(367)**	**(577)**	**–**	**(944)**
Exchange adjustments	**210**	**452**	**159**	**821**
At 31 December 2017	**5,023**	**7,183**	**2,433**	**14,639**
Depreciation				
At 1 January 2015	2,351	5,383	–	7,734
Charge for year	198	479	–	677
Impairment	9	19	–	28
Disposals and other movements	(203)	(411)	–	(614)
Exchange adjustments	(102)	(288)	–	(390)
At 31 December 2015	2,253	5,182	–	7,435
Charge for year	185	424	–	609
Impairment	2	–	–	2
Disposals and other movements	(222)	(656)	–	(878)
Exchange adjustments	(126)	(439)	–	(565)
At 31 December 2016	2,092	4,511	–	6,603
Charge for year	**182**	**442**	**–**	**624**
Impairment	**78**	**–**	**–**	**78**
Disposals and other movements	**(249)**	**(501)**	**–**	**(750)**
Exchange adjustments	**128**	**341**	**–**	**469**
At 31 December 2017	**2,231**	**4,793**	–	**7,024**
Net book value				
At 31 December 2015	2,559	2,286	1,568	6,413
At 31 December 2016	2,524	2,032	2,292	6,848
At 31 December 2017	**2,792**	**2,390**	**2,433**	**7,615**

Impairment charges in 2017 were recognised in relation to land and buildings in the US which were subsequently sold. These charges have been recognised in other operating income and expense.

	2017 $m	2016 $m	2015 $m
The net book value of land and buildings comprised:			
Freeholds	**2,514**	2,326	2,432
Leaseholds	**278**	198	127

Included within plant and equipment are Information Technology assets held under finance leases with a net book value of $nil (2016: $43m; 2015: $70m).

8 Goodwill

	2017 $m	2016 $m	2015 $m
Cost			
At 1 January	**11,969**	12,113	11,868
Additions through business combinations (Note 25)	**–**	19	388
Exchange and other adjustments	**174**	(163)	(143)
At 31 December	**12,143**	11,969	12,113
Amortisation and impairment losses			
At 1 January	**311**	313	318
Exchange and other adjustments	**7**	(2)	(5)
At 31 December	**318**	311	313
Net book value at 31 December	**11,825**	11,658	11,800

Goodwill is tested for impairment at the operating segment level, this being the level at which goodwill is monitored for internal management purposes. As detailed in Note 6, the Group does not have multiple operating segments and is engaged in a single business activity of biopharmaceuticals.

Recoverable amount is determined on a fair value less costs to sell basis using the market value of the Company's outstanding ordinary shares. Our market capitalisation is compared to the book value of the Group's net assets and this indicates a significant surplus at 31 December 2017 (and 31 December 2016 and 31 December 2015).

As a further check, we also perform a discounted cash flow calculation whereby we risk adjust projections of the Group's post-tax cash flows over 10 years. This length of time is considered by the Board as a reasonable period given the long development and life-cycle of a medicine. The projections include assumptions about product launches, competition from rival products and pricing policy as well as the possibility of generics entering the market. In setting these assumptions we consider our past experience, external sources of information (including information on expected increases and ageing of populations in our established markets and the expanding patient populations in newer markets), our knowledge of competitor activity and our assessment of future changes in the pharmaceutical industry. The 10-year period is covered by internal budgets and forecasts. Given that internal budgets and forecasts are prepared for all projections, no general growth rates are used to extrapolate internal budget and forecast amounts. No terminal value is included as the recoverable amount determined by the cash flows exceed the carrying value of net assets without inclusion of a terminal value.

AstraZeneca's post-tax weighted average cost of capital (7.0% for 2017, 2016 and 2015) is used in the calculation to discount the cash flows to reflect the impact of risks relevant to the Group and the time value of money.

No goodwill impairment was identified.

9 Intangible assets

	Product, marketing and distribution rights $m	Other intangibles $m	Software development costs $m	Total $m
Cost				
At 1 January 2015	31,899	2,812	2,026	36,737
Additions through business combinations (Note 25)	3,162	–	–	3,162
Additions – separately acquired	1,341	60	77	1,478
Disposals	(198)	(4)	(14)	(216)
Exchange and other adjustments	(886)	(73)	(70)	(1,029)
At 31 December 2015	35,318	2,795	2,019	40,132
Additions through business combinations (Note 25)	7,307	–	–	7,307
Additions – separately acquired	789	32	77	898
Disposals	(339)	(15)	(141)	(495)
Exchange and other adjustments	(1,472)	(232)	(127)	(1,831)
At 31 December 2016	41,603	2,580	1,828	46,011
Additions – separately acquired	**397**	**7**	**37**	**441**
Disposals	**(249)**	**(67)**	**(62)**	**(378)**
Exchange and other adjustments	**1,162**	**116**	**108**	**1,386**
At 31 December 2017	**42,913**	**2,636**	**1,911**	**47,460**
Amortisation and impairment losses				
At 1 January 2015	12,545	1,653	1,558	15,756
Amortisation for year	1,718	174	107	1,999
Impairment	143	–	5	148
Disposals	(31)	(2)	(14)	(47)
Exchange and other adjustments	(271)	(52)	(47)	(370)
At 31 December 2015	14,104	1,773	1,609	17,486
Amortisation for year	1,454	162	85	1,701
Impairment	43	1	1	45
Disposals	(25)	(15)	(124)	(164)
Exchange and other adjustments	(481)	(85)	(77)	(643)
At 31 December 2016	15,095	1,836	1,494	18,425
Amortisation for year	**1,627**	**118**	**84**	**1,829**
Impairment	**488**	**–**	**3**	**491**
Disposals	**(19)**	**–**	**(52)**	**(71)**
Exchange and other adjustments	**467**	**50**	**81**	**598**
At 31 December 2017	**17,658**	**2,004**	**1,610**	**21,272**
Net book value				
At 31 December 2015	21,214	1,022	410	22,646
At 31 December 2016	26,508	744	334	27,586
At 31 December 2017	**25,255**	**632**	**301**	**26,188**

Other intangibles consist mainly of research and device technologies.

9 Intangible assets *continued*

Amortisation charges are recognised in profit as follows:

	Product, marketing and distribution rights $m	Other intangibles $m	Software development costs $m	Total $m
Year ended 31 December 2015				
Cost of sales	369	–	–	369
Research and development expense	–	57	–	57
Selling, general and administrative costs	1,321	31	107	1,459
Other operating income and expense	28	86	–	114
Total	1,718	174	107	1,999
Year ended 31 December 2016				
Cost of sales	124	–	–	124
Research and development expense	–	48	–	48
Selling, general and administrative costs	1,327	31	85	1,443
Other operating income and expense	3	83	–	86
Total	1,454	162	85	1,701
Year ended 31 December 2017				
Cost of sales	**149**	**–**	**–**	**149**
Research and development expense	**–**	**43**	**–**	**43**
Selling, general and administrative costs	**1,478**	**30**	**84**	**1,592**
Other operating income and expense	**–**	**45**	**–**	**45**
Total	**1,627**	**118**	**84**	**1,829**

Impairment charges are recognised in profit as follows:

	Product, marketing and distribution rights $m	Other intangibles $m	Software development costs $m	Total $m
Year ended 31 December 2015				
Research and development expense	79	–	–	79
Selling, general and administrative costs	–	–	5	5
Other operating income and expense	64	–	–	64
Total	143	–	5	148
Year ended 31 December 2016				
Research and development expense	32	1	–	33
Selling, general and administrative costs	11	–	1	12
Total	43	1	1	45
Year ended 31 December 2017				
Research and development expense	**101**	**–**	**–**	**101**
Selling, general and administrative costs	**387**	**–**	**3**	**390**
Total	**488**	**–**	**3**	**491**

Impairment charges and reversals

Intangible assets under development and not available for use are tested annually for impairment and other intangible assets are tested when there is any indication of impairment. Recoverable amount is determined on a fair value less cost to sell basis using a discounted cash flow calculation (level 3 in the fair value hierarchy) where the products' expected post-tax cash flows are risk-adjusted over their estimated remaining useful economic life. The projections are covered by internal budgets and forecasts. The risk-adjusted cash flows are discounted using AstraZeneca's post-tax weighted average cost of capital (7.0% for 2017, 2016 and 2015).

The estimates used in calculating the recoverable amount are highly sensitive and depend on assumptions specific to the nature of the Group's activities including:

> outcome of R&D activities;
> probability of technical and regulatory success;
> market share and pricing;
> amount and timing of projected future cash flows; and
> sales erosion curves following patent expiry.

At 31 December 2017, the Group recorded an impairment charge of $491m in respect of launched products *Byetta* ($92m, revised carrying value of $407m), FluMist ($121m, revised carrying value of $267m) and Movantik ($174m, revised carrying value of $106m), and products in development which were fully written off, tralokinumab ($53m) and other intangible assets ($51m). The impairments recorded on the launched products were a consequence of revised market share assumptions and, for FluMist, the US market expected timing of renewed recommendation. Impairments recorded on products in development were a consequence of failed or poor performing trials.

No impairment charge has been recorded on Verinurad, a product in development, with a net book value of $1,172m. The valuation is particularly sensitive to variations in the probability of technical and regulatory success ('PTRS') assumptions. To illustrate this, sensitivities performed at the

9 Intangible assets *continued*

year end to vary to PTRS assumptions in the Group's valuation model included reducing the PTRS by 5 percentage points. Assuming all other assumptions remain constant, applying the sensitivity would result in an impairment charge of approximately $300m.

As detailed in Note 25, we have recognised significant intangible assets for late stage development programmes and launched products on business combinations at their fair value at acquisition. Further information on our significant intangible assets are disclosed below.

Significant assets

	Carrying value $m	Remaining amortisation period
Intangible assets arising from the acquisition of Acerta Pharma	7,227	15 years
Intangible assets arising from the acquisition of ZS Pharma[1]	3,162	Not amortised
RSV franchise assets arising from the acquisition of MedImmune	2,223	8 years
Intangible assets arising from the restructuring of a historical joint venture with MSD	1,473	1-13 years
Farxiga/*Forxiga* intangible assets acquired from BMS	1,428	10 years
Respiratory intangible assets acquired from Almirall and Actavis	1,304	2-21 years
Intangible assets arising from the acquisition of Ardea[1]	1,172	Not amortised
Bydureon intangible assets acquired from BMS	1,074	13 years
Onglyza intangible assets acquired from BMS	978	6 years
Other diabetes intangible assets acquired from BMS	997	5-16 years
Intangible assets arising from the acquisition of Pearl Therapeutics	932	11 years
Intangible assets arising from the acquisition of Omthera[1]	533	Not amortised
Intangible assets arising from the acquisition of Amplimmune[1]	470	Not amortised
Respiratory intangible assets acquired from Takeda	454	2-7 years
Roxadustat intangible assets acquired from FibroGen[1]	347	Not amortised
FluMist intangible assets arising from the acquisition of MedImmune	267	14 years

[1] Assets in development are not amortised but are tested annually for impairment.

All the assets listed above are classified as Product, marketing and distribution rights.

10 Investments in associates and joint ventures

	2017 $m	2016 $m	2015 $m
At 1 January	**99**	85	59
Additions	**76**	65	45
Share of after tax losses	**(55)**	(33)	(16)
Unrecognised profit on transactions with joint ventures	**(27)**	–	–
Exchange adjustments	**10**	(18)	(3)
At 31 December	**103**	99	85

On 27 November 2017, AstraZeneca entered into a joint venture agreement with Chinese Future Industry Investment Fund (FIIF), to discover, develop and commercialise potential new medicines to help meet unmet needs globally, and to bring innovative new medicines to patients in China faster. The agreement resulted in the formation of a joint venture entity based in China, Dizhe (Jiangsu) Pharmaceutical Co., Limited. AstraZeneca contributed $55m in initial funds and has a 48% interest in the joint venture. The joint venture entity purchased exclusive rights from AstraZeneca in 2017 to develop and commercialise three potential medicines currently in pre-clinical development in the areas of oncology, cardiovascular and metabolic diseases, and respiratory, resulting in a disposal gain of $28m for AstraZeneca recognised in other operating income.

In 2015, AstraZeneca established the subsidiaries Entasis Therapeutics Ltd and Entasis Therapeutics Inc. (collectively known as 'Entasis') for the development of early-stage infection assets. In March 2016, Entasis closed a Series B financing, raising $25m from four third party investors. Under the funding agreement, a new board of directors was appointed, and a voting rights agreement was put in place committing to reduce AstraZeneca's voting interest to approximately 49%. The results of Entasis were consequently deconsolidated in 2016 from the Group, with an investment in associate of $24m recognised. There was no gain or loss recognised on deconsolidation. During 2017, the voting interests were further reduced and at 31 December 2017 were approximately 18%.

On 1 December 2015, AstraZeneca entered into a joint venture agreement with Fujifilm Kyowa Kirin Biologics Co., Ltd. to develop a biosimilar using the combined capabilities of the two parties. The agreement resulted in the formation of a joint venture entity based in the UK, Centus Biotherapeutics Limited. AstraZeneca contributed $45m in cash to the joint venture entity and has a 50% interest in the joint venture. An additional contribution of $10m was made in 2016 and additional contributions totalling $20m were made in 2017.

On 30 April 2014, AstraZeneca entered into a joint venture agreement with Samsung Biologics Co., Ltd. to develop a biosimilar using the combined capabilities of the two parties. The agreement resulted in the formation of a joint venture entity based in the UK, Archigen Biotech Limited, with a branch in South Korea. AstraZeneca contributed $70m in cash to the joint venture entity and has a 50% interest in the joint venture. An additional contribution of $30m was made in 2016.

All investments are accounted for using the equity method.

10 Investments in associates and joint ventures *continued*

Aggregated summarised financial information for the associate and joint venture entities is set out below:

	2017 $m	2016 $m	2015 $m
Non-current assets	**207**	144	123
Current assets	**158**	128	75
Total liabilities	**(41)**	(20)	(11)
Net assets	**324**	252	187
Amount attributable to AstraZeneca	**117**	125	93
Exchange adjustments	**(14)**	(26)	(8)
Carrying value of investments in associate and joint ventures	**103**	99	85

11 Other investments

	2017 $m	2016 $m	2015 $m
Non-current investments			
Equity securities available for sale	**933**	727	458
Total	**933**	727	458
Current investments			
Equity securities and bonds available for sale	**1,150**	847	548
Fixed deposits	**80**	37	65
Total	**1,230**	884	613

Impairment charges of $14m in respect of available for sale securities are included in Other operating income and expense (2016: $21m; 2015: $17m).

Equity securities and bonds available for sale are held at fair value. The fair value of listed investments is based on year end quoted market prices. Fixed deposits are held at amortised cost with carrying value being a reasonable approximation of fair value given their short-term nature.

None of the financial assets have been reclassified in the year.

Fair value hierarchy

The table below analyses equity securities and bonds available for sale, contained within Other investments and carried at fair value, by valuation method. The different levels have been defined as follows:

> Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
> Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (ie as prices) or indirectly (ie derived from prices).
> Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

	2017 $m	2016 $m	2015 $m
Level 1	**1,408**	933	654
Level 2	**–**	–	–
Level 3	**675**	641	352
Total	**2,083**	1,574	1,006

Equity securities available for sale that are analysed at Level 3 include investments in private biotech companies. In the absence of specific market data, these unlisted investments are held at cost, adjusted as necessary for impairments and revaluations on new funding rounds, which approximates to fair value. Movements in Level 3 investments are detailed below:

	2017 $m	2016 $m	2015 $m
At 1 January	**641**	352	350
Additions	**53**	210	49
Revaluations	**(1)**	110	–
Transfers out	**(12)**	(12)	(22)
Disposals	**(15)**	(2)	(6)
Impairments and exchange adjustments	**9**	(17)	(19)
At 31 December	**675**	641	352

Assets are transferred in or out of Level 3 on the date of the event or change in circumstances that caused the transfer.

12 Derivative financial instruments

	Non-current assets $m	Current assets $m	Current liabilities $m	Non-current liabilities $m	Total $m
Interest rate swaps designated in a fair value hedge	49	–	–	–	49
Interest rate swaps related to instruments designated at fair value through profit and loss	77	–	–	–	77
Cross currency swaps designated in a net investment hedge	320	–	–	–	320
Other derivatives	–	2	(9)	(1)	(8)
31 December 2015	446	2	(9)	(1)	438

	Non-current assets $m	Current assets $m	Current liabilities $m	Non-current liabilities $m	Total $m
Interest rate swaps designated in a fair value hedge	–	19	–	(2)	17
Interest rate swaps related to instruments designated at fair value through profit and loss	65	–	–	–	65
Cross currency swaps designated in a net investment hedge	278	–	–	–	278
Cross currency swaps designated in a cashflow hedge	–	–	–	(115)	(115)
Other derivatives	–	8	(18)	–	(10)
31 December 2016	343	27	(18)	(117)	235

	Non-current assets $m	Current assets $m	Current liabilities $m	Non-current liabilities $m	Total $m
Interest rate swaps designated in a fair value hedge	**–**	**–**	**(3)**	**–**	**(3)**
Interest rate swaps related to instruments designated at fair value through profit and loss	**53**	**–**	**–**	**–**	**53**
Cross currency swaps designated in a net investment hedge	**223**	**12**	**–**	**(4)**	**231**
Cross currency swaps designated in a cashflow hedge	**197**	**–**	**–**	**–**	**197**
Cross currency swaps designated in a fair value hedge	**31**	**–**	**–**	**–**	**31**
Other derivatives	**–**	**16**	**(21)**	**–**	**(5)**
31 December 2017	**504**	**28**	**(24)**	**(4)**	**504**

All derivatives are held at fair value and fall within Level 2 of the fair value hierarchy as defined in Note 11. None of the derivatives have been reclassified in the year.

The fair value of interest rate swaps and cross currency swaps is estimated using appropriate zero coupon curve valuation techniques to discount future contractual cash flows based on rates at current year end.

The fair value of forward foreign exchange contracts and currency options are estimated by cash flow accounting models using appropriate yield curves based on market forward foreign exchange rates at the year end. The majority of forward foreign exchange contracts for existing transactions had maturities of less than one month from year end.

The interest rates used to discount future cash flows for fair value adjustments, where applicable, are based on market swap curves at the reporting date, and were as follows:

	2017	2016	2015
Derivatives	**1.7% to 2.2%**	1.5% to 2.2%	1.2% to 2.1%

13 Non-current other receivables

Non-current other receivables of $847m (2016: $901m; 2015: $907m) include a prepayment of $180m (2016: $380m; 2015: $617m) which represents the long-term element of minimum contractual royalties payable to Shionogi under the global licence agreement for *Crestor*, which was renegotiated in December 2013. The resulting modified royalty structure, which includes fixed minimum and maximum payments in years until 2020, has resulted in the Group recognising liabilities, and corresponding prepayments, for the discounted value of total minimum payments. The current portion of the prepayment is $181m (2016: $116m; 2015: $260m) and is reported in amounts due within one year (see Note 15).

Non-current other receivables also include $178m (2016: $178m; 2015: $158m) prepayments in relation to our research collaboration with Moderna Therapeutics and $175m (2016: $175m; 2015: $nil) receivable related to the disposal of the small molecule antibiotics assets in 2016.

14 Inventories

	2017 $m	2016 $m	2015 $m
Raw materials and consumables	**1,024**	811	960
Inventories in process	**1,208**	1,060	545
Finished goods and goods for resale	**803**	463	638
Inventories	**3,035**	2,334	2,143

The Group recognised $2,493m (2016: $2,644m; 2015: $2,942m) of inventories as an expense within cost of sales during the year.

Inventory write-offs in the year amounted to $109m (2016: $198m; 2015: $112m).

15 Current trade and other receivables

	2017 $m	2016 $m	2015 $m
Amounts due within one year			
Trade receivables	**2,818**	2,625	4,685
Less: Amounts provided for doubtful debts (Note 26)	**(16)**	(42)	(52)
	2,802	2,583	4,633
Other receivables	**793**	852	543
Prepayments and accrued income	**1,148**	879	1,268
	4,743	4,314	6,444
Amounts due after more than one year			
Other receivables	**156**	140	28
Prepayments and accrued income	**110**	119	150
	266	259	178
Trade and other receivables	**5,009**	4,573	6,622

All financial assets included within current trade and other receivables are held at amortised cost with carrying value being a reasonable approximation of fair value.

16 Cash and cash equivalents

	2017 $m	2016 $m	2015 $m
Cash at bank and in hand	**784**	782	1,250
Short-term deposits	**2,540**	4,236	4,990
Cash and cash equivalents	**3,324**	5,018	6,240
Unsecured bank overdrafts	**(152)**	(94)	(189)
Cash and cash equivalents in the cash flow statement	**3,172**	4,924	6,051

The Group holds $93m (2016: $91m; 2015: $110m) of cash and cash equivalents which is required to meet insurance solvency, capital and security requirements.

Cash and cash equivalents are held at amortised cost. Fair value approximates to carrying value.

Non-cash and other movements, within operating activities in the Consolidated Statement of Cash Flows, includes:

	2017 $m	2016 $m	2015 $m
Gains on disposal of short-term investments	**(161)**	–	–
Net gains on disposal of non-current assets	**(24)**	(29)	(85)
Changes in fair value of put option (Acerta Pharma)	**(209)**	(41)	–
Share-based payments charge for period	**220**	241	211
Settlement of share plan awards	**(254)**	(281)	(342)
Pension contributions	**(157)**	(192)	(402)
Pension charges recorded in operating profit	**74**	74	182
Foreign exchange and other	**(13)**	(264)	86
Total operating activities non-cash and other movements	**(524)**	(492)	(350)

17 Interest-bearing loans and borrowings

		Repayment dates	2017 $m	2016 $m	2015 $m
Current liabilities					
Bank overdrafts		On demand	**152**	94	189
Bank collateral			**513**	–	–
Finance leases			**5**	87	67
5.9% Callable bond	US dollars	2017	**–**	1,769	–
Floating rate notes	US dollars	2018	**399**	–	–
1.75% Callable bond	US dollars	2018	**998**	–	–
Other loans (Commercial paper)		Within one year	**180**	357	660
Total			**2,247**	2,307	916
Non-current liabilities					
Finance leases			**–**	6	28
5.9% Callable bond	US dollars	2017	**–**	–	1,796
Floating rate notes	US dollars	2018	**–**	399	399
1.75% Callable bond	US dollars	2018	**–**	998	997
1.95% Callable bond	US dollars	2019	**999**	998	997
2.375% Callable bond	US dollars	2020	**1,591**	1,589	1,586
0.875% Non-callable bond	euros	2021	**890**	782	812
0.25% Callable bond	euros	2021	**594**	522	–
Floating rate notes	US dollars	2022	**249**	–	–
2.375% Callable bond	US dollars	2022	**992**	–	–
7% Guaranteed debentures	US dollars	2023	**347**	350	355
0.75% Callable bond	euros	2024	**1,067**	937	–
3.375% Callable bond	US dollars	2025	**1,978**	1,976	1,971
3.125% Callable bond	US dollars	2027	**742**	–	–
1.25% Callable bond	euros	2028	**941**	827	–
5.75% Non-callable bond	pounds sterling	2031	**468**	426	515
6.45% Callable bond	US dollars	2037	**2,720**	2,719	2,719
4% Callable bond	US dollars	2042	**987**	986	986
4.375% Callable bond	US dollars	2045	**979**	979	976
Other loans			**16**	7	–
Total			**15,560**	14,501	14,137

All loans and borrowings above are unsecured, except for finance leases which are secured against the Information Technology assets to which they relate (see Note 7).

	Current loans and borrowings $m	Non-current loans and borrowings $m	Total $m
At 31 December 2016	2,307	14,501	16,808
Changes from financing cash flows			
Repayment of obligations under finance leases	**(14)**	**–**	**(14)**
Issue of loans	**–**	**1,988**	**1,988**
Repayment of loans	**(1,750)**	**–**	**(1,750)**
Movement in short-term borrowings	**336**	**–**	**336**
Total changes in liabilities arising on financing activities	**(1,428)**	**1,988**	**560**
Movement in overdrafts	**58**	**–**	**58**
Transfers	**1,394**	**(1,394)**	**–**
Exchange and other movements	**(84)**	**465**	**381**
At 31 December 2017	**2,247**	**15,560**	**17,807**

17 Interest-bearing loans and borrowings *continued*

Set out below is a comparison by category of carrying values and fair values of all the Group's interest-bearing loans and borrowings:

	Instruments in a fair value hedge relationship[1] $m	Instruments designated at fair value[2] $m	Instruments designated in cash flow hedge[3] $m	Amortised cost[4] $m	Total carrying value $m	Fair value $m
2015						
Overdrafts	–	–	–	189	189	189
Finance leases due within one year	–	–	–	67	67	67
Finance leases due after more than one year	–	–	–	28	28	28
Loans due within one year	–	–	–	660	660	660
Loans due after more than one year	1,398	355	–	12,356	14,109	15,132
Total at 31 December 2015	1,398	355	–	13,300	15,053	16,076
2016						
Overdrafts	–	–	–	94	94	94
Finance leases due within one year	–	–	–	87	87	87
Finance leases due after more than one year	–	–	–	6	6	6
Loans due within one year	770	–	–	1,356	2,126	2,161
Loans due after more than one year	598	350	2,286	11,261	14,495	15,826
Total at 31 December 2016	1,368	350	2,286	12,804	16,808	18,174
2017						
Overdrafts	**–**	**–**	**–**	**152**	**152**	**152**
Finance leases due within one year	**–**	**–**	**–**	**5**	**5**	**5**
Loans due within one year	**596**	**–**	**–**	**1,494**	**2,090**	**2,092**
Loans due after more than one year	**304**	**347**	**2,602**	**12,307**	**15,560**	**17,031**
Total at 31 December 2017	**900**	**347**	**2,602**	**13,958**	**17,807**	**19,280**

[1] Instruments designated as hedged items in fair value hedge relationships with respect to interest rate risk include a designated portion of the US dollar 5.9% Callable bond repaid in 2017, and a portion of the US dollar 1.75% Callable bond repayable in 2018.

[2] Instruments designated at fair value through profit or loss include the US dollar 7% guaranteed debentures repayable in 2023.

[3] Instruments designated in a cash flow hedge include the euro 0.25%, euro 0.75% and euro 1.25% Callable bonds repayable in 2021, 2024 and 2028 respectively.

[4] Included within borrowings held at amortised cost are amounts designated as hedges of net investments in foreign operations of $1,054m (2016: $1,208m; 2015: $1,327m) held at amortised cost. The fair value of these borrowings was $1,206m at 31 December 2017 (2016: $1,400m; 2015: $1,516m).

The fair value of fixed-rate publicly traded debt is based on year end quoted market prices; the fair value of floating rate debt is nominal value, as mark to market differences would be minimal given the frequency of resets. The carrying value of loans designated at fair value through profit or loss is the fair value; this falls within the Level 1 valuation method as defined in Note 11. For loans designated in a fair value hedge relationship, carrying value is initially measured at fair value and remeasured for fair value changes in respect of the hedged risk at each reporting date. All other loans are held at amortised cost. Fair values, as disclosed in the table above, are all determined using the Level 1 valuation method as defined in Note 11, with the exception of overdrafts and finance leases, where fair value approximates to carrying values.

A loss of $9m was made during the year on the fair value of bonds designated at fair value through profit or loss, due to decreased credit risk. A gain of $27m has been made on these bonds since designation due to increased credit risk. Under IFRS 9 the Group records the effect of the losses and gains, arising from own credit risk, on the fair value of bonds designated at fair value through profit or loss in Other comprehensive income. Changes in credit risk had no material effect on any other financial assets and liabilities recognised at fair value in the Group Financial Statements. The change in fair value attributable to changes in credit risk is calculated as the change in fair value not attributable to market risk. The amount payable at maturity on bonds designated at fair value through profit or loss is $282m.

The interest rates used to discount future cash flows for fair value adjustments, where applicable, are based on market swap curves at the reporting date, and were as follows:

	2017	2016	2015
Loans and borrowings	**1.9% to 2.2%**	1.5% to 2.2%	1.2% to 2.1%

18 Trade and other payables

	2017 $m	2016 $m	2015 $m
Current liabilities			
Trade payables	**3,611**	2,990	3,469
Value added and payroll taxes and social security	**243**	240	207
Rebates and chargebacks	**2,556**	2,812	3,307
Accruals	**3,551**	2,855	2,983
Contingent consideration	**555**	527	396
Other payables	**1,125**	1,062	1,301
Total	**11,641**	10,486	11,663
Non-current liabilities			
Accruals	**143**	292	256
Contingent consideration	**4,979**	4,930	6,015
Other payables	**2,718**	4,266	1,186
Total	**7,840**	9,488	7,457

Non-current other payables includes $1,823m (2016: $1,901m; 2015: $nil) arising from the put option over the non-controlling interest in Acerta Pharma (see Note 24). The put option liability is remeasured each period, based on the latest assessment of the expected redemption amount, with remeasurements taken to Selling, general and administrative costs (see Note 2). Interest arising from amortising the liability is included within Finance expense (see Note 3).

With the exception of contingent consideration payables of $5,534m (2016: $5,457m; 2015: $6,411m) which are held at fair value within Level 3 of the fair value hierarchy as defined in Note 11, all other financial liabilities are held at amortised cost with carrying value being a reasonable approximation of fair value.

Contingent consideration

	2017 $m	2016 $m	2015 $m
At 1 January	**5,457**	6,411	6,899
Settlements	**(434)**	(293)	(579)
Revaluations	**109**	(1,158)	(432)
Discount unwind (Note 3)	**402**	497	524
Foreign exchange	**–**	–	(1)
At 31 December	**5,534**	5,457	6,411

Contingent consideration arising from business combinations is fair valued using decision-tree analysis, with key inputs including the probability of success, consideration of potential delays and the expected levels of future revenues.

Revaluations of contingent consideration are recognised in Selling, general and administrative costs and include a increase of $208m in 2017 (2016: a decrease of $999m; 2015: a decrease of $378m) based on revised milestone probabilities, and revenue and royalty forecasts, relating to the acquisition of BMS's share of the Global Diabetes Alliance. Discount unwind on the liability is included within Finance expense (see Note 3).

Management has identified that reasonably possible changes in certain key assumptions, including the likelihood of achieving successful trial results, obtaining regulatory approval, the projected market share of the therapeutic area and expected pricing for launched products, may cause the calculated fair value of the above contingent consideration to vary materially in future years.

The maximum development and sales milestones payable under outstanding contingent consideration arrangements arising on business combinations are as follows:

Acquisitions	Year	Nature of contingent consideration	Maximum future milestones $m
Spirogen	2013	Milestones	216
Amplimmune	2013	Milestones	275
Omthera Pharmaceuticals	2013	Milestones	120
Pearl Therapeutics	2013	Milestones	390
BMS's share of Global Diabetes Alliance	2014	Milestones and royalties	600
Almirall	2014	Milestones and royalties	925
Definiens	2014	Milestones	150

The amount of royalties payable under the arrangements is inherently uncertain and difficult to predict, given the direct link to future sales and the range of outcomes. The maximum amount of royalties payable in each year is with reference to net sales.

19 Provisions

	Severance $m	Environmental $m	Employee benefits $m	Legal $m	Other provisions $m	Total $m
At 1 January 2015	526	84	163	74	260	1,107
Additions arising on business acquisitions	–	–	–	–	10	10
Charge for year	338	8	7	313	40	706
Cash paid	(408)	(25)	(12)	(69)	(43)	(557)
Reversals	(40)	–	–	–	(12)	(52)
Exchange and other movements	(13)	–	–	39	2	28
At 31 December 2015	403	67	158	357	257	1,242
Charge for year	578	11	6	223	170	988
Cash paid	(433)	(19)	(21)	(126)	(87)	(686)
Reversals	(40)	–	–	–	(39)	(79)
Exchange and other movements	(21)	–	–	(16)	(10)	(47)
At 31 December 2016	487	59	143	438	291	1,418
Charge for year	**225**	**11**	**30**	**281**	**55**	**602**
Cash paid	**(324)**	**(20)**	**(43)**	**(48)**	**(37)**	**(472)**
Reversals	**(75)**	**–**	**(10)**	**(40)**	**(44)**	**(169)**
Exchange and other movements	**45**	**9**	**6**	**23**	**6**	**89**
At 31 December 2017	**358**	**59**	**126**	**654**	**271**	**1,468**

	2017 $m	2016 $m	2015 $m
Due within one year	**1,121**	1,065	798
Due after more than one year	**347**	353	444
Total	**1,468**	1,418	1,242

AstraZeneca is undergoing a global restructuring initiative which involves rationalisation of the global supply chain, the sales and marketing organisation, IT and business support infrastructure, and R&D. Employee costs in connection with the initiatives are recognised in severance provisions. Final severance costs are often subject to the completion of the requisite consultations on the areas impacted.

Details of the environmental and legal provisions are provided in Note 28.

Employee benefit provisions include the Deferred Bonus Plan. Further details are included in Note 27.

Other provisions comprise amounts relating to specific contractual or constructive obligations and disputes.

No provision has been released or applied for any purpose other than that for which it was established.

20 Post-retirement benefits

Pensions

Background

The Company and most of its subsidiaries offer retirement plans which cover the majority of employees in the Group. Many of these plans are 'defined contribution' ("DC"), where the Company contribution and resulting charge is fixed at a set level or is a set percentage of employees' pay.

However, several plans, mainly in the UK, the US and Sweden, are 'defined benefit' ("DB"), where benefits are based on employees' length of service and linked to their salary. The major defined benefit plans, apart from the collectively bargained Swedish plan (which is still open to employees born before 1979), have been closed to new entrants since 2000. During 2010, following consultation with its UK employees' representatives, the Company introduced a freeze on pensionable pay at 30 June 2010 levels for defined benefit members of the UK Pension Fund. The number of active members in the Fund continues to decline and is now below 900 employees.

In November 2017, the Company decided to close both the qualified and non-qualified US pension plans to future accrual effective from 31 December 2017. The legacy DB participants are eligible for DC benefits from 1 January 2018. In addition, the eligibility criteria to qualify for benefits within the US post-retirement welfare plan was also changed effective from 1 November 2017. Further information on the financial impact of these changes is set out later in this section.

The major defined benefit plans are funded through separate, fiduciary-administered assets. The cash funding of the plans, which may from time to time involve special Company payments, is designed, in consultation with independent qualified actuaries, to ensure that the assets are sufficient to meet future obligations as and when they fall due. The funding level is monitored rigorously by the Company and local fiduciaries taking into account: the Company's credit rating, local regulation, cash flows and the solvency and maturity of the relevant pension scheme.

20 Post-retirement benefits *continued*

Financing principles

Ninety two per cent of the Company's defined benefit obligations at 31 December 2017 are in schemes within the UK, the US and Sweden. In these countries, the pension obligations are funded in line with the Company's financing principles. There have been no fundamental changes to these principles during 2017. The Company believes:

- in funding the benefits it promises to employees and meeting its obligations.
- that the pension arrangements should be considered in the context of its broader capital structure. In general, it does not believe in committing excessive capital for funding when the Company might use the capital elsewhere to reinvest in the wider business, nor does it wish to generate surpluses.
- in taking some measured and rewarded risks with the investments underlying the funding, subject to a long-term plan to reduce those risks when opportunities arise.
- that holding certain investments may cause volatility in the funding position. However, the Company would not wish to amend its contribution level for relatively small deviations from its preferred funding level, because it is expected that there will be short-term volatility, but it is prepared to react appropriately to more significant deviations.
- that proactive engagement with local Fiduciary Bodies is necessary and helpful to provide robust oversight and input in relation to funding and investment strategy and to facilitate liability management exercises appropriate to each pension plan.
- in considering the use of alternative methods of providing security that do not require immediate cash funding but help mitigate exposure of the pension arrangement to the credit risk of the Company.

These principles are appropriate at the present date but they are kept under ongoing review; should circumstances change these principles may also be subject to change.

The Company has developed a long-term funding framework to implement these principles, which targets full funding on a low risk funding measure over the long term as the pension funds mature, with affordable long-term de-risking of investment strategy over time. Unless local regulation dictates otherwise, this framework determines the cash contributions payable to the pension funds.

UK

The UK defined benefit pension fund represents approximately 64% of the Company's defined benefit obligations at 31 December 2017. The financing principles are modified in light of the UK regulatory requirements (summarised below) and resulting discussions with the Pension Fund Trustee.

Role of Trustees (UK)

The UK Pension Fund is governed and administered by a corporate Trustee which is legally separate from the Company. The Trustee Directors are comprised of representatives appointed by both the employer and employees, and include an independent professional Trustee Director. The Trustee Directors are required by law to act in the interest of all relevant beneficiaries and are responsible in particular for the asset investment policy and the day-to-day administration of the benefits. They are also responsible for jointly agreeing with the employer the level of contributions due to the UK Pension Fund (see below).

Funding requirements (UK)

UK legislation requires that pension schemes are funded prudently (ie to a level in excess of the current expected cost of providing benefits). On a triennial basis, the Trustee and the Company must agree the contributions required (if any) to ensure the Fund is fully funded over an appropriate time period and on a suitable prudent measure. The last full actuarial valuation of the AstraZeneca Pension Fund was carried out by a qualified actuary as at 31 March 2016 and following discussions between the Company and Trustee was finalised and accepted by The Pensions Regulator in 2017. The next actuarial valuation is due to take place as at 31 March 2019.

In relation to deficit recovery contributions, a lump sum contribution of £51m ($64m) was made in March 2017, with a further £51m contribution due before 31 March 2018. In addition, a further contribution of £25.2m is also due before 31 March 2018 in relation to part payment of the deferred contribution explained below.

During 2017, the Company provided a letter of credit to the Trustee, to underwrite the deferral of an additional deficit recovery contribution payment of approximately £126m which was due in 2017. This contribution will now be paid in five equal instalments from March 2018 to March 2022. The letter of credit underwriting these payments will be renewed each year, but will reduce in value as each annual payment is made.

The Company entered into a long-term funding agreement with the Trustee in October 2016 under which the Company will grant a charge in favour of the Trustee over the new Cambridge Biomedical Campus, upon practical completion, which would crystallise only in the event of the Company's insolvency. This charge will provide security in respect of future UK Pension Fund contributions.

Under the funding assumptions used to set the statutory funding target, the key assumptions from the actuarial valuation as at 31 March 2016 were as follows: long-term UK price inflation set at 2.6% per annum, salary increases at 0% per annum (as a result of pensionable pay levels being frozen in 2010), pension increases at 2.85% per annum and discount rate at 3.71% per annum. The resulting valuation of the Fund's liabilities on that basis were £5,265m ($7,091m) compared to a market value of assets at 31 March 2016 of £4,492m ($6,050m).

Under the governing documentation of the UK Pension Fund, any future surplus in the Fund would be returnable to the Company by refund assuming gradual settlement of the liabilities over the lifetime of the Fund. As such, there are no adjustments required in respect of IFRIC 14 'IAS 19 – The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction'.

Liability Management Exercises (UK)

During 2017, the Company completed a Pensions Increase Exchange (PIE) exercise. This exercise, which commenced in 2016, offered certain pensioner members the option of taking a higher amount of pension right away, in exchange for giving up any potential future inflation linked increases on all, or part of their pension. A credit to the income statement was recognised in 2016 in respect of this exercise of £54m ($74m), in Operating Profit. No such credit was recognised in 2017.

20 Post-retirement benefits *continued*

Regulation (UK)

The UK pensions market is regulated by The Pensions Regulator whose statutory objectives and regulatory powers are described on its website, www.thepensionsregulator.gov.uk.

Rest of Group

The IAS 19 positions for the US and Sweden as at 31 December 2017 are shown below. These plans account for 28% of the Group's defined benefit obligations. The US and Sweden pension funds are governed by Fiduciary Bodies with responsibility for the investment policies of those funds. These plans are funded in line with the Company's financing principles and contributions are paid as prescribed by the long-term funding framework.

As earlier mentioned, the Company announced changes to retirement benefit plans in the US in November 2017. Both the qualified and non-qualified defined benefit pension plans closed to future accrual (ie were frozen), effective 31 December 2017, and changes in eligibility criteria were made for the post-retirement welfare plan effective 1 November 2017. These changes triggered curtailment gains totalling $92m on re-measurement of the future liabilities and which, under the rules of IAS 19, are recognised immediately in the Income statement.

> The US defined benefits programme was actuarially revalued at 31 December 2017, when plan obligations were $1,708m and plan assets were $1,603m. This includes obligations in respect of the non-qualified plan which is largely unfunded.
> The Swedish defined benefits programme was actuarially revalued at 31 December 2017, when plan obligations were estimated to amount to $1,811m and plan assets were $1,146m.

On current bases, it is expected that ongoing contributions (excluding those in respect of past service deficit contributions) during the year ending 31 December 2018 for the three main countries will be approximately $68m.

Post-retirement benefits other than pensions

In the US, and to a lesser extent in certain other countries, AstraZeneca's employment practices include the provision of healthcare and life assurance benefits for retired employees. As at 31 December 2017, some 3,338 retired employees and covered dependants currently benefit from these provisions and some 2,833 current employees will be eligible on their retirement. AstraZeneca accrues for the present value of such retiree obligations over the working life of the employee. In practice, these benefits will be funded with reference to the financing principles.

The cost of post-retirement benefits other than pensions for the Group in 2017 was $14m (2016: $17m; 2015: $23m). Plan assets were $290m and plan obligations were $279m at 31 December 2017. These benefit plans have been included in the disclosure of post-retirement benefits under IAS 19.

Financial assumptions

Qualified independent actuaries have updated the actuarial valuations under IAS 19 of the major defined benefit schemes operated by the Group to 31 December 2017. The assumptions used by the actuaries are chosen from a range of possible actuarial assumptions which, due to the long-term nature of the schemes, may not necessarily be borne out in practice. These assumptions were as follows:

	2017		2016	
	UK	Rest of Group	UK	Rest of Group
Inflation assumption	**3.1%**	**2.2%**	3.2%	2.1%
Rate of increase in salaries	**–**[1]	**3.1%**	–[1]	3.1%
Rate of increase in pensions in payment	**2.9%**	**1.1%**	3.0%	0.9%
Discount rate – defined benefit obligation	**2.5%**[2]	**3.0%**[2]	2.7%	3.3%
Discount rate – interest cost[2]	**2.5%**[3]	**2.7%**[3]	N/A	N/A
Discount rate – service cost[2]	**2.7%**[3]	**3.5%**[3]	N/A	N/A

[1] Pensionable pay frozen at 30 June 2010 levels following UK fund changes.
[2] Group defined benefit obligation as at 31 December 2017 calculated using discount rates based on market conditions as at 31 December 2017.
[3] 2017 interest costs and service costs calculated using discount rates based on market conditions as at 31 December 2016.

The weighted average duration of the post-retirement scheme obligations in the UK is 17 years and 15 years in the Rest of Group.

Discount rate and methodology changes

In 2016, the Company's discount rates were based on yields on long-term AA-rated fixed income instruments, using a single discount rate for each pension plan to value the defined benefit obligations, service cost and interest cost. As stated last year, from January 2017, for the largest plans, the Company moved to a multiple discount rate approach. This has resulted in separate discount rates for defined benefit obligations, service cost and interest cost. The change has impacted on the measurement of the service and interest cost items in 2017.

Demographic assumptions

The mortality assumptions are based on country-specific mortality tables. These are compared to actual experience and adjusted where sufficient data is available. Additional allowance for future improvements in life expectancy is included for all major schemes where there is credible data to support this continuing trend.

The table below illustrates life expectancy assumptions at age 65 for male members retiring in 2017 and male members expected to retire in 2037 (2016: 2016 and 2036 respectively).

	Life expectancy assumption for a male member retiring at age 65			
Country	2017	2037	2016	2036
UK	**23.7**	**24.8**	23.3	24.6
US	**20.8**	**23.0**	22.4	23.9
Sweden	**21.9**	**23.6**	21.8	23.6

The Company adopted the CMI 2016 Mortality Projections Model with a 1% long-term improvement rate in 2017 in the UK.

20 Post-retirement benefits *continued*

Risks associated with the Company's defined benefit pensions

The UK defined benefit plan accounts for 64% of the Group's defined benefit obligations and exposes the Company to a number of risks, the most significant of which are:

Risk	Description	Mitigation
Volatile asset returns	The Defined Benefit Obligation (DBO) is calculated using a discount rate set with reference to AA-rated corporate bond yields; asset returns that differ from the discount rate will create an element of volatility in the solvency ratio. The UK Pension Fund holds a significant proportion (around 72.5%) in growth assets. Although these growth assets are expected to outperform AA-rated corporate bonds in the long-term, they can lead to volatility and mismatching risk in the short-term. The allocation to growth assets is monitored to ensure it remains appropriate given the UK Pension Fund's long-term objectives.	In order to mitigate investment risk, the Trustee invests in a suitably diversified range of asset classes, return drivers and investment managers. The investment strategy will continue to evolve to further improve the expected risk/return profile as opportunities arise. The Trustee has hedged the vast majority (over 85%) of unintended non-sterling, overseas currency risk within the UK Pension Fund assets.
Changes in bond yields	A decrease in corporate bond yields will increase the present value placed on the DBO for accounting purposes.	The interest rate hedge of the UK Pension Fund is implemented via holding gilts and swaps of appropriate duration and set at approximately 80% of total assets and protects to some degree against falls in long-term interest rates (approximately 75% hedged at the end of 2016). There is a framework in place to gradually increase the level of interest rate hedging to 100% of assets over time, via a combination of liability management exercises and additional market-based hedging. Note that there are some differences in the bonds and instruments held by the UK Pension Fund to hedge interest rate risk on the statutory and long-term funding basis (gilts and swaps) and the bonds analysed to set the DBO discount rate on an accounting basis (AA corporate bonds). As such, there remains some mismatching risk on an accounting basis should yields on gilts and swaps diverge compared to corporate bonds (ie the 'credit spread' between gilts and corporate bonds narrows).
Inflation risk	A significant proportion of the DBO is indexed in line with price inflation (specifically inflation in the UK Retail Price Index) and higher inflation will lead to higher liabilities (although, in most cases, this is capped at an annual increase of 5%).	The UK Pension Fund holds index-linked gilts and derivative instruments such as swaps. The inflation hedge of the UK Pension Fund is set at approximately 85% of total assets and protects to some degree against higher-than-expected inflation increases on the DBO (approximately 75% hedged at the end of 2016). There is a framework in place to gradually increase the level of inflation hedging to 100% of assets over time, via a combination of liability management exercises and additional market-based hedging.
Life expectancy	The majority of the UK Pension Fund's obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the liabilities.	The UK Pension Fund entered into a longevity swap during 2013 which provides hedging against the longevity risk of increasing life expectancy over the next 76 years for around 10,000 of the UK Pension Fund's current pensioners and covers $2.4bn of the UK Pension Fund's liabilities. A one-year increase in life expectancy will result in a $244m increase in pension fund assets.

Other risks

There are a number of other risks of running the UK Pension Fund including counterparty risks from using derivatives (mitigated by using a diversified range of counterparties of high standing and ensuring positions are collateralised daily). Furthermore, there are operational risks (such as paying out the wrong benefits) and legislative risks (such as the government increasing the burden on pension funds through new legislation). These are mitigated so far as possible via the governance structure in place which oversees and administers the pension funds.

The Company's pension plans in the US and Sweden also manage these key risks, where they are relevant, in a similar manner, operating a diversified growth portfolio and a framework to hedge interest rate risk.

Post-retirement scheme deficit

The assets and obligations of the defined benefit schemes operated by the Company at 31 December 2017, as calculated in accordance with IAS 19, are shown overleaf. The fair values of the schemes' assets are not intended to be realised in the short term and may be subject to significant change before they are realised. The present value of the schemes' obligations is derived from cash flow projections over long periods and is therefore inherently uncertain.

20 Post-retirement benefits *continued*

Scheme assets

	UK		Rest of Group		Total		2016
	Quoted $m	Unquoted $m	Quoted $m	Unquoted $m	Quoted $m	Unquoted $m	Total $m
Government bonds[1]	1,590	–	79	48	1,669	48	1,717
Corporate bonds[2]	–	34	846	–	846	34	880
Derivatives[3]	–	(82)	(10)	(4)	(10)	(86)	(96)
Investment funds: Listed Equities	–	1,264	332	424	332	1,688	2,020
Investment funds: Global Macro Hedge[4]	–	1,044	–	360	–	1,404	1,404
Investment funds: Diversified growth/Multi Strategy[4]	–	1,460	–	267	–	1,727	1,727
Investment funds: Multi-asset credit[4]	–	622	–	232	–	854	854
Cash and cash equivalents	15	190	115	26	130	216	346
Other	–	–	2	262	2	262	264
Total fair value of scheme assets[5]	1,605	4,532	1,364	1,615	2,969	6,147	9,116

	UK		Rest of Group		Total		2017
	Quoted $m	Unquoted $m	Quoted $m	Unquoted $m	Quoted $m	Unquoted $m	Total $m
Government bonds[1]	**2,056**	**–**	**79**	**45**	**2,135**	**45**	**2,180**
Corporate bonds[2]	**–**	**37**	**849**	**–**	**849**	**37**	**886**
Derivatives[3]	**–**	**(237)**	**(12)**	**26**	**(12)**	**(211)**	**(223)**
Investment funds: Listed Equities	**–**	**1,174**	**371**	**421**	**371**	**1,595**	**1,966**
Investment funds: Global Macro Hedge[4]	**–**	**1,004**	**–**	**396**	**–**	**1,400**	**1,400**
Investment funds: Diversified growth/Multi Strategy[4]	**–**	**1,921**	**–**	**416**	**–**	**2,337**	**2,337**
Investment funds: Multi-asset credit[4]	**–**	**633**	**–**	**268**	**–**	**901**	**901**
Cash and cash equivalents	**40**	**121**	**23**	**23**	**63**	**144**	**207**
Other	**–**	**–**	**2**	**266**	**2**	**266**	**268**
Total fair value of scheme assets[5]	**2,096**	**4,653**	**1,312**	**1,861**	**3,408**	**6,514**	**9,922**

[1] Predominantly developed markets in nature.
[2] Predominantly developed markets in nature and investment grade (AAA-BBB).
[3] Includes interest rate swaps, inflation swaps, longevity swap and other contracts.
[4] Investment Funds are pooled, commingled vehicles, whereby the pension scheme owns units in the fund, alongside other investors. The pension schemes invest in a number of Investment Funds, including Listed Equities (primarily developed markets with some emerging markets across the world), Multi Asset Credit (bonds and debt including a range of investment grade and non-investment grade credit across the world), Diversified Growth/Multi Strategy (multi-asset exposure both across and within traditional and alternative asset classes), and Global Macro Hedge Funds (Discretionary/Fundamental Macro and managed futures).
[5] Included in scheme assets is $nil (2016: $nil) of the Company's own assets.

Scheme obligations

			2017			2016
	UK $m	Rest of Group $m	Total $m	UK $m	Rest of Group $m	Total $m
Present value of scheme obligations in respect of:						
Active membership	**(814)**	**(1,018)**	**(1,832)**	(679)	(1,590)	(2,269)
Deferred membership	**(1,998)**	**(1,688)**	**(3,686)**	(1,806)	(1,046)	(2,852)
Pensioners	**(5,220)**	**(1,767)**	**(6,987)**	(4,633)	(1,548)	(6,181)
Total value of scheme obligations	**(8,032)**	**(4,473)**	**(12,505)**	(7,118)	(4,184)	(11,302)

Net deficit in the scheme

			2017			2016
	UK $m	Rest of Group $m	Total $m	UK $m	Rest of Group $m	Total $m
Total fair value of scheme assets	**6,749**	**3,173**	**9,922**	6,137	2,979	9,116
Total value of scheme obligations	**(8,032)**	**(4,473)**	**(12,505)**	(7,118)	(4,184)	(11,302)
Deficit in the scheme as recognised in the Consolidated Statement of Financial Position	**(1,283)**	**(1,300)**	**(2,583)**	(981)	(1,205)	(2,186)

Fair value of scheme assets

			2017			2016
	UK $m	Rest of Group $m	Total $m	UK $m	Rest of Group $m	Total $m
At beginning of year	**6,137**	**2,979**	**9,116**	6,467	2,954	9,421
Interest income on scheme assets	**159**	**81**	**240**	221	104	325
Expenses	**(6)**	**(12)**	**(18)**	(5)	(9)	(14)
Actuarial gains	**45**	**188**	**233**	858	84	942
Exchange and other adjustments	**596**	**176**	**772**	(1,228)	(26)	(1,254)
Employer contributions	**123**	**34**	**157**	130	62	192
Participant contributions	**3**	**–**	**3**	4	–	4
Benefits paid	**(308)**	**(273)**	**(581)**	(310)	(190)	(500)
Scheme assets' fair value at end of year	**6,749**	**3,173**	**9,922**	6,137	2,979	9,116

20 Post-retirement benefits *continued*

The actual return on the plan assets was a gain of $473m (2016: gain of $1,267m).

Movement in post-retirement scheme obligations

	2017			2016		
	UK $m	Rest of Group $m	Total $m	UK $m	Rest of Group $m	Total $m
Present value of obligations in scheme at beginning of year	**(7,118)**	**(4,184)**	**(11,302)**	(7,451)	(3,944)	(11,395)
Current service cost	**(23)**	**(64)**	**(87)**	(20)	(82)	(102)
Past service (cost)/credit	**(39)**	**70**	**31**	27	15	42
Participant contributions	**(3)**	**–**	**(3)**	(4)	(4)	(8)
Benefits paid	**308**	**273**	**581**	310	190	500
Interest expense on post-retirement scheme obligations	**(184)**	**(105)**	**(289)**	(253)	(135)	(388)
Actuarial losses	**(272)**	**(202)**	**(474)**	(1,189)	(328)	(1,517)
Exchange and other adjustments	**(701)**	**(261)**	**(962)**	1,462	104	1,566
Present value of obligations in scheme at end of year	**(8,032)**	**(4,473)**	**(12,505)**	(7,118)	(4,184)	(11,302)

The obligations arise from the following plans:

	2017			2016		
	UK $m	Rest of Group $m	Total $m	UK $m	Rest of Group $m	Total $m
Funded – pension schemes	**(8,013)**	**(3,698)**	**(11,711)**	(7,101)	(3,309)	(10,410)
Funded – post-retirement healthcare	**–**	**(245)**	**(245)**	–	(279)	(279)
Unfunded – pension schemes	**–**	**(515)**	**(515)**	–	(583)	(583)
Unfunded – post-retirement healthcare	**(19)**	**(15)**	**(34)**	(17)	(13)	(30)
Total	**(8,032)**	**(4,473)**	**(12,505)**	(7,118)	(4,184)	(11,302)

Consolidated Statement of Comprehensive Income disclosures

The amounts that have been charged to the Consolidated Statement of Comprehensive Income, in respect of defined benefit schemes for the year ended 31 December 2017, are set out below.

	2017			2016		
	UK $m	Rest of Group $m	Total $m	UK $m	Rest of Group $m	Total $m
Operating profit						
Current service cost	**(23)**	**(64)**	**(87)**	(20)	(82)	(102)
Past service (cost)/credit	**(39)**	**70**	**31**	27	15	42
Expenses	**(6)**	**(12)**	**(18)**	(5)	(9)	(14)
Total charge to operating profit	**(68)**	**(6)**	**(74)**	2	(76)	(74)
Finance expense						
Interest income on scheme assets	**159**	**81**	**240**	221	104	325
Interest expense on post-retirement scheme obligations	**(184)**	**(105)**	**(289)**	(253)	(135)	(388)
Net interest on post-employment defined benefit plan liabilities	**(25)**	**(24)**	**(49)**	(32)	(31)	(63)
Charge before taxation	**(93)**	**(30)**	**(123)**	(30)	(107)	(137)
Other comprehensive income						
Difference between the actual return and the expected return on the post-retirement scheme assets	**45**	**188**	**233**	858	84	942
Experience gains/(losses) arising on the post-retirement scheme obligations	**(50)**	**(4)**	**(54)**	220	(6)	214
Changes in financial assumptions underlying the present value of the post-retirement scheme obligations	**(261)**	**(214)**	**(475)**	(1,409)	(377)	(1,786)
Changes in demographic assumptions	**39**	**15**	**54**	–	55	55
Remeasurement of the defined benefit liability	**(227)**	**(15)**	**(242)**	(331)	(244)	(575)

Past service credit in 2017 includes a credit to Operating Profit of $92m arising from the changes to the defined benefit and post-retirement welfare plans in the US, as referred to in the Rest of Group section on page 166. The past service credit in 2017 has been partially offset by costs predominantly related to enhanced pensions in early retirement in the UK and Sweden.

Group costs in respect of defined contribution schemes during the year were $304m (2016: $352m).

20 Post-retirement benefits *continued*

Rate sensitivities

The following table shows the US dollar effect of a change in the significant actuarial assumptions used to determine the retirement benefits obligations in our three main defined benefit pension obligation countries.

	2017		2016	
	+0.5%	–0.5%	+0.5%	–0.5%
Discount rate				
UK ($m)	**618**	**(703)**	546	(712)
US ($m)	**95**	**(101)**	107	(114)
Sweden ($m)	**147**	**(168)**	128	(149)
Total ($m)	**860**	**(972)**	781	(975)

	2017		2016	
	+0.5%	–0.5%	+0.5%	–0.5%
Inflation rate[1]				
UK ($m)	**(526)**	**495**	(510)	486
US ($m)	**–**	**–**	(12)	12
Sweden ($m)	**(165)**	**146**	(147)	127
Total ($m)	**(691)**	**641**	(669)	625

	2017		2016	
	+0.5%	–0.5%	+0.5%	–0.5%
Rate of increase in salaries				
UK ($m)	**–**	**–**	–	–
US ($m)	**–**	**–**	(9)	9
Sweden ($m)	**(51)**	**47**	(33)	30
Total ($m)	**(51)**	**47**	(42)	39

	2017		2016	
	+1 year	–1 year	+1 year	–1 year
Mortality rate				
UK ($m)	**(337)**[2]	**337**[3]	(300)	292
US ($m)	**(26)**	**27**	(27)	28
Sweden ($m)	**(63)**	**64**	(57)	57
Total ($m)	**(426)**	**428**	(384)	377

[1] Rate of increase in pensions in payment follows inflation.
[2] Of the $337m increase, $244m is covered by the longevity swap.
[3] Of the $337m decrease, $236m is covered by the longevity swap.

The sensitivity to the financial assumptions shown above has been estimated taking into account the approximate duration of the liabilities and the overall profile of the plan membership. The sensitivity to the life expectancy assumption has been estimated based on the distribution of the plan cash flows.

21 Reserves

Retained earnings

The cumulative amount of goodwill written off directly to reserves resulting from acquisitions, net of disposals, amounted to $631m (2016: $613m; 2015: $624m) using year end rates of exchange. At 31 December 2017, 476,504 shares, at a cost of $22m, have been deducted from retained earnings (2016: 276,303 shares, at a cost of $19m; 2015: 49,105 shares, at a cost of $4m).

There are no significant statutory or contractual restrictions on the distribution of current profits of subsidiaries; undistributed profits of prior years are, in the main, permanently employed in the businesses of these companies. The undistributed income of AstraZeneca companies overseas might be liable to overseas taxes and/or UK taxation (after allowing for double taxation relief) if they were to be distributed as dividends (see Note 4).

	2017 $m	2016 $m	2015 $m
Cumulative translation differences included within retained earnings			
At 1 January	**(2,028)**	(372)	490
Foreign exchange arising on consolidation	**536**	(1,050)	(528)
Exchange adjustments on goodwill (recorded against other reserves)	**18**	(11)	(15)
Foreign exchange arising on designating borrowings in net investment hedges	**505**	(591)	(333)
Fair value movement on derivatives designated in net investment hedges	**(48)**	(4)	14
Net exchange movement in retained earnings	**1,011**	(1,656)	(862)
At 31 December	**(1,017)**	(2,028)	(372)

Cumulative amounts with respect to cash flow hedges included within retained earnings are $76m (2016: $80m; 2015: $nil).

Other reserves

The other reserves arose from the cancellation of £1,255m of share premium account by the Company in 1993 and the redenomination of share capital ($157m) in 1999. The reserves are available for writing off goodwill arising on consolidation and, subject to guarantees given to preserve creditors at the date of the court order, are available for distribution.

22 Share capital of the Company

	Allotted, called-up and fully paid		
	2017 $m	2016 $m	2015 $m
Issued Ordinary Shares ($0.25 each)	**317**	316	316
Redeemable Preference Shares (£1 each – £50,000)	**–**	–	–
At 31 December	**317**	316	316

The Redeemable Preference Shares carry limited class voting rights and no dividend rights. This class of shares is capable of redemption at par at the option of the Company on the giving of seven days' written notice to the registered holder of the shares.

The Company does not have a limited amount of authorised share capital.

The movements in the number of Ordinary Shares during the year can be summarised as follows:

	No. of shares		
	2017	2016	2015
At 1 January	**1,265,229,424**	1,264,122,670	1,263,143,338
Issues of shares (share schemes)	**992,181**	1,106,754	979,332
At 31 December	**1,266,221,605**	1,265,229,424	1,264,122,670

Share repurchases

No Ordinary Shares were repurchased by the Company in 2017 (2016: nil; 2015: nil).

Shares held by subsidiaries

No shares in the Company were held by subsidiaries in any year.

23 Dividends to shareholders

	2017 Per share	2016 Per share	2015 Per share	2017 $m	2016 $m	2015 $m
Final	**$1.90**	$1.90	$1.90	**2,404**	2,402	2,400
Interim	**$0.90**	$0.90	$0.90	**1,139**	1,138	1,137
Total	**$2.80**	$2.80	$2.80	**3,543**	3,540	3,537

Reconciliation of dividend charged to equity to cash flow statement:

	2017 $m	2016 $m	2015 $m
Dividends charged to equity	**3,543**	3,540	3,537
Exchange (gains)/losses on payment of dividend	**(4)**	3	–
Hedge contracts relating to payment of dividends (cash flow statement)	**(20)**	18	(51)
Dividends paid (cash flow statement)	**3,519**	3,561	3,486

24 Non-controlling interests

Following the acquisition of a majority stake in Acerta Pharma on 2 February 2016, the Group Financial Statements at 31 December 2017 reflect equity of $1,676m (2016: $1,808m) and total comprehensive losses of $132m (2016: losses of $95m) attributable to the non-controlling interests, held by other parties, of Acerta Pharma B.V. and its subsidiaries. The following summarised financial information, for Acerta Pharma B.V. and its subsidiaries, is presented on a stand-alone basis since the acquisition date, and before the impact of Group-related adjustments, some of which are incorporated into this calculation of the loss attributable to the non-controlling interests:

	2017 $m	2016 $m
Total Revenue	**–**	–
Profit/(loss) after tax	**412**	(212)
Other comprehensive income	**–**	–
Total comprehensive income/(loss)	**412**	(212)

	2017 $m	2016 $m
Non-current assets	**3**	73
Current assets	**904**	79
Total assets	**907**	152
Current liabilities	**(417)**	(171)
Total liabilities	**(417)**	(171)
Net assets/(liabilities)	**490**	(19)

	2017 $m	2016 $m
Net cash inflow/(outflow) from operating activities	**5**	(223)
Net cash inflow from investing activities	**–**	139
Increase/(decrease) in cash and cash equivalents in the year	**5**	(84)

The non-controlling interest in Acerta Pharma is subject to a put option, exercisable by the minority shareholders at certain points in the future, not earlier than the commercial launch of *Calquence* (acalabrutinib). This put option gives rise to a liability which is recorded at the present value of the expected redemption amount, calculated using a probability-weighted model based on forecast revenue and earnings of Acerta Pharma, and is recorded within Non-current other payables (see Note 18). The forecast revenue and earnings of Acerta Pharma will particularly be affected by the outcome of ongoing clinical trials and regulatory submissions relating to *Calquence*. If actual earnings are lower than forecast, the liability for the put option will decrease. Similarly, if actual earnings are higher than forecast, the liability for the put option will increase. The value of the liability is also sensitive to the expected timing of exercise. The amount of the liability is not directly correlated to time until the expected date of exercise. During the year, *Calquence* received regulatory approval in the US for the treatment of adult patients with mantle cell lymphoma (MCL) who have received at least one prior therapy. This approval has changed the weighted probability of certain outcomes in respect of the forecast earnings of Acerta Pharma and has brought forward the weighted average expected exercise date of the put option. The changes to these assumptions resulted in a decrease in the liability for the year before the effect of interest costs.

25 Acquisitions of business operations

2017 Acquisitions

There were no acquisitions of business operations in 2017.

2016 Acquisitions

Acerta Pharma

On 2 February 2016, AstraZeneca completed an agreement to invest in a majority equity stake in Acerta Pharma, a privately-owned biopharmaceutical company based in the Netherlands and US. The transaction provides AstraZeneca with a potential best-in-class irreversible oral Bruton's tyrosine kinase (BTK) inhibitor, *Calquence*, currently in Phase III development for B-cell blood cancers and in Phase I/II clinical trials in multiple solid tumours. Acerta Pharma has approximately 150 employees.

Under the terms of the agreement, AstraZeneca has acquired 55% of the issued share capital of Acerta Pharma for an upfront payment of $2.5bn. A further payment of $1.5bn was due either on receipt of the first regulatory approval for *Calquence* for any indication in the US, or the end of 2018, depending on which was first. This was paid in 2017 on receipt of first regulatory approval in the US. The agreement also includes options which, if exercised, provide the opportunity for Acerta Pharma's shareholders to sell, and AstraZeneca to buy, the remaining 45% of shares in Acerta Pharma. The options can be exercised at various points in time, conditional on the first approval of *Calquence* in both the US and Europe and when the extent of the commercial opportunity has been fully established, at a price of approximately $3bn net of certain costs and payments incurred by AstraZeneca and net of agreed future adjusting items, using a pre-agreed pricing mechanism.

The acquiring entity within the Group was a Swedish krona functional currency subsidiary. Foreign currency risk arises from the retranslation of the US dollar denominated liabilities arising from the transaction. To manage this foreign currency risk these liabilities have been designated as the hedge instrument in a net investment hedge of the Group's underlying US dollar net investments. Exchange differences on the retranslation of the contingent consideration liability are recognised in Other comprehensive income to the extent that the hedge is effective. Any ineffectiveness is taken to profit.

AstraZeneca's 55% holding is a controlling interest and Acerta Pharma's combination of intangible product rights with an established workforce and their operating processes requires that the transaction is accounted for as a business combination in accordance with IFRS 3.

Goodwill is principally attributable to the value of the specialist know-how inherent in the acquired workforce and the accounting for deferred taxes. Goodwill is not expected to be deductible for tax purposes.

Acerta Pharma's results have been consolidated into the Group's results from 2 February 2016. From the period from acquisition to 31 December 2016, Acerta Pharma had no revenues and its loss after tax was $212m.

If the acquisition had taken effect at the beginning of the reporting period in which the acquisition occurred (1 January 2016), on a *pro forma* basis, the revenue of the combined Group for 2016 would have been unchanged and the profit after tax would have been $3,367m. This *pro forma* information does not purport to represent the results of the combined Group that actually would have occurred had the acquisition taken place on 1 January 2016 and should not be taken to be representative of future results.

The fair values assigned to the Acerta Pharma business combination completed in 2016 were:

	Fair value $m
Non-current assets	
Intangible assets (Note 9)	7,307
Current assets	253
Current liabilities	(90)
Non-current liabilities	
Deferred tax liabilities	(1,777)
Total net assets acquired	5,693
Non-controlling interests	(1,903)
Goodwill (Note 8)	19
Fair value of total consideration	3,809
Less: fair value of deferred consideration	(1,332)
Total upfront consideration	2,477
Less: cash and cash equivalents acquired	(94)
Net cash outflow	2,383

Acquisition costs were immaterial.

25 Acquisitions of business operations *continued*

2015 Acquisitions

ZS Pharma

On 17 December 2015, AstraZeneca completed the acquisition of ZS Pharma, a biopharmaceutical company based in San Mateo, California. ZS Pharma uses its proprietary ion-trap technology to develop novel treatments for hyperkalaemia, a serious condition of elevated potassium in the bloodstream, typically associated with chronic kidney disease (CKD) and chronic heart failure (CHF).

The acquisition gives AstraZeneca access to the potassium-binding compound ZS-9, a potential best-in-class treatment for hyperkalaemia.

ZS Pharma represents a strong fit with AstraZeneca's pipeline and portfolio in Cardiovascular & Metabolic Diseases, one of the Company's three main therapy areas. AstraZeneca's strategy focuses on reducing morbidity, mortality and organ damage by addressing multiple risk factors across cardiovascular disease, diabetes and chronic kidney disease. ZS-9 complements the Company's increasing focus on CKD and CHF, including the investigational medicine roxadustat, which is currently in Phase III development for patients with anaemia associated with CKD, as well as its leading Diabetes portfolio.

Under the terms of the agreement, AstraZeneca acquired 100% of the share capital of ZS Pharma for $90 per share in an all-cash transaction, or approximately $2.7bn in aggregate transaction value.

ZS Pharma has around 200 employees across three sites in California, Texas and Colorado. The combination of intangible product rights with an established workforce and their associated operating processes, principally those related to research and development and manufacturing, requires that the transaction is accounted for as a business combination in accordance with IFRS 3.

Goodwill is principally attributable to the commercial synergies AstraZeneca expects to be able to realise upon launch of ZS-9, the value of the specialist know-how inherent in the acquired workforce and the accounting for deferred taxes. Goodwill is not expected to be deductible for tax purposes.

ZS Pharma's results have been consolidated into the Group's results from 17 December 2015. From the period from acquisition to 31 December 2015, ZS Pharma's revenues and loss were immaterial.

If the acquisition had taken effect at the beginning of the reporting period in which the acquisition occurred (1 January 2015), on a *pro forma* basis, the revenue of the combined Group for 2015 would have been unchanged and the profit after tax would have been $2,702m. This *pro forma* information does not purport to represent the results of the combined Group that actually would have occurred had the acquisition taken place on 1 January 2015 and should not be taken to be representative of future results.

The final fair values assigned to the ZS Pharma business combination are detailed below:

	Fair value $m
Non-current assets	
Intangible assets (Note 9)	3,162
Property, plant and equipment (Note 7)	21
	3,183
Current assets	169
Current liabilities	(50)
Non-current liabilities	
Deferred tax liabilities	(977)
Other liabilities	(13)
	(990)
Total net assets acquired	2,312
Goodwill (Note 8)	388
Total upfront consideration	2,700
Less: cash and cash equivalents acquired	(73)
Less: upfront consideration settled in January 2016	(181)
Net cash outflow	2,446

Acquisition costs were immaterial.

26 Financial risk management objectives and policies

The Group's principal financial instruments, other than derivatives, comprise bank overdrafts, finance leases, loans, current and non-current investments, cash and short-term deposits. The main purpose of these financial instruments is to manage the Group's funding and liquidity requirements. The Group has other financial assets and liabilities such as trade receivables and trade payables, which arise directly from its operations.

The principal financial risks to which the Group is exposed are those of liquidity, interest rate, foreign currency and credit. Each of these is managed in accordance with Board-approved policies. These policies are set out below.

The Group uses foreign currency borrowings, foreign currency forwards and swaps, currency options, cross-currency swaps and interest rate swaps for the purpose of hedging its foreign currency and interest rate risks. The Group may designate certain financial instruments as fair value hedges, cash flow hedges or net investment hedges in accordance with IAS 39. Key controls applied to transactions in derivative financial instruments are: to use only instruments where good market liquidity exists, to revalue all financial instruments regularly using current market rates and to sell options only to offset previously purchased options or as part of a risk management strategy. The Group is not a net seller of options, and does not use derivative financial instruments for speculative purposes.

Capital management

The capital structure of the Group consists of shareholders' equity (Note 22), debt (Note 17) and cash (Note 16). For the foreseeable future, the Board will maintain a capital structure that supports the Group's strategic objectives through:

> managing funding and liquidity risk
> optimising shareholder return
> maintaining a strong, investment-grade credit rating.

The Group utilises factoring arrangements for selected trade receivables. These factoring arrangements qualify for full derecognition of the associated trade receivables under IAS 39.

Funding and liquidity risk are reviewed regularly by the Board and managed in accordance with policies described below.

The Board's distribution policy comprises a regular cash dividend and, subject to business needs, a share repurchase component. The Board regularly reviews its shareholders' return strategy, and in 2012 decided to suspend share repurchases in order to retain strategic flexibility.

The Group's net debt position (loans and borrowings net of cash and cash equivalents, other investments and derivative financial instruments) has increased from a net debt position of $10,657m at the beginning of the year to a net debt position of $12,679m at 31 December 2017, primarily as a result of cash outflows from investing activities, including acquisitions.

Liquidity risk

The Board reviews the Group's ongoing liquidity risks annually as part of the planning process and on an *ad hoc* basis. The Board considers short-term requirements against available sources of funding, taking into account forecast cash flows. The Group manages liquidity risk by maintaining access to a number of sources of funding which are sufficient to meet anticipated funding requirements. Specifically, the Group uses US commercial paper, committed bank facilities and cash resources to manage short-term liquidity and manages long-term liquidity by raising funds through the capital markets. The Group is assigned short-term credit ratings of P-2 by Moody's and A-2 by Standard and Poor's. The Group's long-term credit rating is A3 negative outlook by Moody's and BBB+ stable outlook by Standard and Poor's.

In addition to cash and cash equivalents of $3,324m, fixed deposits of $80m, less overdrafts of $152m at 31 December 2017, the Group has committed bank facilities of $3bn available to manage liquidity. At 31 December 2017, the Group has issued $3,959m under a Euro Medium Term Note programme and $12,980m under a SEC-registered programme. The Group regularly monitors the credit standing of the banking group and currently does not anticipate any issue with drawing on the committed facilities should this be necessary. The committed facilities of $3bn mature in April 2022 and were undrawn at 31 December 2017.

The maturity profile of the anticipated future contractual cash flows including interest in relation to the Group's financial liabilities, on an undiscounted basis and which, therefore, differs from both the carrying value and fair value, is as follows:

	Bank overdrafts and other loans $m	Bonds $m	Finance leases $m	Trade and other payables $m	Total non-derivative financial instruments $m	Interest rate swaps $m	Cross-currency swaps $m	Total derivative financial instruments $m	Total $m
Within one year	851	568	66	11,701	13,186	(54)	(17)	(71)	13,115
In one to two years	–	2,318	41	1,522	3,881	(54)	(17)	(71)	3,810
In two to three years	–	1,865	22	1,110	2,997	(19)	(26)	(45)	2,952
In three to four years	–	1,444	10	1,277	2,731	(15)	(330)	(345)	2,386
In four to five years	–	2,025	2	2,187	4,214	(15)	–	(15)	4,199
In more than five years	–	14,192	–	5,313	19,505	(44)	–	(44)	19,461
	851	22,412	141	23,110	46,514	(201)	(390)	(591)	45,923
Effect of interest	(2)	(8,194)	(46)	–	(8,242)	201	67	268	(7,974)
Effect of discounting, fair values and issue costs	–	(109)	–	(3,990)	(4,099)	(126)	3	(123)	(4,222)
31 December 2015	849	14,109	95	19,120	34,173	(126)	(320)	(446)	33,727

26 Financial risk management objectives and policies *continued*

	Bank overdrafts and other loans $m	Bonds $m	Finance leases $m	Trade and other payables $m	Total non-derivative financial instruments $m	Interest rate swaps $m	Cross-currency swaps $m	Total derivative financial instruments $m	Total $m
Within one year	455	2,374	42	10,566	13,437	(54)	32	(22)	13,415
In one to two years	–	1,921	24	4,986	6,931	(19)	12	(7)	6,924
In two to three years	–	1,500	16	1,144	2,660	(15)	(216)	(231)	2,429
In three to four years	–	2,080	10	1,666	3,756	(15)	47	32	3,788
In four to five years	7	1,756	3	877	2,643	(15)	86	71	2,714
In more than five years	–	14,796	–	3,624	18,420	(30)	320	290	18,710
	462	24,427	95	22,863	47,847	(148)	281	133	47,980
Effect of interest	(4)	(8,111)	(2)	–	(8,117)	148	(351)	(203)	(8,320)
Effect of discounting, fair values and issue costs	–	(59)	–	(2,889)	(2,948)	(82)	(93)	(175)	(3,123)
31 December 2016	458	16,257	93	19,974	36,782	(82)	(163)	(245)	36,537

	Bank overdrafts and other loans $m	Bonds $m	Finance leases $m	Trade and other payables $m	Total non-derivative financial instruments $m	Interest rate swaps $m	Cross-currency swaps $m	Total derivative financial instruments $m	Total $m
Within one year	**859**	**1,985**	**5**	**11,840**	**14,689**	**(10)**	**420**	**410**	**15,099**
In one to two years	**–**	**1,564**	**–**	**1,976**	**3,540**	**(12)**	**(100)**	**(112)**	**3,428**
In two to three years	**–**	**2,144**	**–**	**1,586**	**3,730**	**(12)**	**295**	**283**	**4,013**
In three to four years	**16**	**2,000**	**–**	**3,240**	**5,256**	**(12)**	**(747)**	**(759)**	**4,497**
In four to five years	**–**	**1,736**	**–**	**1,112**	**2,848**	**(12)**	**34**	**22**	**2,870**
In more than five years	**–**	**15,575**	**–**	**2,808**	**18,383**	**(12)**	**26**	**14**	**18,397**
	875	**25,004**	**5**	**22,562**	**48,446**	**(70)**	**(72)**	**(142)**	**48,304**
Effect of interest	**(14)**	**(7,969)**	**–**	**–**	**(7,983)**	**70**	**(480)**	**(410)**	**(8,393)**
Effect of discounting, fair values and issue costs	**–**	**(94)**	**–**	**(3,081)**	**(3,175)**	**(50)**	**93**	**43**	**(3,132)**
31 December 2017	**861**	**16,941**	**5**	**19,481**	**37,288**	**(50)**	**(459)**	**(509)**	**36,779**

Where interest payments are on a floating rate basis, it is assumed that rates will remain unchanged from the last business day of each year ended 31 December.

It is not expected that the cash flows in the maturity profile could occur significantly earlier or at significantly different amounts, with the exception of $5,534m of contingent consideration and $1,823m arising from the put option over the non-controlling interest in Acerta Pharma, both held within other payables (see Note 18).

Market risk

Interest rate risk

The Group maintains a mix of fixed and floating rate debt. The portion of fixed rate debt was approved by the Board and any variation requires Board approval.

A significant portion of the long-term debt is held at fixed rates of interest. The Group uses interest rate swaps and forward rate agreements to manage this mix. During the year the Group issued $2.0bn of bonds maturing in 2022 and 2027 to refinance the $1.75bn 5.9% 2017 bond and for general corporate purposes.

At 31 December 2017, the Group held interest rate swaps with a notional value of $0.9bn, converting the 7% guaranteed debentures payable in 2023 to floating rates and partially converting the 1.75% callable bond maturing in 2018 to floating rates. No new interest rate swaps were entered into during 2017. At 31 December 2017, swaps with a notional value of $0.6bn were designated in fair value hedge relationships and swaps with a notional value of $0.29bn related to debt designated as fair value through profit or loss. Designated hedges are expected to be effective and therefore the impact of ineffectiveness on profit is not expected to be material. The accounting treatment for fair value hedges and debt designated as fair value through profit or loss is disclosed in the Group Accounting Policies section from page 139.

The majority of surplus cash is currently invested in US dollar liquidity funds, fully collateralised repurchase arrangements and investment grade fixed securities.

26 Financial risk management objectives and policies *continued*

The interest rate profile of the Group's interest-bearing financial instruments, as at 31 December 2017, 31 December 2016 and 31 December 2015, is set out below. In the case of current and non-current financial liabilities, the classification includes the impact of interest rate swaps which convert the debt to floating rate. Current financial liabilities with short maturities are classified as floating rate given the amounts borrowed are regularly reset to market rates.

	2017			2016			2015		
	Fixed rate $m	Floating rate $m	Total $m	Fixed rate $m	Floating rate $m	Total $m	Fixed rate $m	Floating rate $m	Total $m
Financial liabilities									
Interest-bearing loans and borrowings									
Current	**404**	**1,843**	**2,247**	1,086	1,221	2,307	67	849	916
Non-current	**14,608**	**952**	**15,560**	13,154	1,347	14,501	11,986	2,151	14,137
Total	**15,012**	**2,795**	**17,807**	14,240	2,568	16,808	12,053	3,000	15,053
Financial assets									
Fixed deposits	**–**	**80**	**80**	–	37	37	–	65	65
Cash and cash equivalents	**–**	**3,324**	**3,324**	–	5,018	5,018	–	6,240	6,240
Total	**–**	**3,404**	**3,404**	–	5,055	5,055	–	6,305	6,305

In addition to the financial assets above, there are $6,366m (2016: $5,519m; 2015: $6,494m) of other current and non-current asset investments and other financial assets on which no interest is received.

Foreign currency risk

The US dollar is the Group's most significant currency. As a consequence, the Group results are presented in US dollars and exposures are managed against US dollars accordingly.

Translational

Approximately 70% of Group external sales in 2017 were denominated in currencies other than the US dollar, while a significant proportion of manufacturing, and research and development costs were denominated in pounds sterling and Swedish krona. Surplus cash generated by business units is substantially converted to, and held centrally in, US dollars. As a result, operating profit and total cash flow in US dollars will be affected by movements in exchange rates.

This currency exposure is managed centrally, based on forecast cash flows. The impact of movements in exchange rates is mitigated significantly by the correlations which exist between the major currencies to which the Group is exposed and the US dollar. Monitoring of currency exposures and correlations is undertaken on a regular basis and hedging is subject to pre-execution approval.

As at 31 December 2017, 2.8% of interest-bearing loans and borrowings were denominated in pounds sterling and 20.6% were denominated in euros. Where there is non-US dollar debt and an underlying net investment of that amount in the same currency, the Group applies net investment hedging. Exchange differences on the retranslation of debt designated as net investment hedges are recognised in other comprehensive income to the extent that the hedge is effective. Any ineffectiveness is taken to profit.

The Group holds cross-currency swaps to hedge against the impact of fluctuations in foreign exchange rates. Fair value movements on the revaluation of the cross-currency swaps are recognised in other comprehensive income to the extent that the hedge is effective, with any ineffectiveness taken to profit. In 2017, following a reduction in the value of the Group's euro net assets, €300m of our €750m 0.875% 2021 bond was de-designated from the Group's euro net investment hedge relationship. Subsequently a €300m cross-currency swap was transacted and designated as a fair value hedge of the resulting exposure to movements in the euro:US dollar exchange rate.

Foreign currency risk arises when the Group has inter-company funding and investments in certain subsidiaries operating in countries with exchange controls.

In Venezuela, the official exchange rate for essential goods and services is VEF 10/$ (the DIPRO rate) as published by CENCOEX (the National Foreign Trade Center). Alternative exchange rates include the DICOM rate, which is a second official exchange tier to cover non essentials. At 31 December 2017, the DICOM rate was approximately VEF 3,300/$.

During 2017, the Group began using the DICOM rate for the consolidation of the financial statements of the Venezuelan subsidiaries. The Group believes that this rate represents the most appropriate rate for consolidation as it reflects their best expectation of the rate at which profits will be remitted. The remaining foreign exchange risk to the Group in respect of Venezuela is now immaterial.

Transactional

One hundred percent of the Group's major transactional currency exposures on working capital balances, which typically extend for up to three months, are hedged, where practicable, using forward foreign exchange contracts against individual Group companies' reporting currency. In addition, the Group's external dividend, which is paid principally in pounds sterling and Swedish krona, is fully hedged from announcement to payment date. Foreign exchange gains and losses on forward contracts transacted for transactional hedging are taken to profit.

Sensitivity analysis

The sensitivity analysis set out overleaf summarises the sensitivity of the market value of our financial instruments to hypothetical changes in market rates and prices. The range of variables chosen for the sensitivity analysis reflects our view of changes which are reasonably possible over a one-year period. Market values are the present value of future cash flows based on market rates and prices at the valuation date. For long-term debt, an increase in interest rates results in a decline in the fair value of debt.

26 Financial risk management objectives and policies *continued*

The sensitivity analysis assumes an instantaneous 100 basis point change in interest rates in all currencies from their levels at 31 December 2017, with all other variables held constant. Based on the composition of our long-term debt portfolio as at 31 December 2017, a 1% increase in interest rates would result in an additional $28m in interest expense being incurred per year. The exchange rate sensitivity analysis assumes an instantaneous 10% change in foreign currency exchange rates from their levels at 31 December 2017, with all other variables held constant. The +10% case assumes a 10% strengthening of the US dollar against all other currencies and the -10% case assumes a 10% weakening of the US dollar.

Each incremental 10% movement in foreign currency exchange rates would have approximately the same effect as the initial 10% detailed in the table below and each 1% change in interest rates would have approximately the same effect as the 1% detailed in the table below.

	Interest rates		Exchange rates	
31 December 2015	+1%	–1%	+10%	–10%
Increase/(decrease) in fair value of financial instruments ($m)	997	(1,150)	136	(136)
Impact on profit: (loss)/gain ($m)	–	–	(91)	91
Impact on equity: gain/(loss) ($m)	–	–	227	(227)

	Interest rates		Exchange rates	
31 December 2016	+1%	–1%	+10%	–10%
Increase/(decrease) in fair value of financial instruments ($m)	1,249	(1,390)	180	(180)
Impact on profit: (loss)/gain ($m)	–	–	(24)	24
Impact on equity: gain/(loss) ($m)	–	–	204	(204)

	Interest rates		Exchange rates	
31 December 2017	+1%	–1%	+10%	–10%
Increase/(decrease) in fair value of financial instruments ($m)	**1,329**	**(1,293)**	**198**	**(198)**
Impact on profit: (loss)/gain ($m)	**–**	**–**	**(123)**	**123**
Impact on equity: gain/(loss) ($m)	**–**	**–**	**321**	**(321)**

There has been no change in the methods and assumptions used in preparing the above sensitivity analysis over the three-year period.

Credit risk

The Group is exposed to credit risk on financial assets, such as cash balances (including fixed deposits and Cash and cash equivalents), derivative instruments, Trade and other receivables. The Group is also exposed in its Net asset position to its own credit risk in respect of the 2023 debentures which are accounted for at fair value through profit or loss. Under IFRS 9, the Group records the effect of the losses and gains, arising from own credit risk, on the fair value of bonds designated at fair value through profit or loss in Other comprehensive income.

Trade and other receivables

Trade receivable exposures are managed locally in the operating units where they arise and credit limits are set as deemed appropriate for the customer. The Group is exposed to customers ranging from government-backed agencies and large private wholesalers to privately owned pharmacies, and the underlying local economic and sovereign risks vary throughout the world. Where appropriate, the Group endeavours to minimise risks by the use of trade finance instruments such as letters of credit and insurance. The Group establishes an allowance for impairment that represents its estimate of incurred losses in respect of specific Trade and other receivables where it is deemed that a receivable may not be recoverable. When the debt is deemed irrecoverable, the allowance account is written off against the underlying receivable.

In the US, sales to three wholesalers accounted for approximately 60% of US sales (2016: three wholesalers accounted for approximately 83%; 2015: three wholesalers accounted for approximately 84%).

The ageing of trade receivables at the reporting date was:

	2017 $m	2016 $m	2015 $m
Not past due	**2,488**	2,559	4,388
Past due 0–90 days	**260**	14	189
Past due 90–180 days	**31**	–	21
Past due > 180 days	**23**	10	35
	2,802	2,583	4,633

	2017 $m	2016 $m	2015 $m
Movements in provisions for trade receivables			
At 1 January	**42**	52	54
Income statement	**(26)**	–	2
Amounts utilised, exchange and other movements	**–**	(10)	(4)
At 31 December	**16**	42	52

The allowance for impairment has been calculated based on past experience and is in relation to specific customers. Given the profile of our customers, including large wholesalers and government-backed agencies, no further credit risk has been identified with the trade receivables not past due other than those balances for which an allowance has been made. The income statement credit or charge is recorded in Selling, general and administrative costs.

26 Financial risk management objectives and policies *continued*

Other financial assets

The Group may hold significant cash balances as part of its normal operations, with the amount of cash held at any point reflecting the level of cash flow generated by the business and the timing of the use of that cash. The majority of excess cash is centralised within the Group treasury entity and is subject to counterparty risk on the principal invested. This risk is mitigated through a policy of prioritising security and liquidity over return, and as such cash is only invested in high credit quality investments. Counterparty limits are set according to the assessed risk of each counterparty and exposures are monitored against these limits on a regular basis. The majority of the Group's cash is invested in US dollar AAA-rated liquidity funds, fully collateralised repurchase agreements and short-term bank deposits.

The most significant concentration of financial credit risk at 31 December 2017 was $1,149m invested in five AAA-rated liquidity funds. The liquidity fund portfolios are managed by the related external third party fund managers to maintain the AAA rating. The group does not invest in more than 10% of the total third party managed fund portfolio for each individual fund. There were no other significant concentrations of financial credit risk at the reporting date.

At 31 December 2017, the Group had investments of $1,150m (2016: $950m; 2015: $1,050m) in short-term repurchase agreements, which are fully collateralised investments. In the event of any default, ownership of the collateral would revert to the Group and would be readily convertible to cash. The value of the collateral held at 31 December 2017 was $1,151m (2016: $951m; 2015: $1,098m).

All financial derivatives are transacted with commercial banks, in line with standard market practice. The Group has agreements with some bank counterparties whereby the parties agree to post cash collateral, for the benefit of the other, equivalent to the market valuation of the derivative positions above a predetermined threshold. The carrying value of such cash collateral held by the Group at 31 December 2017 was $513m (2016: $322m; 2015: $451m) and the carrying value of each cash collateral posted by the Group at 31 December 2017 was $nil (2016: $80m; 2015: $nil).

27 Employee costs and share plans for employees

Employee costs

The average number of people, to the nearest hundred, employed by the Group is set out in the table below. In accordance with the Companies Act 2006, this includes part-time employees.

	2017	2016	2015
Employees			
UK	**6,900**	7,000	7,100
Continental Europe	**14,500**	14,700	14,800
The Americas	**16,300**	17,800	17,500
Asia, Africa & Australasia	**22,300**	22,000	20,700
Continuing operations	**60,000**	61,500	60,100

Geographical distribution described in the table above is by location of legal entity employing staff. Certain staff will spend some or all of their activity in a different location.

The number of people employed by the Group at the end of 2017 was 61,100 (2016: 59,700; 2015: 61,500).

The costs incurred during the year in respect of these employees were:

	2017 $m	2016 $m	2015 $m
Salaries	**5,004**	4,664	4,603
Social security costs	**570**	584	567
Pension costs	**378**	426	484
Other employment costs	**534**	610	474
Total	**6,486**	6,284	6,128

Severance costs of $225m are not included above (2016: $578m; 2015: $338m).

The Directors believe that, together with the basic salary system, the Group's employee incentive schemes provide competitive and market-related packages to motivate employees. They should also align the interests of employees with those of shareholders, as a whole, through long-term share ownership in the Company. The Group's current UK, Swedish and US schemes are described below; other arrangements apply elsewhere.

27 Employee costs and share plans for employees *continued*

Bonus plans

The AstraZeneca UK Performance Bonus Plan

Employees of participating AstraZeneca UK companies are invited to participate in this bonus plan, which rewards strong individual performance. Bonuses are paid in cash.

The AstraZeneca Executive Annual Bonus Scheme

This scheme is a performance bonus scheme for Directors and senior employees who do not participate in the AstraZeneca UK Performance Bonus Plan. Annual bonuses are paid in cash and reflect both corporate and individual performance measures. The Remuneration Committee has discretion to reduce or withhold bonuses if business performance falls sufficiently short of expectations in any year such as to make the payment of bonuses inappropriate.

The AstraZeneca Deferred Bonus Plan

This plan was introduced in 2006 and is used to defer a portion of the bonus earned under the AstraZeneca Executive Annual Bonus Scheme into Ordinary Shares in the Company for a period of three years. The plan currently operates only in respect of Executive Directors and members of the SET. Awards of shares under this plan are typically made in March each year, the first award having been made in February 2006.

Sweden

In Sweden, an all-employee performance bonus plan is in operation, which rewards strong individual performance. Bonuses are paid 50% into a fund investing in AstraZeneca equities and 50% in cash. The AstraZeneca Executive Annual Bonus Scheme, the AstraZeneca Performance Share Plan and the AstraZeneca Global Restricted Stock Plan all operate in respect of relevant AstraZeneca employees in Sweden.

US

In the US, there are two all-employee short-term or annual performance bonus plans in operation to differentiate and reward strong individual performance. Annual bonuses are paid in cash. There is also one senior staff long-term incentive scheme, under which 129 participants may be eligible for awards granted as AstraZeneca ADSs. AstraZeneca ADSs necessary to satisfy the awards are purchased in the market or funded via a share trust. The AstraZeneca Performance Share Plan and the AstraZeneca Global Restricted Stock Plan operate in respect of relevant employees in the US.

Share plans

The charge for share-based payments in respect of share plans is $220m (2016: $241m; 2015: $211m). The plans are equity settled.

The AstraZeneca UK All-Employee Share Plan

The Company offers UK employees the opportunity to buy Partnership Shares (Ordinary Shares). Employees may invest up to £1,800 over a 12-month accumulation period and purchase Partnership Shares in the Company with the total proceeds at the end of the period. The purchase price for the shares is the lower of the price at the beginning or the end of the 12-month period. In 2010, the Company introduced a Matching Share element, the first award of which was made in 2011. Currently one Matching Share is awarded for every four Partnership Shares purchased. Partnership Shares and Matching Shares are held in the HM Revenue & Customs (HMRC)-approved All-Employee Share Plan. At the Company's AGM in 2002, shareholders approved the issue of new shares for the purposes of the All-Employee Share Plan.

The AstraZeneca 2014 Performance Share Plan (PSP)

This plan was approved by shareholders in 2014 for a period of 10 years and replaces the AstraZeneca Performance Share Plan. Generally, awards can be granted at any time, but not during a closed period of the Company. The first grant of awards was made in May 2014. Awards granted under the plan vest after three years, or in the case of Executive Directors and members of the SET, after an additional two-year holding period, and can be subject to the achievement of performance conditions. For awards granted to all participants in 2017, vesting is subject to a combination of measures focused on scientific leadership, revenue growth and financial performance. The Remuneration Committee has responsibility for agreeing any awards under the plan and for setting the policy for the way in which the plan should be operated, including agreeing performance targets and which employees should be invited to participate. The main grant of awards in 2017 under the plan took place in March with further grants in May and August.

	Shares '000	WAFV[1] pence	WAFV[1] $
Shares awarded in March 2015	2,223	2381	35.29
Shares awarded in June 2015	36	2087	33.05
Shares awarded in August 2015	152	2123	33.21
Shares awarded in September 2015	8	n/a	32.32
Shares awarded in November 2015	7	2178	33.31
Shares awarded in March 2016	2,673	1962	28.19
Shares awarded in May 2016	24	1935	28.64
Shares awarded in August 2016	67	2536	33.58
Shares awarded in March 2017	2,359	2440	30.88
Shares awarded in May 2017	10	2607	34.20
Shares awarded in August 2017	44	2234	29.11

[1] Weighted average fair value.

27 Employee costs and share plans for employees *continued*

The AstraZeneca Investment Plan (AZIP)

This plan was introduced in 2010 and approved by shareholders at the 2010 AGM. The final grant of awards under this plan took place in March 2016. Awards granted under the plan vest after eight years and are subject to performance conditions measured over a period of between three and eight years.

	Shares '000	WAFV pence	WAFV $
Shares awarded in March 2015	64	4762	70.58
Shares awarded in August 2015	4	n/a	66.42
Shares awarded in March 2016	84	3923	56.38

The AstraZeneca Global Restricted Stock Plan

This plan was introduced in 2010. The main grant of awards in 2017 under the plan was in March, with further, smaller grants in May, August and November. This plan provides for the grant of restricted stock unit (RSU) awards to selected below SET-level employees and is used in conjunction with the AstraZeneca Performance Share Plan to provide a mix of RSUs and performance shares. Awards typically vest on the third anniversary of the date of grant and are contingent on continued employment with the Company. The Remuneration Committee has responsibility for agreeing any awards under the plan and for setting the policy for the way in which the plan should be operated.

	Shares '000	WAFV pence	WAFV $
Shares awarded in March 2015	1,966	4762	70.58
Shares awarded in August 2015	17	4245	66.42
Shares awarded in March 2016	2,695	3923	56.38
Shares awarded in August 2016	122	5071	67.16
Shares awarded in March 2017	2,502	4880	61.76
Shares awarded in May 2017	78	5214	68.40
Shares awarded in August 2017	31	4468	58.22
Shares awarded in November 2017	77	4942	66.24

The AstraZeneca Restricted Share Plan

This plan was introduced in 2008 and provides for the grant of restricted share awards to key employees, excluding Executive Directors. Awards are made on an *ad hoc* basis with variable vesting dates. The plan has been used six times in 2017 to make awards to 74 employees. The Remuneration Committee has responsibility for agreeing any awards under the plan and for setting the policy for the way in which the plan should be operated.

	Shares '000	WAFV pence	WAFV $
Shares awarded in March 2015	164	4762	70.58
Shares awarded in June 2015	69	4174	66.09
Shares awarded in August 2015	31	4245	66.42
Shares awarded in September 2015	41	4199	64.64
Shares awarded in November 2015	41	4355	66.62
Shares awarded in March 2016	809	3923	56.38
Shares awarded in May 2016	335	3869	57.28
Shares awarded in August 2016	37	5071	67.16
Shares awarded in November 2016	14	4233	53.42
Shares awarded in February 2017	205	4293	55.50
Shares awarded in March 2017	134	4880	61.76
Shares awarded in May 2017	8	5214	68.40
Shares awarded in August 2017	26	4468	58.22
Shares awarded in September 2017	31	4765	65.60
Shares awarded in November 2017	23	4942	66.24

The fair values were determined using a modified version of the binomial model. This method incorporated expected dividends but no other features into the measurements of fair value. The grant date fair values of share awards disclosed in this section do not take account of service and non-market related performance conditions.

28 Commitments and contingent liabilities

Commitments	2017 $m	2016 $m	2015 $m
Contracts placed for future capital expenditure on property, plant and equipment and software development costs not provided for in these accounts	**570**	629	518

Guarantees and contingencies arising in the ordinary course of business, for which no security has been given, are not expected to result in any material financial loss.

Research and development collaboration payments

The Group has various ongoing collaborations, including in-licensing and similar arrangements with development partners. Such collaborations may require the Group to make payments on achievement of stages of development, launch or revenue milestones, although the Group generally has the right to terminate these agreements at no cost. The Group recognises research and development milestones as intangible assets once it is committed to payment, which is generally when the Group reaches set trigger points in the development cycle. Revenue-related milestones are recognised as intangible assets on product launch at a value based on the Group's long-term revenue forecasts for the related product. The table below indicates potential development and revenue-related payments that the Group may be required to make under such collaborations.

	Total $m	Under 1 year $m	Years 1 and 2 $m	Years 3 and 4 $m	Years 5 and greater $m
Future potential research and development milestone payments	**5,838**	**580**	**1,254**	**723**	**3,281**
Future potential revenue milestone payments	**5,064**	**436**	**1,216**	**276**	**3,136**

The table includes all potential payments for achievement of milestones under ongoing research and development arrangements. Revenue-related milestone payments represent the maximum possible amount payable on achievement of specified levels of revenue as set out in individual contract agreements, but exclude variable payments that are based on unit sales (eg royalty-type payments) which are expensed as the associated sale is recognised. The table excludes any payments already capitalised in the Financial Statements for the year ended 31 December 2017.

The future payments we disclose represent contracted payments and, as such, are not discounted and are not risk adjusted. As detailed in the Risk section from page 210, the development of any pharmaceutical product candidate is a complex and risky process that may fail at any stage in the development process due to a number of factors (including items such as failure to obtain regulatory approval, unfavourable data from key studies, adverse reactions to the product candidate or indications of other safety concerns). The timing of the payments is based on the Group's current best estimate of achievement of the relevant milestone.

Environmental costs and liabilities

The Group's expenditure on environmental protection, including both capital and revenue items, relates to costs that are necessary for implementing internal systems and programmes, and meeting legal and regulatory requirements for processes and products. This includes investment to conserve natural resources and otherwise minimise the impact of our activities on the environment.

They are an integral part of normal ongoing expenditure for carrying out the Group's research, manufacturing and commercial operations and are not separated from overall operating and development costs. There are no known changes in legal, regulatory or other requirements resulting in material changes to the levels of expenditure for 2015, 2016 or 2017.

In addition to expenditure for meeting current and foreseen environmental protection requirements, the Group incurs costs in investigating and cleaning up land and groundwater contamination. In particular, AstraZeneca has environmental liabilities at some currently or formerly owned, leased and third party sites.

In the US, Zeneca Inc., and/or its indemnitees, have been named as potentially responsible parties (PRPs) or defendants at approximately 13 sites where Zeneca Inc. is likely to incur future environmental investigation, remediation, operation and maintenance costs under federal, state, statutory or common law environmental liability allocation schemes (together, US Environmental Consequences). Similarly, Stauffer Management Company LLC (SMC), which was established in 1987 to own and manage certain assets of Stauffer Chemical Company acquired that year, and/or its indemnitees, have been named as PRPs or defendants at 35 sites where SMC is likely to incur US Environmental Consequences.

AstraZeneca has also given indemnities to third parties for a number of sites outside the US. These environmental liabilities arise from legacy operations that are not currently part of the Group's business and, at most of these sites, remediation, where required, is either completed or nearing completion. AstraZeneca has made provisions for the estimated costs of future environmental investigation, remediation, operation and maintenance activity beyond normal ongoing expenditure for maintaining the Group's R&D and manufacturing capacity and product ranges, where a present obligation exists, it is probable that such costs will be incurred and they can be estimated reliably. With respect to such estimated future costs, there were provisions at 31 December 2017 in the aggregate of $59m (2016: $59m; 2015: $67m), mainly relating to the US. Where we are jointly liable or otherwise have cost-sharing agreements with third parties, we reflect only our share of the obligation. Where the liability is insured in part or in whole by insurance or other arrangements for reimbursement, an asset is recognised to the extent that this recovery is virtually certain.

It is possible that AstraZeneca could incur future environmental costs beyond the extent of our current provisions. The extent of such possible additional costs is inherently difficult to estimate due to a number of factors, including: (1) the nature and extent of claims that may be asserted in the future; (2) whether AstraZeneca has or will have any legal obligation with respect to asserted or unasserted claims; (3) the type of remedial action, if any, that may be selected at sites where the remedy is presently not known; (4) the potential for recoveries from or allocation of liability to third parties; and (5) the length of time that the environmental investigation, remediation and liability allocation process can take. Notwithstanding and subject to the foregoing, we estimate the potential additional loss for future environmental investigation, remediation, remedial operation and maintenance activity above and beyond our provisions to be, in aggregate, between $87m and $144m (2016: $85m and $141m; 2015: $71m and $119m), which relates mainly to the US.

28 Commitments and contingent liabilities *continued*

Legal proceedings

AstraZeneca is involved in various legal proceedings considered typical to its business, including actual or threatened litigation and/or actual or potential government investigations relating to employment matters, product liability, commercial disputes, pricing, sales and marketing practices, infringement of IP rights, and the validity of certain patents and competition laws. The more significant matters are discussed below.

Most of the claims involve highly complex issues. Often these issues are subject to substantial uncertainties and, therefore, the probability of a loss, if any, being sustained and an estimate of the amount of any loss is difficult to ascertain. Consequently, for a majority of these claims, it is not possible to make a reasonable estimate of the expected financial effect, if any, that will result from ultimate resolution of the proceedings. In these cases, AstraZeneca discloses information with respect to the nature and facts of the cases.

With respect to each of the legal proceedings described below, other than those for which provision has been made, we are unable to make estimates of the possible loss or range of possible losses at this stage, other than as set forth in this section. We also do not believe that disclosure of the amount sought by plaintiffs, if known, would be meaningful with respect to those legal proceedings. This is due to a number of factors, including: (1) the stage of the proceedings (in many cases trial dates have not been set) and the overall length and extent of pre-trial discovery; (2) the entitlement of the parties to an action to appeal a decision; (3) clarity as to theories of liability, damages and governing law; (4) uncertainties in timing of litigation; and (5) the possible need for further legal proceedings to establish the appropriate amount of damages, if any.

While there can be no assurance regarding the outcome of any of the legal proceedings referred to in this Note 28, based on management's current and considered view of each situation, we do not currently expect them to have a material adverse effect on our financial position. This position could of course change over time, not least because of the factors referred to above.

In cases that have been settled or adjudicated, or where quantifiable fines and penalties have been assessed and which are not subject to appeal (or other similar forms of relief), or where a loss is probable and we are able to make a reasonable estimate of the loss, we generally indicate the loss absorbed or make a provision for our best estimate of the expected loss.

Where it is considered that the Group is more likely than not to prevail, legal costs involved in defending the claim are charged to profit as they are incurred.

Where it is considered that the Group has a valid contract which provides the right to reimbursement (from insurance or otherwise) of legal costs and/or all or part of any loss incurred or for which a provision has been established, and we consider recovery to be virtually certain, the best estimate of the amount expected to be received is recognised as an asset.

Assessments as to whether or not to recognise provisions or assets, and of the amounts concerned, usually involve a series of complex judgements about future events and can rely heavily on estimates and assumptions. AstraZeneca believes that the provisions recorded are adequate based on currently available information and that the insurance recoveries recorded will be received. However, given the inherent uncertainties involved in assessing the outcomes of these cases, and in estimating the amount of the potential losses and the associated insurance recoveries, we could in the future incur judgments or insurance settlements that could have a material adverse effect on our results in any particular period.

IP claims include challenges to the Group's patents on various products or processes and assertions of non-infringement of patents. A loss in any of these cases could result in loss of patent protection on the related product. The consequences of any such loss could be a significant decrease in product sales, which could have a material adverse effect on our results. The lawsuits filed by AstraZeneca for patent infringement against companies that have filed ANDAs in the US, seeking to market generic forms of products sold by the Group prior to the expiry of the applicable patents covering these products, typically also involve allegations of non-infringement, invalidity and unenforceability of these patents by the ANDA filers. In the event that the Group is unsuccessful in these actions or the statutory 30-month stay expires before a ruling is obtained, the ANDA filers involved will also have the ability, subject to FDA approval, to introduce generic versions of the product concerned.

AstraZeneca has full confidence in, and will vigorously defend and enforce, its IP.

Over the course of the past several years, including in 2017, a significant number of commercial litigation claims in which AstraZeneca is involved have been resolved, particularly in the US, thereby reducing potential contingent liability exposure arising from such litigation. Similarly, in part due to patent litigation and settlement developments, greater certainty has been achieved regarding possible generic entry dates with respect to some of our patented products. At the same time, like other companies in the pharmaceutical sector and other industries, AstraZeneca continues to be subject to government investigations around the world.

Patent litigation

Brilinta (ticagrelor)

US patent proceedings

In 2015, in response to Paragraph IV notices from multiple ANDA filers, AstraZeneca filed patent infringement lawsuits in the US District Court for the District of Delaware (the District Court) relating to patents listed in the FDA Orange Book with reference to *Brilinta*. AstraZeneca continues to litigate in the District Court against the ANDA filers. Trials are scheduled for March and April 2018.

Patent proceedings outside the US

In Canada, in June 2017, Teva Canada Limited challenged the patents listed on the Canadian Patent Register with reference to *Brilinta*. In September 2017, Apotex Inc. did the same. AstraZeneca has responded to the challenges and hearings are scheduled for April and May 2019.

In China, in October 2017, the Chinese Patent Office issued a decision invalidating one of AstraZeneca's Chinese substance patents relating to *Brilinta*. The patent, Chinese Patent No. ZL99815926.3, is due to expire in December 2019. AstraZeneca has appealed.

Byetta (exenatide)

US patent proceedings

In December 2015, AstraZeneca filed a patent infringement lawsuit in response to a Paragraph IV notice from Amneal Pharmaceuticals LLC (Amneal) relating to patents listed in the FDA Orange Book with reference to *Byetta*. In October 2017, AstraZeneca settled the patent litigation against Amneal. A consent judgment has been entered in the US District Court for the District of Delaware which will enjoin Amneal from launching its proposed exenatide ANDA product until April 2018, subject to regulatory approval.

28 Commitments and contingent liabilities *continued*

Calquence (acalabrutinib)

US patent proceedings

In November 2017, Pharmacyclics LLC filed a complaint in the US District Court for the District of Delaware against Acerta Pharma B.V., Acerta Pharma LLC, and AstraZeneca (collectively, AstraZeneca) alleging that Calquence infringes certain claims of US Patent Nos. 9,079,908; 9,139,591; and 9,556,182. AstraZeneca filed an answer to the complaint in January 2018 alleging, *inter alia*, that the asserted patents are invalid and not infringed.

Crestor (rosuvastatin calcium)

Patent proceedings outside the US

In Australia, as previously disclosed, a provision was taken in respect of damages claims from generic entities and the Commonwealth of Australia in relation to alleged losses suffered in connection with AstraZeneca's enforcement of *Crestor* patents which were subsequently found invalid. During 2016 and 2017, AstraZeneca settled several of these claims; however, the claims from Apotex Inc (and other related Apotex entities) and the Commonwealth of Australia remain outstanding.

In France, patent infringement proceedings continue against Biogaran S.A.S. in relation to the supplementary protection certificate related to the *Crestor* substance patent (European Patent No. EP 0,521,471).

In Japan, patent invalidity proceedings continue against Nippon Chemiphar Co. Ltd (Nippon) in relation to the *Crestor* substance patent (Japanese Patent No. JP 2648897), which expired in Japan in May 2017. The patent was found valid by the Japanese Patent Office in 2016 but this decision was appealed to the High Court.

In the Netherlands, in 2015, the District Court of the Hague determined that Resolution Chemicals Ltd.'s (Resolution) rosuvastatin zinc product does not infringe the supplementary protection certification (SPC) related to the *Crestor* substance patent (European Patent No. EP 0,521,471). In February 2016, the Court of Appeal of the Hague overturned the decision and found that Resolution's product does infringe the SPC. Resolution appealed to the Supreme Court. A decision is pending.

In Spain, in March 2017, AstraZeneca received an interim injunction from the Commercial Court of Barcelona (the Commercial Court) against the launch of ratiopharm Espana, S.A.'s rosuvastatin zinc product. In March 2017, AstraZeneca also initiated main infringement proceedings before the same court. In July 2017, the Commercial Court lifted the interim injunction. Proceedings are ongoing.

In Switzerland, in May 2016, Mepha Pharma AG challenged the validity of the supplementary protection certificate related to the *Crestor* substance patent (European Patent No. EP 0,521,471). The patent was maintained through to expiry in 2017.

In the UK, in October 2015, Resolution Chemicals Ltd. commenced an action in the UK Patent Court alleging partial invalidity and non-infringement of the supplementary protection certificate related to the *Crestor* substance patent (European Patent No. EP 0,521,471). In 2017, the case was stayed by agreement between the parties and the patent was maintained through to expiry in 2017.

Daliresp (roflumilast)

US patent proceedings

In 2015, in response to Paragraph IV notices from ANDA filers, AstraZeneca filed patent infringement lawsuits in the US District Court for the District of New Jersey (the District Court) relating to patents listed in the FDA Orange Book with reference to *Daliresp*. In 2017, AstraZeneca entered into several separate settlements and the District Court entered consent judgments to dismiss several of the litigations. AstraZeneca continues to litigate in the District Court against additional ANDA filers. Trial is scheduled for April 2018.

Faslodex (fulvestrant)

US patent proceedings

AstraZeneca has filed patent infringement lawsuits in the US District Court for the District of New Jersey (the District Court) relating to four patents listed in the FDA Orange Book with reference to *Faslodex* after receiving a number of Paragraph IV notices relating to multiple ANDAs seeking FDA approval to market generic versions of *Faslodex*, prior to the expiration of AstraZeneca's patents. In July 2016, AstraZeneca settled one of these, the lawsuit brought against Sandoz, Inc (Sandoz), and the District Court entered a consent judgment, which included an injunction preventing Sandoz from launching a generic fulvestrant product until March 2019, or earlier in certain circumstances. In 2016 and 2017, AstraZeneca resolved the lawsuits against seven additional ANDA filers, and the District Court also entered consent judgments ending those lawsuits. AstraZeneca continues to litigate in the District Court against one ANDA filer.

In February 2017, AstraZeneca was served with three petitions for *inter partes* review by the Patent Trial and Appeal Board (PTAB) of the US Patent and Trademark Office relating to patents listed in the FDA Orange Book with reference to *Faslodex*. In September 2017, the PTAB denied institution of all three petitions, and no appeals were taken.

In March and October 2017, AstraZeneca received Paragraph IV notices regarding NDAs submitted pursuant to 21 U.S.C. § 355(b)(2) by Teva Pharmaceuticals USA, Inc. (Teva) and Fresenius Kabi USA LLC (Fresenius), respectively, relating to the same FDA Orange Book-listed patents. In April 2017, AstraZeneca filed a lawsuit against Teva in the US District Court for the District of New Jersey (the District Court). In December 2017, AstraZeneca filed lawsuits against Fresenius in both the District Court and the US District Court for the District of Delaware. In January 2018, AstraZeneca settled the lawsuits against both Teva and Fresenius and consent judgments have been entered, ending the lawsuits.

Patent proceedings outside the US

In Brazil, in February 2013, Eurofarma Laboratorios S.A. (Eurofarma) filed a nullity action against a formulation patent for *Faslodex*. In October 2015, the 31st Specialized Intellectual Property (IP) Federal Court of Rio de Janeiro invalidated AstraZeneca's patent. In July 2017, the 1st Specialized IP Panel of the Rio Federal Court of Appeals rejected AstraZeneca's appeal against this decision. AstraZeneca did not appeal further.

In China, in March 2014, AstraZeneca received a request for invalidation of the *Faslodex* formulation patent CN01803546.9 filed by Jiangsu Hansoh Pharmaceutical Co. Ltd. at the Chinese Patent Office. In September 2014, the Patent Re-examination Board of the Chinese Patent Office declared the patent invalid. AstraZeneca appealed to the Beijing IP Court and the appeal was rejected in April 2016. AstraZeneca appealed this decision to the Beijing Higher People's Court and the appeal was rejected in December 2016. AstraZeneca did not appeal further.

28 Commitments and contingent liabilities *continued*

In Europe, in May 2017, at an oral hearing, the Opposition Division of the European Patent Office revoked a *Faslodex* divisional patent (European Patent No. EP 2,266,573) for lack of inventive step. Oppositions against the grant of the patent had been filed by five opponents. AstraZeneca appealed in July 2017.

In Germany, in July 2015, AstraZeneca was served with complaints filed by Hexal AG (Hexal) and ratiopharm GmbH (ratiopharm) requesting the revocation of the German part of European Patent No. EP 1,250,138 (the '138 patent). In January 2017, the German Federal Patent Court declared the '138 patent invalid. AstraZeneca's appeal is pending. In January 2017, the Regional Court of Düsseldorf lifted a provisional injunction based on the '138 patent which had been in place against Hexal since February 2016. In January 2017, the Higher Regional Court of Düsseldorf suspended the effects of a provisional injunction based on the '138 patent which had been in place against ratiopharm since September 2016.

In Spain, in January 2016 and July 2017, the Barcelona Commercial Court ordered preliminary injunctions based on the Spanish part of European Patent Nos. EP 1,250,138 and EP 2,266,573, respectively preventing Sandoz Farmacéutica, S.A. (Sandoz) and Teva Pharm S.L.U. (Teva) from launching generic *Faslodex* in Spain. Sandoz appealed and, in December 2017, the Barcelona Court of Appeals revoked and lifted the preliminary injunction against Sandoz.

Imfinzi (durvalumab)

US patent proceedings

In July 2017, Bristol-Myers Squibb, E.R. Squibb & Sons L.L.C., Ono Pharmaceutical Co. and Tasuku Honjo filed a patent infringement action in the US District Court for the District of Delaware relating to AstraZeneca's commercialisation of *Imfinzi* in the US. AstraZeneca filed an answer to the complaint in October 2017 alleging, *inter alia*, that the asserted patent is invalid and not infringed. The litigation is ongoing.

Losec/*Prilosec* (omeprazole)

Patent proceedings outside the US

In Canada, in 2004, AstraZeneca brought proceedings against Apotex Inc. (Apotex) for infringement of several patents related to Losec. In February 2015, the Federal Court of Canada (the Federal Court) found that Apotex had infringed the Losec formulation patent (Canadian Patent No. 1,292,693). This finding was upheld on appeal. In July 2017, after a reference to account for Apotex's profits earned as a result of the infringement, the Federal Court issued its decision describing how the quantification of monies owed to AstraZeneca should proceed. Apotex has appealed.

Nexium (esomeprazole magnesium)

US patent proceedings

In 2017, AstraZeneca settled several separate patent litigations against ANDA filers relating to patents listed in the FDA Orange Book with reference to *Nexium*, *Nexium* oral suspension and *Nexium* 24HR (OTC). The US District Court for the District of New Jersey entered consent judgments and each of the separate patent litigations was dismissed.

Patent proceedings outside the US

In Canada, in July 2014, the Federal Court of Canada found the *Nexium* substance patent (Canadian Patent No. 2,139,653 (the '653 patent)) invalid and not infringed by Apotex Inc. In July 2015, AstraZeneca's appeal was dismissed. AstraZeneca was granted leave to appeal to the Supreme Court of Canada (the Supreme Court) and a hearing was held in November 2016. In June 2017, the Supreme Court granted AstraZeneca's appeal and found the '653 patent valid. AstraZeneca is taking steps to collect infringement damages.

Onglyza (saxagliptin) and *Kombiglyze* (saxagliptin and metformin)

US patent proceedings

AstraZeneca initiated patent infringement proceedings against various generic entities in the US District Court for the District of Delaware (the District Court) after those entities had submitted ANDAs containing a Paragraph IV Certification alleging that US Patent No. RE44,186 (the '186 patent), listed in the FDA Orange Book with reference to *Onglyza* and *Kombiglyze XR*, is invalid and/or will not be infringed by the products as described in their ANDAs. In February 2017, the District Court issued a decision upholding the validity of the '186 patent. Mylan Pharmaceuticals Inc. (Mylan), one of the generic defendants, appealed the District Court's decision to the US Court of Appeals for the Federal Circuit (the Court of Appeals). In June 2016, the Court of Appeals denied Mylan's petition for rehearing *en banc* of the decision affirming the denial of Mylan's motion to dismiss for lack of jurisdiction. In September 2016, Mylan filed a petition for *writ of certiorari* with the US Supreme Court seeking an appeal of the Court of Appeals' decision and, in January 2017, that petition was denied. In May 2016, the US Patent and Trademark Office (USPTO) instituted an *inter partes* review brought by Mylan challenging the validity of the '186 patent (the Mylan IPR). Subsequently, additional generic entities also filed petitions for *inter partes* review challenging the validity of the '186 patent and joined the Mylan IPR. In August 2017, the USPTO decided in AstraZeneca's favour and upheld the challenged claims of the '186 patent. Mylan has appealed the USPTO's decision to the Court of Appeals.

Pulmicort Respules (budesonide inhalation suspension)

US patent proceedings

In February 2015, the US District Court for the District of New Jersey (the District Court) determined that the asserted claims of US Patent No. 7,524,834, which covered *Pulmicort Respules*, were invalid following challenges brought by Apotex Inc. and Apotex Corp., Breath Limited, Sandoz, Inc. and Watson Laboratories, Inc. (together, the Generic Challengers). In May 2015, the US Court of Appeals for the Federal Circuit affirmed the District Court's decision. Since 2009, various injunctions were issued in this matter. Damages claims based on those injunctions have been filed by the Generic Challengers and a provision has been taken.

Synagis (palivizumab)

US patent proceedings

In March 2017, MedImmune LLC was served with a complaint filed by UCB BioPharma SPRL in the US District Court for the District of Delaware (the District Court) alleging that *Synagis* infringed US Patent No. 7,566,771. In May 2017, the District Court granted the parties' joint stipulation to voluntarily terminate the litigation with prejudice.

28 Commitments and contingent liabilities *continued*

Tagrisso (osimertinib)

Patent proceedings outside the US

In Europe, in October 2016, Stada Arzneimittel AG filed an opposition to the grant of European Patent No. 2,736,895 (the '895 patent). The European Patent Office Opposition Hearing took place in January 2018 and the '895 patent was upheld.

Vimovo (naproxen/esomeprazole magnesium)

Patent proceedings outside the US

In Canada, in January 2015, AstraZeneca received two notices of allegation from Mylan Pharmaceuticals ULC (Mylan). In response, AstraZeneca and Pozen Inc. (now Aralez Pharmaceuticals Inc.), the licensee and patent holder respectively, commenced proceedings in relation to the *Vimovo* formulation patent (Canadian Patent No. 2,449,098). In February 2017, the Federal Court of Canada dismissed AstraZeneca's application. The Minister of Health has issued a marketing authorisation to Mylan.

Product liability litigation

Byetta/*Bydureon* (exenatide)

In the US, Amylin Pharmaceuticals, LLC, a wholly-owned subsidiary of AstraZeneca, and/or AstraZeneca are among multiple defendants in various lawsuits filed in federal and state courts involving claims of physical injury from treatment with *Byetta* and/or *Bydureon*. The lawsuits allege several types of injuries including pancreatitis, pancreatic cancer, thyroid cancer, and kidney cancer. A multidistrict litigation was established in the US District Court for the Southern District of California (the District Court) in regard to the alleged pancreatic cancer cases in federal courts. Further, a co-ordinated proceeding has been established in Los Angeles, California in regard to the various lawsuits in California state courts.

In November 2015, the District Court granted the defendants' motion for summary judgment and dismissed all claims alleging pancreatic cancer that accrued prior to 11 September 2015. In November 2017, the US Court of Appeals for the Ninth Circuit vacated the District Court's order and remanded for further discovery. The appeal of a similar motion, which was granted in favour of the defendants in the California state co-ordinated proceeding in May 2016, remains pending.

Crestor (rosuvastatin calcium)

In the US, AstraZeneca was defending a number of lawsuits alleging multiple types of injuries caused by the use of Crestor, including diabetes mellitus, various cardiac injuries, rhabdomyolysis, and/or liver and kidney injuries. AstraZeneca has resolved all active claims with regard to this matter.

Farxiga (dapagliflozin) and *Xigduo* (dapagliflozin/metformin HCl)

In the US, AstraZeneca has been named as a defendant in lawsuits involving plaintiffs claiming physical injury, including diabetic ketoacidosis and kidney injury/failure, from treatment with *Farxiga* and/or *Xigduo* XR. Cases with these allegations have been filed in several jurisdictions. In April 2017, the Judicial Panel on Multidistrict Litigation ordered transfer of any currently pending cases as well as any similar, subsequently filed cases to a co-ordinated and consolidated pre-trial multidistrict litigation proceeding in the US District Court for the Southern District of New York.

Nexium (esomeprazole magnesium)

In the US, AstraZeneca was defending product liability lawsuits brought in US federal and state courts by approximately 1,900 plaintiffs who alleged that *Nexium* caused osteoporotic injuries, such as bone deterioration, loss of bone density and/or bone fractures, but all such claims have now been dismissed with judgment entered in AstraZeneca's favour. In January 2017, the California Second Appellate Division affirmed the dismissal of the fewer than 40 cases in California state court and no further appeal was taken. There are currently no claims pending in the US that allege that *Nexium* caused osteoporotic or other bone-related injuries.

Nexium (esomeprazole magnesium) and *Losec*/*Prilosec* (omeprazole)

In the US, AstraZeneca is defending various lawsuits brought in federal and state courts involving multiple plaintiffs claiming that they have been diagnosed with kidney injuries following treatment with proton pump inhibitors, including *Nexium* and *Prilosec*. In May 2017, counsel for a group of such plaintiffs filed a motion with the Judicial Panel on Multidistrict Litigation (JPML) seeking the transfer of any currently pending federal court cases as well as any similar, subsequently filed cases to a co-ordinated and consolidated pre-trial multidistrict litigation (MDL) proceeding. In August 2017, the JPML granted the motion and consolidated the pending federal court cases in an MDL proceeding in federal court in New Jersey for pre-trial purposes.

In Canada, in July and August 2017, AstraZeneca was served with three putative class action lawsuits. Two of the lawsuits seek authorisation to represent individuals resident in Canada who allegedly suffered kidney injuries from the use of proton pump inhibitors, including *Nexium* and *Losec*, and the third, pending in Quebec, seeks authorisation to represent such individuals resident in Quebec.

Onglyza (saxagliptin) and *Kombiglyze* (saxagliptin and metformin)

In the US, AstraZeneca is defending various lawsuits alleging heart failure, cardiac failure, and/or death from treatment with Onglyza or Kombiglyze. In October 2017, counsel for a group of plaintiffs filed a motion with the Judicial Panel on Multidistrict Litigation seeking the transfer of any currently pending federal court cases as well as any similar, subsequently filed cases to a co-ordinated and consolidated pre-trial multidistrict litigation proceeding.

Seroquel (quetiapine fumarate)

In the US, in November 2017, AstraZeneca was named as one of several defendants in a lawsuit filed in Missouri involving one plaintiff alleging, among other things, wrongful death from treatment with *Seroquel*.

Commercial litigation

Amplimmune

In the US, in June 2017, AstraZeneca was served with a lawsuit filed by the stockholders' agents for Amplimmune, Inc. (Amplimmune) in Delaware State Court that alleged, among other things, breaches of contractual obligations relating to a 2013 merger agreement between AstraZeneca and Amplimmune.

Array BioPharma

In the US, in December 2017, AstraZeneca was served with a complaint filed in New York State court by Array BioPharma, Inc. (Array) that alleged, among other things, breaches of contractual obligations relating to a 2003 collaboration agreement between AstraZeneca and Array.

28 Commitments and contingent liabilities *continued*

Nexium settlement anti-trust litigation

In the US, AstraZeneca is a defendant in a multidistrict litigation class action and individual lawsuit alleging that AstraZeneca's settlements of certain patent litigation in the US relating to *Nexium* violated US anti-trust law and various state laws. A trial in the US District Court for the District of Massachusetts (the District Court) commenced in October 2014 and, in December 2014, a jury returned a verdict in favour of AstraZeneca and entered judgment in favour of AstraZeneca in September 2015. The plaintiffs appealed that judgment and, in November 2016, the US Court of Appeals for the First Circuit affirmed the District Court's decision. The plaintiffs did not file a petition for *writ of certiorari* with the US Supreme Court, and the federal appeals for this verdict are accordingly concluded.

Two lawsuits filed in Pennsylvania state court by various indirect purchasers of *Nexium* for similar matters remain pending.

Ocimum lawsuit

In the US, in December 2015, AstraZeneca was served with a complaint filed by Ocimum Biosciences, Ltd. (Ocimum) in the Superior Court for the State of Delaware that alleges, among other things, breaches of contractual obligations and misappropriation of trade secrets, relating to a now terminated 2001 licensing agreement between AstraZeneca and Gene Logic, Inc. (Gene Logic), the rights to which Ocimum purports to have acquired from Gene Logic.

Toprol-XL (metoprolol succinate)

In the US, in March 2015, AstraZeneca was served with a state court complaint filed by the Attorney General for the State of Louisiana (the State) alleging that, in connection with enforcement of its patents for *Toprol-XL*, it had engaged in unlawful monopolisation and unfair trade practices, causing the State government to pay increased prices for Toprol-XL. In February 2016, the State court heard oral argument on AstraZeneca's motion to dismiss and ordered the dismissal of the complaint with prejudice and judgment in AstraZeneca's favour. The State is appealing the dismissal.

Other commercial litigation

Anti-Terrorism Act Civil Lawsuit

In the US, in October 2017, AstraZeneca and certain other pharmaceutical and/or medical device companies were named as defendants in a complaint filed in federal court in the District of Columbia by US nationals (or their estates, survivors, or heirs) who were killed or wounded in Iraq between 2005 and 2009. The plaintiffs allege that the defendants violated the US Anti-Terrorism Act and various state laws by selling pharmaceuticals and medical supplies to the Iraqi Ministry of Health.

Telephone Consumer Protection Act litigation

In the US, in December 2016, AstraZeneca and several other entities were served with a complaint filed in the US District Court for the Southern District of Florida that alleges, among other things, violations of the Telephone Consumer Protection Act caused by the sending of unsolicited advertisements by facsimile. AstraZeneca's motion to dismiss is pending.

Government investigations/proceedings

Crestor (rosuvastatin calcium)

Qui tam litigation

In the US, in January and February 2014, AstraZeneca was served with lawsuits filed in the US District Court for the District of Delaware under the *qui tam* (whistleblower) provisions of the federal False Claims Act and related state statutes, alleging that AstraZeneca directed certain employees to promote *Crestor* off-label and provided unlawful remuneration to physicians in connection with the promotion of *Crestor*. The DOJ and all US states have declined to intervene in the lawsuits. This litigation has been stayed pending trial court disposition or earlier resolution of the Texas Attorney General litigation involving *Crestor* disclosed below.

Texas Attorney General litigation

In the US, in January 2015, following a previously disclosed investigation by the State of Texas into AstraZeneca's sales and marketing activities involving *Crestor*, AstraZeneca was served with a lawsuit in which the Texas Attorney General's office intervened in a state whistleblower action pending in Travis County Court, Texas. The lawsuit alleges that AstraZeneca engaged in inappropriate promotion of *Crestor* and improperly influenced the formulary status of *Crestor*.

Nexium (esomeprazole magnesium)

Federal Trade Commission inquiry

In the US, in 2008, AstraZeneca received a Civil Investigative Demand from the US Federal Trade Commission (FTC) seeking information regarding the *Nexium* patent litigation settlement with Ranbaxy Laboratories Ltd. This investigation was officially closed by the FTC in October 2017.

Seroquel IR (quetiapine fumarate) and *Seroquel XR* (quetiapine fumarate)

Qui tam litigation in New York

In the US, in September 2015, AstraZeneca was served with a lawsuit filed in US Federal Court in New York under the *qui tam* (whistleblower) provisions of the federal and certain state False Claims Acts. The lawsuit alleges that AstraZeneca misrepresented the safety profile of, and improperly promoted, *Seroquel*. The US government and the named states have declined to intervene in this case.

Qui tam litigation in Delaware

In the US, in April 2014, AstraZeneca was served with lawsuits filed in the US District Court for the District of Delaware under the *qui tam* (whistleblower) provisions of the federal False Claims Act and related state statutes, alleging that AstraZeneca directed certain employees to promote *Seroquel* off-label and provided unlawful remuneration to physicians in connection with the promotion of *Seroquel*. The DOJ and all US states have declined to intervene in the lawsuits. This litigation has been stayed pending trial court disposition or earlier resolution of the Texas Attorney General litigation involving *Seroquel* disclosed below.

Texas Attorney General litigation

In the US, in October 2014, following a previously disclosed investigation by the State of Texas (the State) into AstraZeneca's sales and marketing activities involving *Seroquel*, the Texas Attorney General's Office intervened in a State whistleblower action pending in Travis County Court, Texas (the County Court). The lawsuit alleges that AstraZeneca engaged in inappropriate promotion and made improper payments intended to influence

28 Commitments and contingent liabilities *continued*

the formulary status of *Seroquel*. The relief that the State seeks to recover from AstraZeneca includes trebled civil remedies, penalties, interest, and attorneys' fees pursuant to the Texas Medicaid Fraud Prevention Act and damages pursuant to Texas common law.

In June 2017, the County Court entered an order denying all of the State's motions for summary judgment except for the State's motion on the defence of waiver, and denying AstraZeneca's motion for summary judgment. The trial, which was scheduled for October 2017, has been postponed until the Texas Supreme Court resolves the appeals in unrelated cases called Nazari v. State and In re Xerox Corp. A provision has been taken with regard to claims brought by the State and other related lawsuits against AstraZeneca.

Synagis (palivizumab)

Litigation in New York

In the US, in June 2011, MedImmune received a demand from the US Attorney's Office for the Southern District of New York requesting certain documents related to the sales and marketing activities of *Synagis*. In July 2011, MedImmune received a similar court order to produce documents from the Office of the Attorney General for the State of New York Medicaid and Fraud Control Unit pursuant to what the government attorneys advised was a joint investigation. MedImmune has co-operated with these inquiries. In March 2017, MedImmune was served with a lawsuit filed in US Federal Court in New York by the Attorney General for the State of New York alleging that MedImmune inappropriately provided assistance to a single specialty care pharmacy.

In June 2017, AstraZeneca was served with a lawsuit in US Federal Court in New York by a relator under the *qui tam* (whistleblower) provisions of the federal and certain state False Claims Acts. The lawsuit was originally filed under seal in April 2009 and alleges that MedImmune made false claims about *Synagis*. In November 2017, AstraZeneca was served with an amended complaint in which a relator set forth additional false claims allegations relating to *Synagis*.

Florida Attorney General investigation

In May 2012, MedImmune received a *subpoena duces tecum* from the Office of Attorney General for the State of Florida Medicaid and Fraud Control Unit requesting certain documents related to the sales and marketing activities of *Synagis*. MedImmune accepted receipt of the request and has co-ordinated with the Florida government to provide the appropriate responses and co-operate with any related investigation. AstraZeneca is unaware of the nature or focus of the investigation; however, based on the requests, it appears to be similar to the inquiry from the State of New York (which is described above).

Other government investigations/proceedings

Additional government inquiries

As is true for most, if not all, major prescription pharmaceutical companies, AstraZeneca is currently involved in multiple inquiries into drug marketing and pricing practices. In addition to the investigations described above, various law enforcement offices have, from time to time, requested information from the Group. There have been no material developments in those matters.

Tax

Where tax exposures can be quantified, an accrual is made based on best estimates and management's judgement. Details of the movements in relation to material tax exposures are discussed below. As accruals can be built up over a long period of time but the ultimate resolution of tax exposures usually occurs at a point in time, and given the inherent uncertainties in assessing the outcomes of these exposures (which sometimes can be binary in nature), we could, in future periods, experience adjustments to these accruals that have a material positive or negative effect on our results in any particular period.

AstraZeneca faces a number of audits and reviews in jurisdictions around the world and, in some cases, is in dispute with the tax authorities. The issues under discussion are often complex and can require many years to resolve. Accruals for tax contingencies require management to make estimates and judgements with respect to the ultimate outcome of a tax audit, and actual results could vary from these estimates.

Transfer pricing and other international tax contingencies

The total net accrual included in the Group Financial Statements to cover the worldwide exposure to transfer pricing audits is $235m, a decrease of $85m compared with 2016 mainly due to the revision to the presentation of interest on tax contingencies and a reduction in accruals for transfer pricing contingencies as a result of tax authority discussions and audit settlements.

Management continues to believe that AstraZeneca's positions on all its transfer pricing audits and disputes are robust, and that AstraZeneca is appropriately provided, including the assessment where corresponding relief will be available. For transfer pricing audits where AstraZeneca and the tax authorities are in dispute, AstraZeneca estimates the potential for reasonably possible additional losses above and beyond the amount provided to be up to $30m (2016: $184m; 2015: $357m). However, management believes that it is unlikely that these additional losses will arise. It is possible that some of these contingencies may reduce in the future to the extent that any tax authority challenge is unsuccessful, or matters lapse following expiry of the relevant statutes of limitation resulting in a reduction in the tax charge in future periods.

Other tax contingencies

Included in the tax accrual is $932m relating to a number of other tax contingencies, a decrease of $76m mainly due to the revision to the presentation of interest on tax contingencies and releases following expiry of statute of limitations, partially offset by the impact of an additional year of transactions relating to contingencies for which accruals had already been established and exchange rate effects. For these tax exposures, AstraZeneca does not expect material additional losses. It is, however, possible that some of these contingencies may reduce in the future if any tax authority challenge is unsuccessful or matters lapse following expiry of the relevant statutes of limitation resulting in a reduction in the tax charge in future periods.

Timing of cash flows and interest

It is not possible to estimate the timing of tax cash flows in relation to each outcome. However, it is anticipated that a number of significant disputes may be resolved over the next one to two years.

Included within other receivables and payables is a net amount of interest arising on tax contingencies of $72m.

29 Operating leases

Total rentals under operating leases charged to profit were as follows:

	2017 $m	2016 $m	2015 $m
Operating leases	**137**	174	185

The future minimum lease payments under operating leases that have initial or remaining terms in excess of one year at 31 December 2017 were as follows:

	2017 $m	2016 $m	2015 $m
Obligations under leases comprise:			
Not later than one year	**112**	98	95
Later than one year and not later than five years	**304**	247	245
Later than five years	**107**	96	69
Total future minimum lease payments	**523**	441	409

30 Statutory and other information

	2017 $m	2016 $m	2015 $m
Fees payable to PricewaterhouseCoopers LLP and its associates:			
Group audit fee	**3.0**	–	–
Fees payable to PricewaterhouseCoopers LLP and its associates for other services:			
The audit of subsidiaries pursuant to legislation	**5.7**	–	–
Attestation under s404 of Sarbanes-Oxley Act 2002	**2.0**	–	–
Audit-related assurance services	**0.4**	–	–
Tax compliance services	**–**	–	–
Other assurance services	**–**	–	–
Fees payable to PricewaterhouseCoopers LLP in respect of the Group's pension schemes:			
The audit of subsidiaries' pension schemes	**–**	–	–
	11.1	–	–

	2017 $m	2016 $m	2015 $m
Fees payable to KPMG LLP and its associates:			
Group audit fee	**–**	2.8	3.2
Fees payable to KPMG LLP and its associates for other services:			
The audit of subsidiaries pursuant to legislation	**0.3**	5.4	5.4
Attestation under s404 of Sarbanes-Oxley Act 2002	**–**	1.8	1.8
Audit-related assurance services	**0.6**	0.7	0.7
Tax compliance services	**–**	–	0.1
Other assurance services	**0.8**	0.2	0.5
Fees payable to KPMG LLP in respect of the Group's pension schemes:			
The audit of subsidiaries' pension schemes	**0.2**	0.6	0.6
	1.9	11.5	12.3

Related party transactions

The Group had no material related party transactions which might reasonably be expected to influence decisions made by the users of these Financial Statements.

Key management personnel compensation

Key management personnel are defined for the purpose of disclosure under IAS 24 'Related Party Disclosures' as the members of the Board and the members of the SET.

	2017 $'000	2016 $'000	2015 $'000
Short-term employee benefits	**28,274**	23,725	29,265
Post-employment benefits	**2,469**	2,407	2,636
Share-based payments	**16,452**	20,377	17,885
	47,195	46,509	49,786

Total remuneration is included within employee costs (see Note 27).

31 Subsequent events

There were no material subsequent events.

Group Subsidiaries and Holdings

In accordance with section 409 of the Companies Act 2006 a full list of subsidiaries, partnerships, associates, joint ventures and joint arrangements, the country of incorporation, registered office address, and the effective percentage of equity owned as at 31 December 2017 are disclosed below. Unless otherwise stated the share capital disclosed comprises ordinary shares which are indirectly held by AstraZeneca PLC.

Unless otherwise stated the accounting year ends of subsidiaries are 31 December. The Group Financial Statements consolidate the Financial Statements of the Company and its subsidiaries at 31 December 2017.

At 31 December 2017	Group Interest
Wholly owned subsidiaries	
Argentina	
AstraZeneca S.A.	100%
Nicolas de Vedia 3616, Piso 8, Ciudad Autónoma de Buenos Aires, Argentina	
Australia	
AstraZeneca Holdings Pty Limited	100%
AstraZeneca PTY Limited	100%
Pharmaceutical Manufacturing Company Pty Limited	100%
Pharmaceutical Manufacturing Division Pty Limited	100%
66 Talavera Road, Macquarie Park, NSW 2113, Australia	
Austria	
AstraZeneca Österreich GmbH	100%
A-1030 Wien, Landstraßer Hauptstraße 1A, Austria	
Belgium	
AstraZeneca S.A. / N.V.	100%
Egide Van Ophemstraat 110 1180 Brussels, Belgium	
Brazil	
AstraZeneca do Brasil Limitada	100%
Rod. Raposo Tavares, KM 26, 9, Cotia, Brazil	
Bulgaria	
AstraZeneca Bulgaria EOOD	100%
36 Dragan Tzankov Blvd., District Izgrev, Sofia, 1057, Bulgaria	
Canada	
AstraZeneca Canada Inc.[1]	100%
Suite 5000, 1004 Middlegate Road, Ontario, L4Y 1M4, Canada	
Cayman Islands	
AZ Reinsurance Limited	100%
94 Solaris Avenue, Second Floor, Camana Bay, Grand Cayman, Cayman Islands	
Chile	
AstraZeneca S.A.	100%
AstraZeneca Farmaceutica Chile Limitada	100%
Av. Isidora Goyenechea 3477, 2nd Floor, Las Condes, Santiago, Chile	
China	
AstraZeneca Pharmaceuticals Co., Limited	100%
No. 2, Huangshan Road, Wuxi New District, China	
AstraZeneca (Wuxi) Trading Co. Ltd	100%
Building E (Building No. 5), Huirong Commercial Plaza, East Jinghui Road, Xinwu District, Wuxi, China	
AstraZeneca Investment (China) Co., Ltd	100%
No.199 Liangjing Road, China (Shanghai) Pilot Free Trade Zone, Shanghai, China	
AstraZeneca Pharmaceutical (China) Co. Ltd	100%
No 88 Yaocheng Avenue, Taizhou, Jiangsu Province, China	
AstraZeneca Pharmaceuticals Technologies (Beijing) Co., Ltd	100%
Unit 2203, 22F, No 8, Jianguomenwai Avenue, Chaoyang District, Beijing, China	
Colombia	
AstraZeneca Colombia S.A.S.	100%
Carrera 7 No. 71-21, Torre A, Piso 19, Bogota, D.C., Colombia	
Costa Rica	
AstraZeneca CAMCAR Costa Rica, S.A.	100%
Escazu, Guachipelin, Centro Corporativo Plaza Roble, Edificio Los Balcones, Segundo Nivel, San Jose, Costa Rica	
Croatia	
AstraZeneca d.o.o.	100%
Radnicka cesta 80, 10000 Zagreb, Croatia	
Czech Republic	
AstraZeneca Czech Republic, s.r.o.	100%
U Trezorky 921/2, 158 00 Prague 5, Czech Republic	
Denmark	
AstraZeneca A/S	100%
Arne Jacobsens Allé 13, DK-2300, Copenhagen S, Denmark	
Egypt	
AstraZeneca Egypt for Pharmaceutical Industries JSC	100%
Villa 133, Road 90 North, New Cairo, Egypt	
AstraZeneca Egypt for Trading LLC	100%
14C Ahmed Kamel Street, New Maadi, Cairo, Egypt	
Drimex LLC	100%
Villa 47, Road 270, New Maadi, Cairo 11435, Egypt	
Estonia	
AstraZeneca Eesti OÜ	100%
Jarvevana tee 9, Tallinn, 11314, Estonia	
Finland	
AstraZeneca OY.	100%
Itsehallintokuja 4, Espoo, 02600, Finland	
France	
AstraZeneca S.A.S.	100%
AstraZeneca Finance S.A.S.	100%
AstraZeneca Holding France S.A.S.	100%
AstraZeneca Reims S.A.S.	100%
Tour Carpe Diem-31, Place des Corolles, 92400 Courbevoie, France	
AstraZeneca Dunkerque Production SCS	100%
224 Avenue de la Dordogne, 59640 Dunkerque, France	
Germany	
AstraZeneca Holding GmbH[2]	100%
AstraZeneca GmbH	100%
Tinsdaler Weg 183, Wedel, D-22880, Germany	
Sofotec GmbH	100%
Benzstrasse 1-3, 61352, Bad Homburg v.d. Hohe, Germany	
Definiens AG	100%
Bernhard-Wicki-Straße 5, 80636, Munich, Germany	
Greece	
AstraZeneca S.A.	100%
Theotokopoulou 4 & Astronafton, Athens, 151 25, Greece	
Hong Kong	
AstraZeneca Hong Kong Limited	100%
18/F., Shui On Centre, 6-8 Harbour Road, Wanchai, Hong Kong	
Hungary	
AstraZeneca Kft	100%
2nd floor, 134-146 building B, Bocskai str., Budapest, 1113, Hungary	
India	
AstraZeneca India Private Limited[3]	100%
12th Mile on Bellary Road, Venkatala Kattigenahalli, Yelahanka, Bangalore-560 063, India	
Iran	
AstraZeneca Pars Company	100%
Suite 1, 1st Floor No. 39, Alvand Ave., Argantin Sq., Tehran 1516673114, Iran	

At 31 December 2017	Group Interest
Ireland	
AstraZeneca Pharmaceuticals (Ireland) Designated Activity Company	100%
4th Floor, South Bank House, Barrow Street, Dublin, 4, Republic of Ireland	
Israel	
AstraZeneca Israel Ltd	100%
6 Hacharash St., Hod Hasharon 4524075, Israel	
Italy	
Simesa SpA	100%
AstraZeneca SpA	100%
Palazzo Ferraris, via Ludovico il Moro 6/c 20080, Basiglio (Milan), Italy	
Japan	
AstraZeneca K.K.	100%
3-1, Ofuka-cho, Kita-ku, Osaka, 530-0011, Japan	
Kenya	
AstraZeneca Pharmaceuticals Limited	100%
Chaka Place, Ground Floor, Argwings Kodhek, Nairobi, Kenya	
Latvia	
AstraZeneca Latvija SIA	100%
Skanstes iela 50, Riga, LV-1013, Latvia	
Lithuania	
AstraZeneca Lietuva UAB	100%
Jasinkio 16A, Vilnius, LT-03163, Lithuania	
Luxembourg	
AstraZeneca Luxembourg S.A.	100%
Am Brill 7 B – L-3961 Ehlange – Grand Duchy du Luxembourg, Luxembourg	
Malaysia	
AstraZeneca Asia-Pacific Business Services Sdn Bhd	100%
Level 8, Unit 8.01-8.05 Menara UAC, Jalan PJU 7/5, Mutiara Damansara, 47800 Petaling Jaya, Selangor, Malaysia	
AstraZeneca Sdn Bhd	100%
Level 12, Surian Tower, No. 1 Jalan PJU 7/3, Mutiara Damansara, 47810 Petaling Jaya, Selangor, Malaysia	
Mexico	
AstraZeneca, S.A. de C.V.	100%
Av. Periferico Sur 4305 interior 5, Colonia Jardines en la Montana, Mexico City, Tlalpan Distrito Federal, CP14210, Mexico	
AstraZeneca Health Care Division, S.A. de C.V.	100%
Avenida Lomas Verdes 67 Colonia Lomas Verdes, Naucalpan de Juarez, CP 53120, Mexico	
Morocco	
AstraZeneca Maroc SARLAU	100%
92 Boulevard Anfa ETG 2, Casablanca 20000, Morocco	

At 31 December 2017	Group Interest
The Netherlands	
AstraZeneca B.V.	100%
AstraZeneca Continent B.V.	100%
AstraZeneca Gamma B.V.	100%
AstraZeneca Holdings B.V.	100%
AstraZeneca Jota B.V.	100%
AstraZeneca Rho B.V.	100%
AstraZeneca Sigma B.V.	100%
AstraZeneca Zeta B.V.	100%
Prinses Beatrixlaan 582, 2595BM, The Hague, The Netherlands	
MedImmune Pharma B.V.	100%
Lagelandsweeg 78, 6545 CG Nijmegen, The Netherlands	
New Zealand	
AstraZeneca Limited	100%
Level 1, 22-28 Customs Street East, Auckland Central, Auckland, 1010, New Zealand	
Nigeria	
AstraZeneca Nigeria Limited	100%
No.9 Joel Ogunaike Street, GRA Ikeja, Lagos, Nigeria	
Norway	
AstraZeneca AS	100%
Grenseveien 92, Box 6050 Etterstad, NO-0602 Oslo, Norway	
Pakistan	
AstraZeneca Pharmaceuticals Pakistan (Private) Limited[4]	100%
Office No 1, 2nd Floor, Sasi Arcade, Block 7, Main Clifton Road, Karachi, Pakistan	
Panama	
AstraZeneca CAMCAR, S.A.	100%
Bodega #1, Parque Logistico MIT, Carretera Hacia Coco Solo, Colon, Panama	
Peru	
AstraZeneca Peru S.A.	100%
Av. El Derby 055, Torre 2. Piso 5. Of. 503. Santiago de Surco, Lima, Peru	
Philippines	
AstraZeneca Pharmaceuticals (Phils.) Inc.	100%
16th Floor, Inoza Tower, 40th Street, Bonifacio Global City, Taguig 1634, Philippines	
Poland	
AstraZeneca Pharma Poland Sp.z.o.o.	100%
Postepu 14, 02-676, Warszawa, Poland	
Portugal	
Astra Alpha Produtos Farmaceuticos Lda	100%
AstraZeneca Produtos Farmaceuticos Lda	100%
Novastra Promoção e Comércio Farmacêutico Lda	100%
Novastuart Produtos Farmaceuticos Lda	100%
Stuart-Produtos Farmacêuticos Lda	100%

At 31 December 2017	Group Interest
Zeneca Epsilon – Produtos Farmacêuticos Lda	100%
Zenecapharma Produtos Farmaceuticos Lda	100%
Rua Humberto Madeira, No 7, Queluz de Baixo, 2730-097, Barcarena, Portugal	
Puerto Rico	
IPR Pharmaceuticals, Inc.	100%
Road 188, San Isidro Industrial Park, Canóvanas, Puerto Rico 00729	
Romania	
AstraZeneca Pharma S.R.L.	100%
12 Menuetului Street, Bucharest Business Park, Building D, West Wing, 1st Floor, Sector 1, Bucharest, 013713, Romania	
Russia	
AstraZeneca Industries, LLC	100%
AstraZeneca Pharmaceuticals, LLC	100%
125284, Begovaya Str, 3, block 1, Moscow, Russian Federation	
Singapore	
AstraZeneca Singapore Pte Limited	100%
10 Kallang Avenue #12-10, Aperia Tower 2, 339510, Singapore	
South Africa	
Astra Pharmaceuticals (Pty) Limited	100%
AstraZeneca Pharmaceuticals (Pty) Limited	100%
17 Georgian Crescent West, Northdowns Office Park, Bryanston, 2041, South Africa	
South Korea	
AstraZeneca Korea Co. Ltd	100%
17th Floor, Luther Building, 42, Olympic-ro 35da-gil Songpa-gu, Seoul, South Korea	
Spain	
AstraZeneca Farmaceutica Spain S.A.	100%
AstraZeneca Farmaceutica Holding Spain, S.A.	100%
Laboratorio Beta, S.A.	100%
Laboratorio Lailan, S.A.	100%
Laboratorio Odin, S.A.	100%
Laboratorio Tau S.A.	100%
Parque Norte, Edificio Álamo, C/Serrano Galvache no 56., 28033 Madrid, Spain	
Sweden	
Astra Export & Trading Aktiebolag	100%
Astra Lakemedel Aktiebolag	100%
AstraZeneca AB	100%
AstraZeneca Biotech AB	100%
AstraZeneca BioVentureHub AB	100%
AstraZeneca Holding Aktiebolag[2]	100%
AstraZeneca International Holdings Aktiebolag[5]	100%
AstraZeneca Nordic AB	100%
AstraZeneca Pharmaceuticals Aktiebolag	100%
AstraZeneca Södertälje 2 AB	100%

Group Subsidiaries and Holdings
continued

At 31 December 2017	Group Interest
Stuart Pharma Aktiebolag	100%
Tika Lakemedel Aktiebolag	100%
SE-151 85 Södertälje, Sweden	
Aktiebolaget Hassle	100%
Symbicom Aktiebolag[5]	100%
431 83 Molndal, Sweden	
Astra Tech International Aktiebolag	100%
Box 14, 431 21 Molndal, Sweden	
Switzerland	
AstraZeneca AG	100%
AstraZeneca, Grafenauweg 10, CH-6301, Zug, Switzerland	
Spirogen Sarl[5]	100%
Rue du Grand-Chêne 5, CH-1003 Lausanne, Switzerland	
Taiwan	
AstraZeneca Taiwan Limited[6]	100%
21st Floor, Taipei Metro Building 207, Tun Hwa South Road, SEC 2 Taipei, Taiwan, Republic of China	
Thailand	
AstraZeneca (Thailand) Limited	100%
Asia Centre 19th floor, 173/20, South Sathorn Rd, Khwaeng Thungmahamek, Khet Sathorn, Bangkok, 10120, Thailand	
Tunisia	
AstraZeneca Tunisie SaRL	100%
Lot n°1.5.5 les jardins du lac, bloc B les berges du lac Tunis, Tunisia	
Turkey	
AstraZeneca Ilac Sanayi ve Ticaret Limited Sirketi	100%
YKB Plaza, B Blok, Kat:3-4, Levent/Beşiktaş, Istanbul, Turkey	
Zeneca Ilac Sanayi Ve Ticaret Anonim Sirketi	100%
Büyükdere Cad., Y.K.B. Plaza, B Blok, Kat:4, Levent/Beşiktaş, Istanbul, Turkey	
Ukraine	
AstraZeneca Ukraina LLC	100%
13, Pymonenko Street, building 1, Kiev, 04050, Ukraine	
United Arab Emirates	
AstraZeneca FZ-LLC	100%
P.O. Box 27614, Block D, Dubai Healthcare City, Oud Mehta Road, Dubai, United Arab Emirates	
United Kingdom	
Ardea Biosciences Limited	100%
Arrow Therapeutics Limited	100%
Astra Pharmaceuticals Limited	100%
AstraPharm[5]	100%
AstraZeneca China UK Limited	100%

At 31 December 2017	Group Interest
AstraZeneca Death In Service Trustee Limited	100%
AstraZeneca Employee Share Trust Limited	100%
AstraZeneca Finance Limited	100%
AstraZeneca Intermediate Holdings Limited[2]	100%
AstraZeneca Investments Limited	100%
AstraZeneca Japan Limited	100%
AstraZeneca Nominees Limited	100%
AstraZeneca Quest Limited	100%
AstraZeneca Share Trust Limited	100%
AstraZeneca Sweden Investments Limited	100%
AstraZeneca Treasury Limited[5]	100%
AstraZeneca UK Limited	100%
AstraZeneca US Investments Limited[2]	100%
AZENCO2 Limited	100%
AZENCO4 Limited	100%
Cambridge Antibody Technology Group Limited	100%
KuDOS Horsham Limited	100%
KuDOS Pharmaceuticals Limited	100%
Meronem Group Limited	100%
Zenco (No 8) Limited	100%
Zeneca Finance (Netherlands) Company	100%
1 Francis Crick Avenue, Cambridge Biomedical Campus, Cambridge, CB2 0AA, United Kingdom	
MedImmune Limited	100%
Milstein Building, Granta Park, Cambridge, CB21 6GH, United Kingdom	
MedImmune U.K. Limited	100%
Plot 6, Renaissance Way, Boulevard Industry Park, Liverpool, L24 9JW, United Kingdom	
United States	
Amylin Pharmaceuticals, LLC[7]	100%
AstraZeneca Collaboration Ventures, LLC[7]	100%
AstraZeneca Pharmaceuticals LP[8]	100%
AstraZeneca, LLC[7]	100%
AstraZeneca LP[8]	100%
Atkemix Nine Inc.	100%
Atkemix Ten Inc.	100%
BMS Holdco, Inc.	100%
Corpus Christi Holdings Inc.	100%
Omthera Pharmaceuticals, Inc.	100%
Stauffer Management Company LLC[7]	100%
Zeneca Holdings Inc.	100%
Zeneca Inc.	100%
Zeneca Wilmington Inc.[2]	100%
1800 Concord Pike, Wilmington DE, 19803, United States	
ZS Pharma Inc.	100%
1100 Park Place, Suite 300, San Mateo, CA 94403, United States	
AlphaCore Pharma, LLC[7]	100%
333 Parkland Plaza, Suite 5, Ann Arbor, MI 48103, United States	

At 31 December 2017	Group Interest
Amylin Ohio LLC[7]	100%
8814 Trade Port Drive, West Chester, OH 45011, United States	
Ardea Biosciences, Inc.	100%
4939 Directors Place, San Diego, CA 92121, United States	
AZ-Mont Insurance Company	100%
76 St Paul Street, Suite 500, Burlington, VT 05401, United States	
Definiens Inc.	100%
1808 Aston Avenue, Suite 190, Carlsbad, CA 92008, United States	
MedImmune Biologics, Inc.	100%
MedImmune, LLC[7]	100%
MedImmune Ventures, Inc.	100%
One MedImmune Way, Gaithersburg, MD 20878, United States	
Optein, Inc.	100%
2711 Centerville Road, Suite 400, Wilmington, DE 1989, United States	
Pearl Therapeutics, Inc.	100%
200 Cardinal Way, Redwood City, CA 94063, United States	
Uruguay	
AstraZeneca S.A.[6]	100%
Yaguarón 1407 of 1205, Montevideo, Uruguay	
Venezuela	
AstraZeneca Venezuela S.A.	100%
Gotland Pharma S.A.	100%
Av. La Castellana, Torre La Castellana, Piso 5, Oficina 5-G, 5-H, 5-I, Urbanización La Castellana, Municipio Chacao, Estado Bolivariano de Miranda, Venezuela	

Subsidiaries where the effective interest is less than 100%

Algeria	
SPA AstraZeneca Al Djazair[9]	65.77%
No 20 Zone Macro Economique, dar El Medina-Hydra, Alger, Algeria	
India	
AstraZeneca Pharma India Limited[3]	75%
Block N1, 12th Floor, Manyata Embassy Business Park, Rachenahalli, Outer Ring Road, Bangalore-560 045, India	
Indonesia	
P.T. AstraZeneca Indonesia	95%
Perkantoran Hijau Arkadia Tower F, 3rd Floor, Jl. T.B. Simatupang Kav. 88, Jakarta, 12520, Indonesia	

At 31 December 2017	Group Interest
The Netherlands	
Acerta Pharma B.V.	55%
Aspire Therapeutics B.V.	55%
Kloosterstraat 9, 5349 AB, Oss, The Netherlands	
United States	
Acerta Pharma LLC[7]	55%
2200 Bridge Parkway, Suite 101, Redwood City, CA 94065, United States	
Joint Ventures	
Hong Kong	
WuXi MedImmune Biopharmaceutical Co., Limited	50%
Room 1902, 19/F, Lee Garden One, 33 Hysan Avenue, Causeway Bay, Hong Kong	
United Kingdom	
Archigen Biotech Limited[9]	50%
Centus Biotherapeutics Limited[9]	50%
1 Francis Crick Avenue, Cambridge Biomedical Campus, Cambridge, CB2 0AA, United Kingdom	
United States	
Montrose Chemical Corporation of California	50%
Suite 380, 600 Ericksen Ave N/E, Bainbridge Island, United States	
Significant Holdings	
Australia	
Armaron Bio Ltd[10]	22.94%
Level 1, 120 Jolimont Road, East Melbourne 3002 VIC, Australia	
China	
Dizal (Jiangsu) Pharmaceutical Co., Ltd.[11]	48.3%
Suite 4105, Building E (Building No.5) of Huirong Plaza, East Jinghui Road, Xinwu District, Wuxi, Jiangsu Province, China	
United Kingdom	
Apollo Therapeutics LLP[7]	25%
Stevenage Biosciences Catalyst, Gunnels Wood Road, Stevenage, Hertfordshire, SG1 2FX, United Kingdom	
United States	
C.C.Global Chemicals Company	37.5%
PO Box 7, MS2901, Texas, TX76101-0007, United States	
Associated Holdings	
New Zealand	
Adherium Limited	4.62%
Level 2, 204 Quay Street, Auckland, 1010, New Zealand	
Switzerland	
ADC Therapeutics Sàrl[12]	7.3%
Biopôle, Route de la Corniche 3B, 1066 Epalinges, Switzerland	
United Kingdom	
Circassia Pharmaceuticals PLC	14.2%
The Magdalen Centre, Robert Robinson Avenue, Oxford Science Park, Oxford, Oxfordshire, OX4 4GA, United Kingdom	

At 31 December 2017	Group Interest
Datapharm Communications Limited[7,13]	12.5%
Ground Floor, Pascal Place, Randalls Way, Leatherhead, Surrey, KT22 7TW, United Kingdom	
Entasis Therapeutics Limited[14]	18.49%
3rd Floor, 1 Ashley Road, Altrincham, Cheshire, WA14 2DT, United Kingdom	
Mereo Biopharma Group PLC	2.7%
4th Floor, One, Cavendish Place, London, W1G 0QF, United Kingdom	
Silence Therapeutics PLC	0.17%
27 Eastcastle Street, London, W1W 8DH, United Kingdom	
United States	
AbMed Corporation[15]	18%
65 Cummings Park Drive, Woburn, MA 01801, United States	
Affinita Biotech, Inc.[16]	16.23%
329 Oyster Point Blvd., 3rd Floor, South San Francisco, CA 94080, United States	
Albireo Pharma, Inc.	5.71%
10 Post Office Square, Suite 502 South, Boston, MA 02109, United States	
Biohaven Pharmaceutical Holding Company Ltd.	0.45%
234 Church Street, New Haven, CT 06510, United States	
Biodesix Inc.[17]	0.07%
2970 Wilderness Place, Suite 100, Boulder, CO 80301, United States	
BlinkBio, Inc.	0.45%
P.O. Box 1966, Jupiter, FL 33468, United States	
Cerapedics, Inc.[18]	8.8%
11025 Dover St #1600, Broomfield, CO 80021, United States	
Corvidia Corporation[17]	19%
35 Gatehouse Drive, Waltham, MA 02451, United States	
Elusys Therapeutics, Inc.[19]	7.2%
25 Riverside Drive, Unit One, Pine Brook, NJ 07058, United States	
FibroGen, Inc.	1.01%
409 Illinois St., San Francisco, CA 94158, United States	
G1 Therapeutics, Inc.	10.41%
79 T.W. Alexander Drive, 4401 Research Commons, Suite 105, Research Triangle Park, NC 7709, United States	
Hydra Biosciences Inc.	4.27%
45 Moulton Street, Cambridge, MA 02138, United States	
Inotek Pharmaceuticals Corporation	7.05%
91 Hartwell Ave, 2nd Floor, Lexington, MA 02421, United States	
Millendo Therapeutics, Inc.[10]	4.42%
301 North Main Street, Suite 100, Ann Arbor, MI 48104, United States	
Moderna Therapeutics, Inc.[20]	8.32%
320 Bent Street, Cambridge, MA 02141, United States	

At 31 December 2017	Group Interest
Myotherix Inc[10]	8.27%
29540 Kohoutek Way, Union City, CA 94587, United States	
Nano Precision Medical, Inc.	5.58%
5858 Horton St Suite 393, Emeryville, CA 94608, United States	
PhaseBio Pharmaceuticals, Inc.[18]	14.39%
One Great Valley, Parkway, Suite 30, Malvern, PA 19355, United States	
Rani Therapeutics, LLC[21]	0.97%
2051 Ringwood Ave, San Jose, CA 95116, United States	
Regulus Therapeutics Inc.	3.39%
10614 Science Center Dr., San Diego, CA 92121, United States	

[1] Ownership held in ordinary and class B special shares.
[2] Directly held by AstraZeneca PLC.
[3] Accounting year end is 31 March.
[4] Accounting year end is 30 June.
[5] Ownership held in class A and class B shares.
[6] Ownership held in common shares and special shares.
[7] Ownership held as membership interest.
[8] Ownership held as partnership interest.
[9] Ownership held in class A shares.
[10] Ownership held in class B preference shares.
[11] Voting rights and percentages vary depending on the subject matter and business to be voted on.
[12] Ownership held in class B preference shares, class C preference shares, class D preference shares and class E preference shares.
[13] A company limited by guarantee.
[14] Ownership held in ordinary shares and class A shares.
[15] Ownership held in common shares and series A preferred shares.
[16] Ownership held in class A voting and class A non-voting shares.
[17] Ownership held in series A preferred stock.
[18] Ownership held in class C preference shares.
[19] Ownership held in class D preference shares.
[20] Ownership held in class D preference shares, class E preference shares and class F preference shares.
[21] Ownership held in class C-1 preference shares.

Company Balance Sheet
at 31 December

AstraZeneca PLC

	Notes	2017 $m	2016 $m
Fixed assets			
Fixed asset investments	1	**31,482**	30,449
Current assets			
Debtors – other		**11**	14
Debtors – amounts owed by Group undertakings		**7,995**	8,935
		8,006	8,949
Creditors: Amounts falling due within one year			
Non-trade creditors	2	**(325)**	(518)
Interest-bearing loans and borrowings	3	**(1,397)**	(1,749)
		(1,722)	(2,267)
Net current assets		**6,284**	6,682
Total assets less current liabilities		**37,766**	37,131
Creditors: Amounts falling due after more than one year			
Amounts owed to Group undertakings	3	**(283)**	(283)
Interest-bearing loans and borrowings	3	**(15,197)**	(14,138)
		(15,480)	(14,421)
Net assets		**22,286**	22,710
Capital and reserves			
Called-up share capital	4	**317**	316
Share premium account		**4,393**	4,351
Capital redemption reserve		**153**	153
Other reserves		**2,549**	2,583
Profit and loss account		**14,874**	15,307
Shareholders' funds		**22,286**	22,710

$m means millions of US dollars.

The Company's profit for the year was $3,109m (2016: $3,699m).

The Company Financial Statements from page 194 to 198 were approved by the Board on 2 February 2018 and were signed on its behalf by

Pascal Soriot Director

Marc Dunoyer Director

Company's registered number 02723534

Statement of Changes in Equity

For the year ended 31 December

	Share capital $m	Share premium account $m	Capital redemption reserve $m	Other reserves $m	Profit and loss account $m	Total equity $m
At 1 January 2016	316	4,304	153	2,623	15,147	22,543
Total comprehensive income for the period						
Profit for the period	–	–	–	–	3,699	3,699
Amortisation of loss on cash flow hedge	–	–	–	–	1	1
Total comprehensive income for the period	–	–	–	–	3,700	3,700
Transactions with owners, recorded directly in equity						
Dividends	–	–	–	–	(3,540)	(3,540)
Capital contributions for share-based payments	–	–	–	(40)	–	(40)
Issue of Ordinary Shares	–	47	–	–	–	47
Total contributions by and distributions to owners	–	47	–	(40)	(3,540)	(3,533)
At 31 December 2016	316	4,351	153	2,583	15,307	22,710
Total comprehensive income for the period						
Profit for the period	**–**	**–**	**–**	**–**	**3,109**	**3,109**
Amortisation of loss on cash flow hedge	**–**	**–**	**–**	**–**	**1**	**1**
Total comprehensive income for the period	**–**	**–**	**–**	**–**	**3,110**	**3,110**
Transactions with owners, recorded directly in equity						
Dividends	**–**	**–**	**–**	**–**	**(3,543)**	**(3,543)**
Capital contributions for share-based payments	**–**	**–**	**–**	**(34)**	**–**	**(34)**
Issue of Ordinary Shares	**1**	**42**	**–**	**–**	**–**	**43**
Total contributions by and distributions to owners	**1**	**42**	**–**	**(34)**	**(3,543)**	**(3,534)**
At 31 December 2017	**317**	**4,393**	**153**	**2,549**	**14,874**	**22,286**

At 31 December 2017, $14,874m (2016: $15,307m) of the profit and loss account reserve was available for distribution. Included in other reserves is a special reserve of $157m (2016: $157m), arising on the redenomination of share capital in 1999.

Included within other reserves at 31 December 2017 is $708m (2016: $742m) in respect of cumulative share-based payment awards. These amounts are not available for distribution.

Company Accounting Policies

Basis of presentation of financial information

These financial statements were prepared in accordance with FRS 101 'Reduced Disclosure Framework'.

In preparing these financial statements, the Company applied the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU (Adopted IFRSs), but makes amendments where necessary in order to comply with the Companies Act 2006 and has set out below where advantage of the FRS 101 disclosure exemptions has been taken.

In these financial statements, the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

> Statement of Cash Flows and related notes
> disclosures in respect of transactions with wholly owned subsidiaries
> disclosures in respect of capital management
> the effects of new but not yet effective IFRSs
> disclosures in respect of the compensation of Key Management Personnel.

As the Group Financial Statements (presented on pages 135 to 193) include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 available in respect of the following disclosures:

> IFRS 2 'Share-based Payment' in respect of group settled share-based payments
> certain disclosures required by IFRS 13 'Fair Value Measurement' and the disclosures required by IFRS 7 'Financial Instrument Disclosures'.

No individual profit and loss account is prepared as provided by section 408 of the Companies Act 2006.

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these financial statements.

Basis of accounting

The Company Financial Statements are prepared under the historical cost convention, in accordance with the Companies Act 2006.

The following paragraphs describe the main accounting policies, which have been applied consistently.

Foreign currencies

Profit and loss account items in foreign currencies are translated into US dollars at average rates for the relevant accounting periods. Monetary assets and liabilities are translated at exchange rates prevailing at the date of the Company Balance Sheet. Exchange gains and losses on loans and on short-term foreign currency borrowings and deposits are included within net interest payable. Exchange differences on all other transactions are taken to operating profit.

Taxation

The current tax payable is based on taxable profit for the year. Taxable profit differs from reported profit because taxable profit excludes items that are either never taxable or tax deductible or items that are taxable or tax deductible in a different period. The Company's current tax assets and liabilities are calculated using tax rates that have been enacted or substantively enacted by the reporting date.

Deferred tax is provided using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the asset can be utilised. This requires judgements to be made in respect of the availability of future taxable income.

No deferred tax asset or liability is recognised in respect of temporary differences associated with investments in subsidiaries and branches where the Company is able to control the timing of reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

The Company's deferred tax assets and liabilities are calculated using tax rates that are expected to apply in the period when the liability is settled or the asset realised based on tax rates that have been enacted or substantively enacted by the reporting date.

Accruals for tax contingencies require management to make judgements and estimates of exposures in relation to tax audit issues. Tax benefits are not recognised unless the tax positions will probably be sustained based upon management's interpretation of applicable laws and regulations and the likelihood of settlement.

Once considered to be probable, management reviews each material tax benefit to assess whether a provision should be taken against full recognition of the benefit on the basis of potential settlement through negotiation and/or litigation. Accruals for tax contingencies are measured using the single best estimate of likely outcome approach.

Investments

Fixed asset investments, including investments in subsidiaries, are stated at cost and reviewed for impairment if there are indications that the carrying value may not be recoverable.

Share-based payments

The issuance by the Company to employees of its subsidiaries of a grant of awards over the Company's shares, represents additional capital contributions by the Company to its subsidiaries. An additional investment in subsidiaries results in a corresponding increase in shareholders' equity. The additional capital contribution is based on the fair value of the grant issued, allocated over the underlying grant's vesting period, less the market cost of shares charged to subsidiaries in settlement of such share awards.

Financial instruments

Loans and other receivables are held at amortised cost. Long-term loans payable are held at amortised cost.

Litigation

Through the normal course of business, the AstraZeneca Group is involved in legal disputes, the settlement of which may involve cost to the Company. Provision is made where an adverse outcome is probable and associated costs can be estimated reliably. In other cases, appropriate descriptions are included.

Notes to the Company Financial Statements

1 Fixed asset investments

	Investments in subsidiaries		
	Shares $m	Loans $m	Total $m
At 1 January 2017	**16,026**	**14,423**	**30,449**
Additions	**–**	**1,987**	**1,987**
Transfer to current assets	**–**	**(1,399)**	**(1,399)**
Capital reimbursement	**(30)**	**–**	**(30)**
Exchange	**–**	**463**	**463**
Amortisation	**–**	**12**	**12**
At 31 December 2017	**15,996**	**15,486**	**31,482**

A list of subsidiaries is included on pages 190 to 193.

2 Non-trade creditors

	2017 $m	2016 $m
Amounts due within one year		
Short-term borrowings	**199**	371
Other creditors	**119**	140
Amounts owed to Group undertakings	**7**	7
	325	518

3 Loans

		Repayment dates	2017 $m	2016 $m
Amounts due within one year				
Interest-bearing loans and borrowings (unsecured)				
Floating rate notes	US dollars	2018	**399**	–
1.75% Callable bond	US dollars	2018	**998**	–
5.9% Callable bond	US dollars	2017	**–**	1,749
			1,397	1,749
Amounts due after more than one year				
Amounts owed to Group undertakings (unsecured)				
7.2% Loan	US dollars	2023	**283**	283
Interest-bearing loans and borrowings (unsecured)				
Floating rate notes	US dollars	2018	**–**	399
1.75% Callable bond	US dollars	2018	**–**	998
1.95% Callable bond	US dollars	2019	**999**	998
2.375% Callable bond	US dollars	2020	**1,591**	1,589
0.875% Non-callable bond	euros	2021	**890**	782
0.25% Callable bond	euros	2021	**594**	522
Floating rate bond	US dollars	2022	**249**	–
2.375% Callable bond	US dollars	2022	**992**	–
0.75% Callable bond	euros	2024	**1,067**	937
3.375% Callable bond	US dollars	2025	**1,978**	1,976
3.125% Callable bond	US dollars	2027	**742**	–
1.25% Callable bond	euros	2028	**941**	827
5.75% Non-callable bond	pounds sterling	2031	**468**	426
6.45% Callable bond	US dollars	2037	**2,720**	2,719
4% Callable bond	US dollars	2042	**987**	986
4.375% Callable bond	US dollars	2045	**979**	979
			15,197	14,138

3 Loans *continued*

	2017 $m	2016 $m
Loans are repayable:		
After five years from balance sheet date	**10,165**	9,133
From two to five years	**4,316**	3,891
From one to two years	**999**	1,397
Within one year	**1,397**	1,749
Total unsecured	**16,877**	16,170

With the exception of the 2018 and 2022 floating rate notes, all loans are at fixed interest rates. Accordingly, the fair values of the loans will change as market rates change. However, since the loans are held at amortised cost, changes in interest rates and the credit rating of the Company do not have any effect on the Company's net assets.

4 Share capital

Details of share capital movements in the year are included in Note 22 to the Group Financial Statements.

5 Contingent liabilities

The Company is named as a party to legal proceedings in the *Farxiga* product liability litigation and the Array BioPharma Inc. commercial litigation, each of which are described more fully in Note 28 to the Group Financial Statements.

Other

The Company has guaranteed the external borrowing of a subsidiary in the amount of $286m.

6 Statutory and other information

The Directors were paid by another Group company in 2017 and 2016.

7 Subsequent events

There were no material subsequent events.

Group Financial Record

For the year ended 31 December	2013 $m	2014 $m	2015 $m	2016 $m	2017 $m
Revenue and profits					
Product Sales	25,711	26,095	23,641	21,319	**20,152**
Externalisation Revenue	95	452	1,067	1,683	**2,313**
Cost of sales	(5,261)	(5,842)	(4,646)	(4,126)	**(4,318)**
Distribution costs	(306)	(324)	(339)	(326)	**(310)**
Research and development expense	(4,821)	(5,579)	(5,997)	(5,890)	**(5,757)**
Selling, general and administrative costs	(12,206)	(13,000)	(11,112)	(9,413)	**(10,233)**
Other operating income and expense	500	335	1,500	1,655	**1,830**
Operating profit	3,712	2,137	4,114	4,902	**3,677**
Finance income	50	78	46	67	**113**
Finance expense	(495)	(963)	(1,075)	(1,384)	**(1,508)**
Share of after tax losses in associates and joint ventures	–	(6)	(16)	(33)	**(55)**
Profit before tax	3,267	1,246	3,069	3,552	**2,227**
Taxation	(696)	(11)	(243)	(146)	**641**
Profit for the period	2,571	1,235	2,826	3,406	**2,868**
Other comprehensive income for the period, net of tax	(113)	(1,506)	(338)	(1,778)	**639**
Total comprehensive income for the period	2,458	(271)	2,488	1,628	**3,507**
Profit attributable to:					
Owners of the Parent	2,556	1,233	2,825	3,499	**3,001**
Non-controlling interests	15	2	1	(93)	**(133)**
Earnings per share					
Basic earnings per $0.25 Ordinary Share	$2.04	$0.98	$2.23	$2.77	**$2.37**
Diluted earnings per $0.25 Ordinary Share	$2.04	$0.98	$2.23	$2.76	**$2.37**
Dividends	$2.80	$2.80	$2.80	$2.80	**$2.80**
Return on revenues					
Operating profit as a percentage of Total Revenue	14.4%	8%	16.7%	21.3%	**16.4%**
Ratio of earnings to fixed charges	9.9	6.1	11.3	8.9	**4.4**

At 31 December	2013 $m	2014 $m	2015 $m	2016 $m	2017 $m
Statement of Financial Position					
Property, plant and equipment, goodwill and intangible assets	31,846	38,541	40,859	46,092	**45,628**
Other investments and non-current receivables	2,513	2,138	1,896	2,070	**2,387**
Deferred tax assets	1,205	1,219	1,294	1,102	**2,189**
Current assets	20,335	16,697	16,007	13,262	**13,150**
Total assets	55,899	58,595	60,056	62,526	**63,354**
Current liabilities	(16,051)	(17,330)	(14,869)	(15,256)	**(16,383)**
Deferred tax liabilities	(2,827)	(1,796)	(2,665)	(3,956)	**(3,995)**
Other non-current liabilities	(13,768)	(19,823)	(24,013)	(26,645)	**(26,334)**
Net assets	23,253	19,646	18,509	16,669	**16,642**
Share capital	315	316	316	316	**317**
Reserves attributable to equity holders of the Company	22,909	19,311	18,174	14,538	**14,643**
Non-controlling interests	29	19	19	1,815	**1,682**
Total equity and reserves	23,253	19,646	18,509	16,669	**16,642**

For the year ended 31 December	2013 $m	2014 $m	2015 $m	2016 $m	2017 $m
Cash flows					
Net cash inflow/(outflow) from:					
Operating activities	7,400	7,058	3,324	4,145	**3,578**
Investing activities	(2,889)	(7,032)	(4,239)	(3,969)	**(2,328)**
Financing activities	(3,047)	(2,705)	878	(1,324)	**(2,936)**
	1,464	(2,679)	(37)	(1,148)	**(1,686)**

For the purpose of computing the ratio of earnings to fixed charges, earnings consist of the income from continuing ordinary activities before taxation of Group companies and income received from companies owned 50% or less, plus fixed charges. Fixed charges consist of interest on all indebtedness, amortisation of debt discount and expense, and that portion of rental expense representative of the interest factor.

Science

can

prevent disease in adolescents

Today, non-communicable diseases (NCDs) kill 40 million people each year, with Type 2 diabetes, cancer, heart and respiratory disease accounting for over 80% of these deaths. One way we are addressing this global health issue is to focus on prevention and, more specifically, on youth. With over 1.2 billion adolescents in the world today, improving adolescent health and wellbeing will not only have major benefits for adolescents, and for those around them, but will also improve the health benefits of future generations.

The AstraZeneca Young Health Programme (YHP) is a global disease prevention programme with a focus on adolescents. Launched in 2010, it tackles the NCD epidemic by focusing on risk behaviours. Our programming, advocacy and research looks at the primary risk factors that lead to disease later in life. By encouraging more young people to adopt healthy habits, it is more likely to lead to healthier outcomes.

"Through the YHP, I trained to become a Peer Educator and now use street theatre to educate young people about their health concerns. Due to YHP many young people have given up smoking and are seeking access to healthcare facilities. Since being part of the YHP, my confidence has grown and the increased responsibility has given me a clearer sense of purpose. The YHP has changed my life."

- 30 NGO partners
- 21 countries around the world on five continents
- 1.6 million youths reached with health information
- 12,800 health workers trained
- 14,600 peer educators trained
- Breakthrough research – Johns Hopkins, Imperial College
- New evidence – Population Reference Bureau policy briefs and data sheets on risk behaviours

AstraZeneca Young Health Programme
A global community investment initiative

with founding partners

Johns Hopkins Bloomberg School of Public Health

PLAN International

Photo: Marco Betti and AstraZeneca Young Health Programme.

Development Pipeline
as at 31 December 2017

AstraZeneca-sponsored or directed trials

Phase III/Pivotal Phase II/Registration

New Molecular Entities (NMEs) and significant additional indications

Regulatory submission dates shown for assets in Phase III and beyond. As disclosure of compound information is balanced by the business need to maintain confidentiality, information in relation to some compounds listed here has not been disclosed at this time.

Compound	Mechanism	Area Under Investigation	Date Commenced Phase	Estimated Regulatory Acceptance Date/Submission Status			
				US	EU	Japan	China
Oncology							
Calquence[#] (acalabrutinib)	BTK inhibitor	B-cell malignancy	Q1 2015	Launched			
savolitinib[#] SAVOIR	MET inhibitor	papillary renal cell carcinoma	Q3 2017	2020	2020		
selumetinib ASTRA	MEK inhibitor	differentiated thyroid cancer	Q3 2013	H2 2018 (Orphan Drug Designation)	H2 2018		
moxetumomab pasudotox[#] PLAIT	anti-CD22 recombinant immunotoxin	hairy cell leukaemia	Q2 2013	H1 2018 (Orphan Drug Designation)			
Imfinzi[#] + tremelimumab ARCTIC	PD-L1 mAb + CTLA-4 mAb	3rd line NSCLC	Q2 2015	H1 2018	H1 2018	H1 2018	
Imfinzi[#] + tremelimumab MYSTIC	PD-L1 mAb + CTLA-4 mAb	1st line NSCLC	Q3 2015	H2 2018	H2 2018	H2 2018	
Imfinzi[#] + tremelimumab NEPTUNE	PD-L1 mAb + CTLA-4 mAb	1st line NSCLC	Q4 2015	2019	2019	2019	2020
Imfinzi[#] + tremelimumab + chemotherapy POSEIDON	PD-L1 mAb + CTLA-4 mAb	1st line NSCLC	Q2 2017	2019	2019	2019	2020
Imfinzi[#] + tremelimumab + SoC CASPIAN	PD-L1 mAb + CTLA-4 mAb + SoC	1st line SCLC	Q1 2017	2019	2019	2019	
Imfinzi[#] + tremelimumab KESTREL	PD-L1 mAb + CTLA-4 mAb	1st line HNSCC	Q4 2015	H2 2018	H2 2018	H2 2018	
Imfinzi[#] + tremelimumab EAGLE	PD-L1 mAb + CTLA-4 mAb	2nd line HNSCC	Q4 2015	H2 2018	H2 2018	H2 2018	
Imfinzi[#] + tremelimumab DANUBE	PD-L1 mAb + CTLA-4 mAb	1st line bladder cancer	Q4 2015	2019	2019	2019	
Imfinzi[#] + tremelimumab HIMALAYA	PD-L1 mAb + CTLA-4 mAb	1st line hepatocellular carcinoma	Q4 2017	2021	2021	2021	2021
Lynparza[#¶] + cediranib CONCERTO	PARP inhibitor + VEGF inhibitor	recurrent platinum-resistant ovarian cancer	Q1 2017	2019			
CVMD							
Epanova	omega-3 carboxylic acids	severe hypertriglyceridaemia		Approved		2020	
ZS-9 (sodium zirconium cyclosilicate)	potassium binder	hyperkalaemia			Accepted[1]	2019	
roxadustat[#] OLYMPUS (US) ROCKIES (US)	hypoxia-inducible factor prolyl hydroxylase inhibitor	anaemia in CKD/end-stage renal disease	Q3 2014	H2 2018			Accepted[2]

Compound	Mechanism	Area Under Investigation	Date Commenced Phase	Estimated Regulatory Acceptance Date/Submission Status US	EU	Japan	China
Respiratory							
Bevespi (PT003)	LABA/LAMA	COPD		Launched	Accepted	H2 2018	H2 2018
Fasenra[#] (benralizumab[#]) CALIMA SIROCCO ZONDA BISEBORA GREGALE	IL-5R mAb	severe, uncontrolled asthma		Launched	Approved	Approved	2021
PT010	LABA/LAMA/ICS	COPD	Q3 2015	2019	2019	H2 2018	H2 2018
tezepelumab NAVIGATOR SOURCE	TSLP mAb	severe, uncontrolled asthma	Q1 2018	2021	2021	2021	
Other							
anifrolumab[#] TULIP	Type 1 IFN receptor mAb	systemic lupus erythematosus	Q3 2015	2019 (Fast Track)	2019	2019	
lanabecestat[#] AMARANTH + extension, DAYBREAK-ALZ	beta-secretase inhibitor	Alzheimer's disease	Q2 2016	2020 (Fast Track)	2020	2020	

[#] Collaboration.
[¶] Registrational Phase II trial.
[1] CHMP positive opinion received.
[2] FibroGen completed rolling regulatory submission in China.

Phases I and II
NMEs and significant additional indications

Compound	Mechanism	Area Under Investigation	Phase	Date Commenced Phase
Oncology				
Imfinzi[#]	PD-L1 mAb	solid tumours	II	Q3 2014
Imfinzi[#] + tremelimumab	PD-L1 mAb + CTLA-4 mAb	gastric cancer	II	Q2 2015
Imfinzi[#] + tremelimumab	PD-L1 mAb + CTLA-4 mAb	biliary tract, oesophageal	II	Q4 2013
Imfinzi[#] + tremelimumab + chemo	PD-L1 mAb + CTLA-4 mAb	1st line pancreatic ductal adenocarcinoma, oesophageal and SCLC	I	Q2 2016
Imfinzi[#] + AZD5069	PD-L1 mAb + CXCR2 antagonist	pancreatic ductal adenocarcinoma	II	Q2 2017
Imfinzi[#] + AZD5069 or *Imfinzi*[#] + AZD9150[#]	PD-L1 mAb + CXCR2 antagonist or PD-L1 mAb + STAT3 inhibitor	HNSCC	II	Q3 2015
Imfinzi[#] + dabrafenib + trametinib	PD-L1 mAb + BRAF inhibitor + MEK inhibitor	melanoma	I	Q1 2014
Imfinzi[#] + AZD1775[#]	PD-L1 mAb + Wee1 inhibitor	solid tumours	I	Q4 2015
Imfinzi[#] + MEDI0680	PD-L1 mAb + PD-1 mAb	solid tumours	II	Q3 2016
Imfinzi[#] or *Imfinzi*[#] + (tremelimumab or AZD9150[#])	PD-L1 mAb or PD-L1 mAb + (CTLA-4 mAb or STAT3 inhibitor)	diffuse large B-cell lymphoma	I	Q3 2016
Imfinzi[#] + *Iressa*	PD-L1 mAb + EGFR inhibitor	NSCLC	I	Q2 2014
Imfinzi[#] + MEDI0562[#]	PD-L1 mAb + humanised OX40 agonist	solid tumours	I	Q2 2016
Imfinzi[#] + MEDI9197[#]	PD-L1 mAb + TLR 7/8 agonist	solid tumours	I	Q2 2017
Imfinzi[#] + oleclumab (MEDI9447)	PD-L1 mAb + CD73 mAb	solid tumours	I	Q1 2016
Imfinzi[#] + monalizumab	PD-L1 mAb + NKG2a mAb	solid tumours	I	Q1 2016
Imfinzi[#] + selumetinib	PD-L1 mAb + MEK inhibitor	solid tumours	I	Q4 2015
Imfinzi[#] + tremelimumab	PD-L1 mAb + CTLA-4 mAb	solid tumours	I	Q4 2013
tremelimumab + MEDI0562[#]	CTLA-4 mAb + humanised OX40 agonist	solid tumours	I	Q2 2016
Imfinzi[#] + azacitidine	PD-L1 mAb + azacitidine	myelodysplastic syndrome	I	Q2 2016

Development Pipeline
continued

Compound	Mechanism	Area Under Investigation	Phase	Date Commenced Phase
Imfinzi# + MEDI0457#	PD-L1 mAb + DNA HPV vaccine	HNSCC	II	Q4 2017
Imfinzi# + RT (platform) CLOVER	PD-L1 mAb + RT	locally-advanced HNSCC, NSCLC, SCLC	I	Q1 2018
Lynparza# + AZD6738	PARP inhibitor + ATR inhibitor	gastric cancer	II	Q3 2016
Lynparza# + AZD1775#	PARP inhibitor + Wee1 inhibitor	solid tumours	I	Q3 2015
Lynparza# + *Imfinzi*# MEDIOLA	PARP inhibitor + PD-L1 mAb	solid tumours	II	Q2 2016
Tagrisso + (selumetinib# or savolitinib#) TATTON	EGFR inhibitor + (MEK inhibitor or MET inhibitor)	advanced EGFRm NSCLC	II	Q2 2016
Tagrisso BLOOM	EGFR inhibitor	CNS metastases in advanced EGFRm NSCLC	II	Q4 2015
AZD1775# + chemotherapy	Wee1 inhibitor + chemotherapy	ovarian cancer	II	Q1 2015
AZD1775#	Wee1 inhibitor	solid tumours	I	Q3 2015
vistusertib	mTOR inhibitor	solid tumours	II	Q1 2013
AZD5363#	AKT inhibitor	breast cancer	II	Q1 2014
AZD4547	FGFR inhibitor	solid tumours	II	Q4 2011
AZD0156	ATM inhibitor	solid tumours	I	Q4 2015
AZD1390	ATM inhibitor	healthy volunteer trial	I	Q4 2017
AZD2811#	Aurora B inhibitor	solid tumours	I	Q4 2015
AZD4573	CDK9 inhibitor	haematological malignancies	I	Q4 2017
AZD4635	A2aR inhibitor	solid tumours	I	Q2 2016
AZD4785	KRAS inhibitor	solid tumours	I	Q2 2017
AZD5153	BRD4 inhibitor	solid tumours	I	Q3 2017
AZD5991	MCL1 inhibitor	haematological malignancies	I	Q3 2017
Calquence + vistusertib	B-cell malignancy + mTor inhibitor	haematological malignancies	I	Q3 2017
AZD6738	ATR inhibitor	solid tumours	I	Q4 2013
AZD8186	PI3k inhibitor	solid tumours	I	Q2 2013
AZD9496	selective oestrogen receptor degrader	oestrogen receptor +ve breast cancer	I	Q4 2014
MEDI-565#	CEA BiTE mAb	solid tumours	I	Q1 2011
MEDI0562#	humanised OX40 agonist	solid tumours	I	Q1 2015
MEDI1873	GITR agonist fusion protein	solid tumours	I	Q4 2015
MEDI3726#	PSMA antibody drug conjugate	prostate cancer	I	Q1 2017
MEDI4276	HER2 bi-specific antibody drug conjugate	solid tumours	I	Q4 2015
MEDI5083	immune activator	solid tumours	I	Q1 2017
MEDI7247	antibody drug conjugate	haematological malignancies	I	Q2 2017
MEDI9197#	TLR 7/8 agonist	solid tumours	I	Q4 2015
oleclumab (MEDI9447)	CD73 mAb	solid tumours	I	Q3 2015
CVMD				
verinurad	URAT1 inhibitor	CKD	II	Q2 2017
MEDI0382	GLP-1/glucagon dual agonist	Type 2 diabetes/obesity	II	Q3 2016
MEDI6012	LCAT	CV disease	II	Q4 2015
AZD4831	myeloperoxidase	HF with a preserved ejection fraction	I	Q3 2016
AZD5718	FLAP	coronary artery disease	II	Q4 2017
AZD8601#	VEGF-A	CV disease	I	Q1 2017
MEDI5884#	cholesterol modulation	CV disease	II	Q4 2017
Respiratory				
abediterol#	LABA	asthma/COPD	II	Q4 2007
tezepelumab#	TSLP mAb	atopic dermatitis	II	Q2 2015
AZD1419#	inhaled TLR9 agonist	asthma	II	Q4 2016
AZD7594	inhaled SGRM	asthma/COPD	II	Q3 2015
AZD8871#	MABA	COPD	II	Q1 2017
PT010	LABA/LAMA/ICS	asthma	II	Q2 2014
AZD5634	inhaled ENaC	cystic fibrosis	I	Q1 2016
AZD7594 + abediterol#	inhaled SGRM + LABA	asthma/COPD	I	Q4 2016
AZD7986#	DPP1	COPD	II	Q4 2017
AZD9567	oral SGRM	rheumatoid arthritis/respiratory	II	Q4 2015
AZD1402#	inhaled IL-4Ra	asthma	I	Q4 2017
MEDI3506	IL-33 mAb	COPD	I	Q2 2017

Compound	Mechanism	Area Under Investigation	Phase	Date Commenced Phase
Other				
anifrolumab#	Type 1 IFN receptor mAb	lupus nephritis	II	Q4 2015
anifrolumab#	Type 1 IFN receptor mAb	systemic lupus erythematosus (subcutaneous)	II	Q1 2017
inebilizumab#	CD19 mAb	neuromyelitis optica	II (Orphan drug US, EU)	Q1 2015
mavrilimumab#	GM-CSFR mAb	rheumatoid arthritis	II	Q1 2010
MEDI3902	Psl/PcrV bispecific mAb	prevention of nosocomial pseudomonas aeruginosa pneumonia	II (Fast Track, US)	Q2 2016
suvratoxumab (MEDI4893)	mAb binding to *S. aureus* toxin	prevention of nosocomial *Staphylococcus aureus* pneumonia	II (Fast Track, US)	Q4 2014
prezalumab# (MEDI5872#)	B7RP1 mAb	primary Sjögren's syndrome	II	Q3 2015
MEDI8852	influenza A mAb	influenza A treatment	II (Fast Track, US)	Q4 2015
MEDI8897#	RSV mAb-YTE	passive RSV prophylaxis	II (Fast Track, US)	Q1 2015
AZD0284	RORg	psoriasis/respiratory	I	Q4 2016
MEDI0700#	BAFF/B7RP1 bispecific mAb	systemic lupus erythematosus	I	Q1 2016
MEDI1814#	amyloid beta mAb	Alzheimer's disease	I	Q2 2014
MEDI4920	anti-CD40L-Tn3 fusion protein	primary Sjögren's syndrome	I	Q2 2014
MEDI7352	NGF/TNF bi-specific mAb	osteoarthritis pain	I	Q1 2016
MEDI7734	ILT7 mAb	myositis	I	Q3 2016
MEDI9314	IL-4R mAb	atopic dermatitis	I	Q1 2016

Collaboration.

Significant Life-cycle Management

Compound	Mechanism	Area Under Investigation	Date Commenced Phase	Estimated Regulatory Acceptance Date/Submission Status			
				US	EU	Japan	China
Oncology							
Calquence# (acalabrutinib)	BTK inhibitor	1st line chronic lymphocytic leukaemia	Q3 2015	2020 (Orphan Drug Designation)	2020 (Orphan designation)		
Calquence# (acalabrutinib)	BTK inhibitor	relapsed/refractory chronic lymphocytic leukaemia, high risk	Q4 2015	2019 (Orphan Drug Designation)	2019 (Orphan designation)		
Calquence# (acalabrutinib)	BTK inhibitor	1st line mantle cell lymphoma	Q1 2017	2023			
Faslodex FALCON	oestrogen receptor antagonist	1st line hormone receptor +ve advanced breast cancer		Approved	Approved	Approved	Approved
Imfinzi# PACIFIC	PD-L1 mAb	locally-advanced (Stage 3), NSCLC	Q2 2014	Accepted (Breakthrough Therapy Designation & Priority Review)	Accepted	Accepted	
Imfinzi# PEARL (China)	PD-L1 mAb	1st line NSCLC	Q1 2017				2020
Lynparza# OlympiAD	PARP inhibitor	gBRCA metastatic breast cancer	Q2 2014	Approved (Priority Review)	H1 2018	Accepted (Orphan drug designation, Priority Review)	H2 2018
Lynparza# SOLO-2	PARP inhibitor	2nd line or greater BRCAm PSR ovarian cancer, maintenance monotherapy	Q3 2013	Approved (Priority Review)	Accepted	Approved (Orphan drug designation)	Accepted
Lynparza# SOLO-1	PARP inhibitor	1st line BRCAm ovarian cancer	Q3 2013	H2 2018	H2 2018	H2 2018	2019
Lynparza# SOLO-3	PARP inhibitor	gBRCA PSR ovarian cancer	Q1 2015	H2 2018			
Lynparza# POLO	PARP inhibitor	pancreatic cancer	Q1 2015	2019	2019		
Lynparza# PROfound	PARP inhibitor	prostate cancer	Q1 2017	2020 (Breakthrough Therapy Designation)	2020	2020	2020
Lynparza# OlympiA	PARP inhibitor	gBRCA adjuvant breast cancer	Q2 2014	2020	2020	2020	
Tagrisso FLAURA	EGFR inhibitor	1st line advanced EGFRm NSCLC	Q1 2015	Accepted (Breakthrough Therapy Designation)	Accepted	Accepted	H2 2018
Tagrisso ADAURA	EGFR inhibitor	adjuvant EGFRm NSCLC	Q4 2015	2022	2022	2022	2022

Development Pipeline
continued

Compound	Mechanism	Area Under Investigation	Date Commenced Phase	Estimated Regulatory Acceptance Date/Submission Status US	EU	Japan	China
CVMD							
Brilinta[1] THALES	P2Y12 receptor antagonist	acute ischaemic stroke or transient ischaemic attack	Q1 2018	2020	2020	2020	2020
Brilinta[1] THEMIS	P2Y12 receptor antagonist	CV outcomes trial in patients with Type 2 diabetes and coronary artery disease without a previous history of MI or stroke	Q1 2014	2019	2019	2019	2020
Brilinta[1] HESTIA	P2Y12 receptor antagonist	prevention of vaso-occlusive crises in paediatric patients with sickle cell disease	Q1 2014	2021	2021		
Farxiga[2] DECLARE-TIMI 58	SGLT2 inhibitor	CV outcomes trial in patients with Type 2 diabetes	Q2 2013	2019	2019		
Farxiga[2]	SGLT2 inhibitor	Type 1 diabetes	Q4 2014	H2 2018	H1 2018	H2 2018	
Farxiga[2]	SGLT2 inhibitor	worsening HF or CV death in patients with chronic HF	Q1 2017	2020	2020	2020	2020
Farxiga[2]	SGLT2 inhibitor	renal outcomes and CV mortality in patients with CKD	Q1 2017	2021	2021	n/a	2021
Xigduo XR/*Xigduo*[3]	SGLT2 inhibitor/ metformin FDC	Type 2 diabetes		Launched	Launched		2020
Qtern	DPP-4 inhibitor/ SGLT2 inhibitor FDC	Type 2 diabetes		Launched	Launched		
Bydureon BCise/Bydureon autoinjector[4]	GLP-1 receptor agonist	Type 2 diabetes	Q1 2013	Launched	Accepted		
Bydureon EXSCEL	GLP-1 receptor agonist	Type 2 diabetes outcomes trial	Q2 2010	H1 2018	H1 2018		H2 2018
saxagliptin/dapagliflozin/ metformin	DPP-4 inhibitor/ SGLT2 inhibitor	Type 2 diabetes	Q2 2017	H1 2018	H1 2018		
Epanova STRENGTH	omega-3 carboxylic acids	CV outcomes trial in statin-treated patients at high CV risk, with persistent hypertriglyceridaemia plus low HDL-cholesterol	Q4 2014	2020	2020	2020	2020
Respiratory							
Fasenra[#] (benralizumab[#]) TERRANOVA GALATHEA	IL-5R mAb	COPD	Q3 2014	H2 2018	H2 2018	2019	
Symbicort SYGMA	ICS/LABA	as-needed use in mild asthma	Q4 2014		2018		2019
Duaklir Genuair[#]	LAMA/LABA	COPD		H1 2018	Launched		2019
Other							
Nexium	proton-pump inhibitor	stress ulcer prophylaxis					Accepted
Nexium	proton-pump inhibitor	paediatrics		Launched	Launched	Approved	
linaclotide[#]	GC-C receptor peptide agonist	irritable bowel syndrome with constipation (IBS-C)					Accepted

[#] Collaboration.
[1] *Brilinta* in the US and Japan; *Brilique* in ROW.
[2] *Farxiga* in the US; *Forxiga* in ROW.
[3] *Xigduo* XR in the US; *Xigduo* in the EU.
[4] *Bydureon BCise* in the US; *Bydureon* autoinjector in the EU.

Terminations/Discontinued projects

NME/Line Extension	Compound	Reason for Discontinuation	Area Under Investigation
Symbicort – breath actuated inhaler	ICS/LABA	Strategic	asthma/COPD
AZD3241	myeloperoxidase inhibitor	Safety/efficacy	multiple system atrophy
AZD9412[#]	inhaled interferon beta	Strategic	asthma/COPD
AZD4076	anti-miR103/107 oligonucleotide	Safety/efficacy	non-alcoholic fatty liver disease/non-alcoholic steatohepatitis (NASH)
MEDI4166	PCSK9/GLP-1 mAb + peptide fusion	Safety/efficacy	diabetes/cardiovascular
verinurad	selective uric acid reabsorption inhibitor (URAT-1)	Strategic	chronic treatment of hyperuricemia in patients
NME	MEDI8111	Strategic	trauma/bleeding
NME	AZD9898[#]	Safety/efficacy	asthma
NME	MEDI-573	Safety/efficacy	metastatic breast cancer
NME	tralokinumab STRATOS 1,2 TROPOS MESOS	Safety/efficacy	severe, uncontrolled asthma

[#] Collaboration.

Completed Projects/Divestitures

Compound	Mechanism	Area Under Investigation	Completed/ Divested	Estimated Regulatory Submission Acceptance			
				US	EU	Japan	China
Tagrisso AURA, AURA2, (AURA17 Asia regional)	EGFR inhibitor	≥2nd line advanced EGFRm T790M NSCLC	Completed	Launched (Breakthrough Therapy, Priority Review, Orphan drug)	Launched (Accelerated assessment)	Launched	Launched
Tagrisso AURA3	EGFR inhibitor	≥2nd line advanced EGFRm T790M NSCLC	Completed	Launched	Launched		
Brilinta/Brilique	P2Y12 receptor antagonist	arterial thrombosis	Completed	Launched	Launched	Launched	Launched
Onglyza SAVOR-TIMI 53	DPP-4 inhibitor	Type 2 diabetes outcomes trial	Completed	Launched	Launched	Launched	*Onglyza* SAVOR-TIMI 53
Farxiga/Forxiga	SGLT2 inhibitor	Type 2 diabetes	Completed	Launched	Launched	Launched	Launched
Imfinzi (durvalumab[#])	PD-L1 mAb	≥2nd line advanced bladder cancer	Completed	Approved, Launched (Breakthrough Therapy & Priority Review)	n/a	n/a	n/a
AZD9150	STAT3 inhibitor	haematological malignancies	Completed				
MEDI0680	PD-1 mAb	solid tumours	Completed				
Kombiglyze XR/*Komboglyze*[1]	DPP-4 inhibitor/ metformin FDC	Type 2 diabetes		Launched	Launched		Launched

[#] Collaboration.
[1] *Kombiglyze* XR in the US; *Komboglyze* in the ROW.

Patent Expiries of Key Marketed Products

Patents covering our products are or may be challenged by third parties. Generic products may be launched 'at risk' and our patents may be revoked, circumvented or found not to be infringed. For more information, please see Risk from page 210. Many of our products are subject to challenges by third parties. Details of material challenges by third parties can be found in Note 28 to the Financial Statements from page 182. The expiry dates shown below include granted SPC/PTE and/or Paediatric Exclusivity periods (as appropriate). In Europe, the exact SPC situation may vary by country as different Patent Offices grant SPCs at different rates. Expiry dates in red relate to new molecular entity patents, the remaining dates relate to other patents. The expiry dates of relevant regulatory data exclusivity periods are not represented in the table below. A number of our products are subject to generic competition in one or more markets. Further information can be found in the Geographical Review from page 221.

Key marketed products	Description	US	China	EU[1]	Japan	US Product Sales ($m)			Aggregate Revenue for China, Japan and Europe[2] Product Sales ($m)		
						2017	2016	2015	**2017**	2016	2015
Atacand[3]	An angiotensin II antagonist for the 1st line treatment of hypertension and symptomatic heart failure	expired	[4]	expired	[4]	**19**	36	34	**86**	97	106
Bevespi Aerosphere	A combination of a long-acting muscarinic antagonist and a long-acting beta-2 adrenergic agonist used for the long-term maintenance treatment of airflow obstruction in COPD	2030-2031	2030	2030	2030	**16**	2	–	**–**	–	–
Brilinta/ Brilique	An oral P2Y12 platelet inhibitor for acute coronary syndromes (ACS) or extended therapy in high-risk patients with a history of myocardial infarction (MI)	2018-2024, 2021-2030	2018, 2019[5], 2021[6]	2018-2024, 2021[7]-2027	2023-2024, 2025-2030	**509**	348	240	**402**	347	268
Bydureon/ Bydureon BCise	A once-weekly injectable glucagon-like peptide-1 (GLP-1) receptor agonist available as a single-dose tray, a single-dose pen or autoinjector device indicated as monotherapy and as part of combination therapy adjunct to diet and exercise to improve glycaemic control in adults with Type 2 diabetes	2018-2028, 2030[8]	2020-2028, 2029[8]	2017-2028, 2029[8]	2018-2028, 2029[8]	**458**	463	482	**93**	109	90
Byetta	A twice-daily injectable GLP-1 receptor agonist indicated to improve glycaemic control in adults with Type 2 diabetes	2017-2020[9]	2020	2017-2021	2018-2020	**114**	164	209	**39**	62	86
Calquence	A selective inhibitor of Bruton tyrosine kinase indicated for the treatment of mantle cell lymphoma (MCL) and in development for the treatment of multiple B-cell malignancies and other cancers	2032, 2036	2032	2032	2032	**–**	–	–	**–**	–	–
Crestor	A statin for dyslipidaemia and hypercholesterolaemia	2018-2022[10]	2020-2021	2017, 2020	2017, 2023	**373**	1,223	2,844	**1,528**	1,698	1,642
Daliresp/ Daxas	An oral PDE4 (phosphodiesterase-4) inhibitor for adults with severe COPD to decrease their number of exacerbations (US only)	2020, 2023-2024	2023	2019[11], 2023		**167**	134	104	**26**	15	–
Duaklir	A fixed-dose combination of a long-acting muscarinic antagonist (LAMA) and a long-acting beta2-adrenergic receptor agonist (LABA) for the maintenance treatment of COPD	2020, 2025*, 2022-2027[12]	2020, 2022-2027	2025, 2022-2029	2025, 2021-2029	**–**	–	–	**77**	62	26
Fasenra	A monoclonal antibody for add-on maintenance treatment of patients with severe asthma aged 12 years and older, and with an eosinophilic phenotype, which directly targets and depletes eosinophils by recruiting natural killer cells and inducing apoptosis (programmed cell death)	2020, 2028-2034	2021, 2028	2020, 2028	2020	**–**	–	–	**–**	–	–
Faslodex	An injectable oestrogen receptor antagonist. It is used for the treatment of hormone receptor positive advanced breast cancer whose disease has progressed following treatment with prior endocrine therapy	2021[13]		2021[14]	2026	**492**	438	356	**352**	311	269
Farxiga/ Forxiga	A selective inhibitor of human sodium-glucose co-transporter 2 (SGLT2 inhibitor) indicated as monotherapy and as part of combination therapy adjunct to diet and exercise to improve glycaemic control in adult patients with Type 2 diabetes	2020, 2025*, 2020-2030	2020-2023, 2028	2020-2027	2024-2025, 2028	**355**	358	229	**245**	175	121
Fluenz tetra/ *FluMist* Quadravalent	A live-attenuated vaccine indicated for active immunisation for the prevention of influenza disease caused by influenza A subtype viruses and type B viruses contained in the vaccine	2018-2026	2020-2025	2020-2026	2020-2025	**–**	33	206	**76**	65	83
Imfinzi	A human monoclonal antibody that blocks PD-L1 interaction with PD-1 and CD80 on T cells, countering the tumour's immune-evading tactics and inducing an immune response. It is currently indicated in the US for the treatment of locally advanced or metastatic urothelial carcinoma	2030	2030	2030	2030	**19**	–	–	**–**	–	–
Iressa	An epidermal growth factor receptor-tyrosine kinase inhibitor (EGFR-TKI) that acts to block signals for cancer cell growth and survival in advanced non-small cell lung cancer (NSCLC)	2017[15]	2023	2019[16], 2023	2018, 2023	**39**	23	6	**367**	358	396
Kombiglyze XR[17]	Combines saxagliptin (*Onglyza*) and extended release metformin (metformin XR) in a once-daily tablet for Type 2 diabetes	2023, 2025	2021, 2025	2021-2026, 2025	[18]	**111**	145	154	**–**	–	–

Key marketed products	Description	US	China	EU[1]	Japan	US Product Sales ($m)			Aggregate Revenue for China, Japan and Europe[2] Product Sales ($m)		
						2017	2016	2015	**2017**	2016	2015
Lynparza	An oral poly ADP-ribose polymerase (PARP) inhibitor that may exploit tumour DNA damage response (DDR) pathway deficiencies to potentially kill cancer cells. It is indicated in the EU and US for the treatment of women with BRCAm ovarian cancer	2022-2024, 2028*, 2029[19], 2024-2031	2021-2024, 2024-2027, 2029[19]	2021-2029, 2024-2027	2021-2024, 2024-2027	**141**	127	70	**130**	81	23
Movantik/ Moventig	A once-daily, peripherally-acting mu-opioid receptor antagonist approved for the treatment of opioid-induced constipation (OIC) in adult patients. The indication varies by jurisdiction	2022-2027, 2028*, 2032	2024	2022-2024, 2029*[20]	2022-2024	**120**	90	28	**2**	–	–
Nexium	A proton pump inhibitor used to treat acid-related diseases	2018-2020[21]	2018-2019	2018	2018, 2018-2019	**499**	526	870	**973**	975	985
Onglyza	An oral dipeptidyl peptidase 4 (DPP-4) inhibitor for Type 2 diabetes	2023, 2028	2021, 2025	2024, 2025	[18]	**209**	231	266	**114**	120	124
Pulmicort	An inhaled corticosteroid for maintenance treatment of asthma	2018-2019[22]	2018[23]	2018[23]	2018[23]	**156**	174	200	**847**	732	662
Qtern	A once-daily oral treatment combination of dapagliflozin (10mg) and saxagliptin (5mg) indicated as an adjunct to diet and exercise to improve glycaemic control in adults with Type 2 diabetes who have inadequate control with dapagliflozin or who are already treated with dapagliflozin and saxagliptin	2020, 2025*, 2020-2029	2020-2023	2020-2027	2024-2025	**4**	–	–	**–**	–	–
Seloken/ Toprol-XL	A beta-blocker once-daily tablet for control of hypertension, heart failure and angina	expired	expired	expired	expired	**37**	95	89	**470**	462	436
Seroquel XR	Generally approved for the treatment of schizophrenia, bipolar disorder, major depressive disorder and, on a more limited basis, for generalised anxiety disorder	2017[24]	2017	2017	[25]	**175**	515	716	**82**	134	201
Symbicort	A combination of an inhaled corticosteroid and a fast onset LABA for maintenance treatment of asthma and COPD	2017-2029[26]	2017-2018[27]	2018-2019[27]	2017-2020[27]	**1,099**	1,242	1,520	**1,201**	1,276	1,375
Synagis	A humanised mAb used to prevent serious lower respiratory tract disease caused by respiratory syncytial virus (RSV) in paediatric patients at high risk of acquiring RSV disease	2023		2023	2023	**317**	325	285	**370**	352	377
Tagrisso	An EGFR-TKI indicated for patients with metastatic EGFR T790M mutation-positive NSCLC	2032	2032	2032	2034	**405**	254	15	**486**	158	4
Tudorza/ Eklira Genuair	A LAMA for the maintenance treatment of COPD	2020, 2025*, 2022-2027	2020, 2022-2027	2025, 2022-2029	2025, 2021-2029	**66**	77	103	**74**	84	77
Xigduo	Combines dapagliflozin (*Farxiga/Forxiga*), an SGLT2 inhibitor, and metformin IR, in a twice-daily tablet to improve glycaemic control in adult patients with Type 2 diabetes who are inadequately controlled by metformin alone	2020, 2025*, 2020-2030	2020-2023	2020-2028	2024-2025, 2030	**134**	99	32	**58**	37	21
Zoladex	A luteinising hormone-releasing hormone (LHRH) agonist used to treat prostate cancer, breast cancer and certain benign gynaecological disorders	2022	2021	2021	2021	**15**	35	28	**483**	498	485

* Date represents expiry of a pending SPC/PTE and/or Paediatric Exclusivity period.
[1] Expiry in major EU markets.
[2] The Product Sales reflected are of Europe Region as defined in Market definitions on page 235.
[3] *Atacand HCT* in US.
[4] Takeda retained rights.
[5] The patent was invalidated during invalidation proceedings at the Chinese Patent Office (SIPO). The patentee has appealed that decision.
[6] The patent was invalidated during invalidation proceedings at the Chinese Patent Office (SIPO).
[7] The patent was revoked during opposition proceedings at the European Patent Office (EPO). The patentee has appealed that decision.
[8] Patent expiry date relates to *BCise*.
[9] Settled with two generic companies with a licensed entry date of 15 October 2017, or later, subject to regulatory approval.
[10] A settlement agreement in the US permitted Watson Laboratories, Inc. and Actavis, Inc. (together, Watson) to begin selling its generic version of *Crestor* and its rosuvastatin zinc product from 2 May 2016.
[11] There is eight years' data exclusivity and two years' market exclusivity for *Daxas* in the EU to 5 July 2020.
[12] Not filed for approval in US.
[13] Settled with various generic companies for licensed entry dates of 25 March 2019 or later.
[14] In Germany, the patent has been revoked, and AstraZeneca is appealing; generics have launched pending appeal.
[15] In the US, *Iressa* has seven years' orphan drug exclusivity to 13 July 2022.
[16] SPCs expire 2 March 2019. There is eight years' data exclusivity and two years' market exclusivity for *Iressa* in the EU to 24 June 2019.
[17] *Komboglyze/Kombiglyze* XR revenue is included in the *Onglyza* revenue figure.
[18] AstraZeneca does not have commercialisation rights.
[19] Patent expiry date relates to the tablet formulation.
[20] ProStrakan Group (a subsidiary of Kyowa Hakko Kirin Co. Ltd) is exclusively licensed in the EU, Iceland, Norway, Switzerland and Liechtenstein.
[21] Licence agreements have allowed generic companies to launch generic capsule versions in the US.
[22] A licence agreement with Teva permits its ongoing sale in the US of a generic version from December 2009. The 2018 expiry relates to the *Flexhaler* device, while the 2019 expiry relates to the formulation in the *Flexhaler* presentation and also to *Respules*.
[23] The 2018 expiry relates to the formulation in the *Turbuhaler* presentation and to a process useful for the *Respules* product.
[24] Licence agreements with various generics companies allowed launches of generic versions of *Seroquel XR* in the US as of 1 November 2016.
[25] Rights licensed to Astellas.
[26] Patent expiry dates relate to the *Symbicort* pMDI product, including any granted Paediatric Exclusivity term.
[27] Patent expiry dates relate to the *Symbicort Turbuhaler* product.

Risk

Risks and uncertainties

Operating in the pharmaceutical sector carries various inherent risks and uncertainties that may affect our business. In this section, we describe the risks and uncertainties that we consider material to our business in that they may have a significant effect on our financial condition, results of operations, and/or reputation.

These risks are not listed in any particular order of priority and have been categorised consistently with the Principal Risks detailed from page 63, which are included below along with the other risks that we face. We believe that the forward-looking statements about AstraZeneca in this Annual Report, identified by words such as 'anticipates', 'believes', 'expects' and 'intends', and that include, among other things, Future prospects in the Financial Review on page 78, are based on reasonable assumptions. However, forward-looking statements involve inherent risks and uncertainties such as those summarised below. They relate to events that may occur in the future, that may be influenced by factors beyond our control and that may have actual outcomes materially different from our expectations. Therefore, other risks, unknown or not currently considered material, could have a material adverse effect on our financial condition or results of operations.

Product pipeline and IP risks	Impact
Failure or delay in delivery of pipeline or launch of new products	
Our continued success depends on the development and successful launch of innovative new drugs. The development of pharmaceutical product candidates is a complex, risky and lengthy process involving significant financial, R&D and other resources. A project may fail at any stage of the process due to various factors, including failure to obtain the required regulatory or marketing approvals for the product candidate or for its manufacturing facilities, unfavourable clinical efficacy data, safety concerns, failure to demonstrate adequate cost-effective benefits to regulatory authorities and/or payers and the emergence of competing products. More details of projects that have suffered setbacks or failures during 2017 can be found in the Therapy Area Review. The anticipated launch dates of major new products significantly affect our business, including investment in large clinical studies, the manufacture of pre-launch product stocks, investment in marketing materials pre-launch, sales force training and the timing of anticipated future revenue streams from new Product Sales. Launch dates are primarily driven by our development programmes and the demands from various factors, including adverse findings in pre-clinical or clinical studies, regulatory demands, price negotiation, competitor activity and technology transfer. More complex and stringent regulations govern the manufacturing and supply of biologics products, thus impacting the production and release schedules of such products more significantly. In addition to developing products in-house, we also expand our product portfolio and geographical presence through licensing arrangements and strategic collaborations, which are key to growing and strengthening our business. The success of such arrangements is largely dependent on the technology and other IP rights we acquire or license, and the resources, efforts and skills of our partners. Disputes or difficulties in our relationship with our collaborators or partners may arise, for example, due to conflicting priorities or conflicts of interest between parties. In many cases we make milestone payments well in advance of the commercialisation of the products, with no assurance that we will recoup these payments. We experience strong competition from other pharmaceutical companies in respect of licensing arrangements, strategic collaborations, and acquisition targets.	Failure or delay in development of new product candidates that achieve the expected commercial success could frustrate the achievement of development targets, adversely affect the reputation of our R&D capabilities, and is likely to materially adversely affect our business and results of operations. See also Failure to achieve strategic plans or meet targets and expectations on page 219. Since our business model and strategy rely on the success of relatively few compounds, the failure of any compound in our late-stage pipeline or in-line products may have a significant negative effect on our business or results of operations. Significant delays to anticipated launch dates of new products could have a material adverse effect on our financial position and/or results of operations. For example, for the launch of products that are seasonal in nature, delays in regulatory approvals or manufacturing difficulties may delay launch to the next season which, in turn, may significantly reduce the return on costs incurred in preparing for the launch for that season. Furthermore, in immuno-oncology in particular, speed to market is critical given the large number of clinical trials being conducted by other companies. In addition, a delayed launch may lead to increased costs if, for example, marketing and sales efforts need to be rescheduled or performed for longer than expected. Failure to complete collaborative projects in a timely, cost-effective manner may limit our ability to access a greater portfolio of products, IP technology and shared expertise. Disputes and difficulties with our partners may erode or eliminate the benefits of our alliances and collaborations. In addition, failure to perform on the part of parties to externalisation transactions may diminish the future value of those transactions or, in some cases, allow a competitor to beat us to market with a similar or first-in-class product. Delay of launch can also erode the term of patent exclusivity. Competition from other pharmaceutical companies means that we may be unsuccessful in implementing some of our intended projects or we may have to pay a significant premium over book or market values for our acquisitions.

Product pipeline and IP risks	Impact

Difficulties in obtaining or maintaining regulatory drug approval for products

We are subject to strict controls on the commercialisation processes for our pharmaceutical products, including their development, manufacture, distribution and marketing. The criteria for establishing safety, efficacy and quality, which are essential for securing marketing approvals, may vary by country and by region. Regulators can refuse to grant approval or may require additional data before approval is granted, even though the medicine may already be launched in other countries.

Factors, including advances in science and technology, evolving regulatory science, and different approaches to benefit/risk tolerance by regulatory authorities, the general public, and other third party public interest groups influence the initial approvability of new drugs. While we seek to manage many of these risks, unanticipated and unpredictable policymaking by governments and regulators, limited regulatory authority resources or conflicting priorities often lead to severe delays in regulatory approvals.

We may be required to conduct additional clinical trials after a drug's approval because a regulatory authority may have a concern that impacts the benefit/risk profile of one of our marketed drugs or drugs currently in development. For our marketed drugs, new data and meta-analyses have the potential to drive changes in the approval status or labelling. In addition, recent years have seen an increase in post-marketing regulatory requirements and commitments, and an increased call for third-party access to regulatory and clinical trial data packages for independent analysis and interpretation, and broader data transparency. Such transparency, while important, could lead to inappropriate or incorrect data analyses which may damage the integrity of our products and our Company's reputation.

Delays in regulatory reviews and approvals could delay our ability to market our products and may adversely affect our revenue. In addition, post-approval requirements, including additional clinical trials, could result in increased costs, and may impact the labelling and approval status of currently marketed products.

Failure to obtain, defend and enforce effective IP protection and IP challenges by third parties

A pharmaceutical product may be protected from being copied for a limited period of time under certain patent rights and/or related IP rights, such as Regulatory Data Protection or Orphan Drug status. Typically, products protected by such rights generate significantly higher revenues than those not protected. Our ability to obtain, maintain, defend and enforce patents and other IP rights in relation to our products is an important element in protecting and recouping our investment in R&D and creating long-term value for the business. Some countries in which we operate do not offer robust IP protection. This may be because IP laws are still developing, the scope of those laws is limited or the political environment does not support such legislation.

We may also face challenges early in the patent application process and throughout a patent's life. The grounds for these challenges could be the validity of a patent and/or its effective scope and are based on ever-evolving legal precedents. We are experiencing increased challenges in the US and elsewhere in the world and there can be no guarantee of success for either party in patent proceedings and litigation.

We also bear the risk that our products may be found to infringe patents owned or licensed by third parties, including research-based and generic pharmaceutical companies and individuals. These third parties may seek remedies for patent infringement, including injunctions (for example, preventing the marketing of one of our products) and damages (for example, research-based competitors are alleging infringement of their patents and are seeking damages in relation to our marketing of *Imfinzi* and *Calquence*).

Details of material patent proceedings and litigation matters can be found in Note 28 to the Financial Statements from page 182.

Limitations on the availability of patent protection, the ability to obtain related IP rights or the use of compulsory licensing in certain countries in which we operate, as well as our ability to defend and enforce our patents, could allow for earlier entry of generic or biosimilar competitor products. This could have a material adverse effect on the pricing and sales of our products and, consequently, could materially adversely affect our revenues.

Third parties may be awarded remedies for alleged infringement of their IP, for example injunctions and damages for alleged patent infringement. In the US, courts may order enhanced (ie up to treble) damages for alleged wilful infringement of patents. From time to time we may acquire licences, discontinue activities and/or modify processes to avoid claims of patent infringement. These steps could entail significant costs and our revenue and margins could be materially adversely affected.

More information about protecting our IP, the risk of patent litigation and the early loss of IP rights is contained in the Intellectual Property section on page 32, the Competitive pressures including expiry or loss of IP rights and generic competition risk on page 212 and Note 28 to the Financial Statements from page 182.

Commercialisation risks	Impact

Competitive pressures including expiry or loss of IP rights, and generic competition

A pharmaceutical product competes with other products marketed by research-based pharmaceutical companies and with generic or biosimilar drugs marketed by generic drug manufacturers.

Approval of competitive products for the same or similar indication as one of our products may result in immediate and significant decreases in our revenues.

Generic versions of products, including biosimilars, are often sold at lower prices than branded products, as the manufacturer does not have to recoup the significant cost of R&D investment and market development. Expiry or loss of IP rights can materially adversely affect our revenues and financial condition due to the launch of cheaper generic copies of the product in the country where the rights have expired or been lost (see the table in the Patent Expiries of Key Marketed Products section from page 208). For example in 2017, our US Product Sales of *Crestor* fell to $373 million (2016: $1,223 million), following the launch of generics.

Additionally, the expiry or loss of patents covering other innovator companies' products may also lead to increased competition and pricing pressure for our own, still-patented products in the same product class due to the availability of lower priced generic products in that product class.

Generic manufacturers may also take advantage of the failure of certain countries to properly enforce Regulatory Data Protection or other related IP rights and may launch generics during this protected period. This is a particular risk in some Emerging Markets where appropriate patent protection or other related IP rights may be difficult to obtain or enforce.

The biosimilars market has experienced notable growth in 2017, with approval of several monoclonal antibody biosimilars in the US and Europe. This trend is expected to continue. Increased regulatory and legal activity related to the launch and approval of these therapeutics is anticipated. Regulatory authorities in other territories continue to implement or consider abbreviated approval processes for biosimilars, allowing quicker entry to market for such products and earlier than anticipated competition for patented biologics.

As well as facing generic competition upon expiry or loss of IP rights, we also face the risk that generic drug manufacturers seek to market generic versions of our products prior to expiries of our patents and/or the Regulatory Exclusivity periods. For example, we are currently facing challenges from numerous generic drug manufacturers regarding our patents relating to key products, including *Brilinta*, *Faslodex*, *Byetta*, *Daliresp*, *Onglyza* and *Crestor*.

IP rights protecting our products may be challenged by external parties. We expect our most valuable products to receive the greatest number of challenges. Despite our efforts to establish and defend robust patent protection for our products, we bear the risk that courts may decide that our IP rights are invalid and/or that third parties do not infringe our asserted IP rights.

Where we assert our IP rights but are ultimately unsuccessful, third parties may seek damages, alleging, for example, that they have been inappropriately restrained from entering the market. In such cases, we bear the risk that we incur liabilities to those third parties.

Details of material patent litigation matters can be found in Note 28 to the Financial Statements from page 182.

If we are not successful in obtaining, maintaining, defending or enforcing our exclusive rights to market our products, particularly in the US where we achieve our highest Product Sales, our revenue and margins could be materially adversely affected. In addition, unsuccessful assertion of our IP rights may lead to damages or other liabilities to third parties that could materially adversely affect our financial performance.

Unfavourable resolution of current and potential future patent litigation may require us to make significant provisions in our accounts relating to legal proceedings and/or could materially adversely affect our financial condition or results of operations.

Commercialisation risks	Impact

Price controls and reductions

Most of our key markets have experienced the implementation of various cost control or reimbursement mechanisms for pharmaceutical products.

In the US, there is significant pricing pressure driven by payer consolidation, restrictive reimbursement policies, and cost control tools, such as exclusionary formularies and price protection clauses. Many formularies employ 'generic first' strategies and/or require physicians to obtain prior approval for the use of a branded medicine where a generic alternative exists. These mechanisms can be used by payers to limit the use of branded products and put pressure on manufacturers to reduce net prices. In addition, patients are seeing changes in the design of their health plan benefits and may experience variation in how their plans cover their medications, including increases in the out-of-pocket payments for their branded medications. Patient out-of-pocket spending is generally in the form of a co-payment or co-insurance, but there is a growing trend towards high deductible health plans that require that patients pay the full list price of their drugs and services until they meet certain out-of-pocket thresholds. Ongoing scrutiny of the US pharmaceutical industry, focused largely on pricing, is placing increased emphasis on the value of medications. This scrutiny will likely continue across many stakeholders, including policymakers and legislators.

The new US political leadership continues to consider a range of legislative and regulatory proposals to address the high costs of prescription drugs as well as reforms to the US healthcare system. These may include changes to the ACA, modifications to Medicare and other government programmes, and policies aimed at reducing drug prices such as importation schemes. For more information, please see Pricing of medicines in the Marketplace section from page 12. However, many of these proposals have not achieved broad support from policymakers and, in the near term, legislators have shifted focus away from healthcare reform. It is difficult to predict what specific proposals could be enacted and to determine the implications for the healthcare system and pharmaceutical industry. However, healthcare reform remains a key campaign promise of the current administration and proposals that would significantly modify existing laws and regulations, including the ACA, government programmes and policies relating to drug pricing, could affect private health insurance, coverage through Medicaid and the health insurance exchange marketplaces, Medicare coverage and savings provisions, and other facets of the US healthcare market, with potentially significant impacts on the pharmaceutical industry.

In Europe, the industry continues to be exposed to various *ad hoc* cost-containment measures and reference pricing mechanisms, which impact prices. There is a trend towards increasing transparency and comparison of prices among EU Member States which may eventually lead to a change in the overall pricing and reimbursement landscape.

In Emerging Markets, governments are increasingly controlling pricing in the self-pay sector and favouring locally manufactured drugs. In addition, the emergence of price referencing has been seen in some markets combined with a call from authorities to provide greater global price transparency.

Concurrently, many markets are adopting the use of Health Technology Assessment (HTA) to provide a rigorous evaluation of the clinical efficacy of a product at, or post, launch. HTA evaluations are also increasingly being used to assess the clinical effect, as well as cost-effectiveness, of products in a particular health system. This comes as payers and policymakers attempt to increase efficiencies in the use and choice of pharmaceutical products.

A summary of the principal aspects of price regulation and how pricing pressures are affecting our business in our most important markets is set out in Pricing of medicines in the Marketplace section from page 12 and on the next page in the following risk factor.

Due to these pricing pressures, there can be no certainty that we will be able to charge prices for a product that, in a particular country or in the aggregate, enable us to earn an adequate return on our product investment. These pressures, including the increasingly restrictive reimbursement policies to which we are subject, could materially adversely affect our business or results of operations.

We expect these pricing pressures will continue and may increase.

The continued disparities in EU and US pricing systems could lead to marked price differentials between regions, which, by way of the implementation of existing or new reference pricing mechanisms, increases the pricing pressure affecting the industry. The importation of pharmaceutical products from countries where prices are low due to government price controls, or other market dynamics, to countries where prices for those products are higher, is already prevalent and may increase. Strengthened collaboration by governments may accelerate the development of further cost-containment policies (such as joint procurement). Increased and simplified access to national and regional prices in markets and the publication of these prices in centralised databases have facilitated the uptake and efficiency of price referencing across the world.

Commercialisation risks	Impact

Economic, regulatory and political pressures

Operating in over 100 countries, we are subject to political, socio-economic and financial factors both globally and in individual countries.

A sustained global economic downturn may further exacerbate pressure from governments and other healthcare payers on medicine prices and volumes of sales in response to pressures on budgets, and may cause a slowdown or a decline in growth in some markets. Those most severely impacted by the economic downturn may seek alternative ways to settle their debts through, for example, the issuance of government bonds which might trade at a discount to the face value of the debt. Other customers may cease to trade, which may result in losses from writing off debts, or a reduction in demand for products.

We are highly dependent on being able to access a sustainable flow of liquid funds due to the high fixed costs of operating our business and the long and uncertain development cycles of our products. In a sustained economic downturn, financial institutions with whom we deal may cease to trade and there can be no guarantee that we will be able to access monies owed to us without a protracted, expensive and uncertain process, if at all.

The majority of our cash investments are managed centrally and are invested in collateralised bank deposits, fixed income securities in government, financial and non-financial securities and AAA credit-rated institutional money market funds. Money market funds are backed by institutions in the US and the EU, which, in turn, invest in other funds, including sovereign funds. This means our credit exposure is a mix of US and EU sovereign default risk, financial institution and non-financial institution default risk.

On 23 June 2016, the UK held a referendum on the UK's continuing membership of the EU, the outcome of which was a decision for the UK to leave the EU (Brexit). On 29 March 2017, the UK Government formally notified the EU under Article 50 of the UK's intention to leave the EU. This notification began the process of negotiation that will likely determine the future terms of the UK's relationship with the EU. Absent a negotiated agreement, the UK will leave the EU on 29 March 2019 and relevant EU law and agreements will cease to apply. Until the Brexit negotiation process is completed, it is difficult to anticipate the potential impact on AstraZeneca's market share, sales, profitability and results of operations. The Group operates from a global footprint and retains flexibility to adapt to changing circumstances. The uncertainty during and after the period of negotiation is also expected to increase volatility and may have an economic impact on the countries in which we operate, particularly in the UK and Eurozone. The Board reviews the potential impact of Brexit as an integral part of its Principal Risks (as outlined from page 63) rather than as a stand-alone risk. As the process of Brexit evolves, the Board will continue to assess its impact on the Company.

Deterioration of, or failure to improve, socio-economic conditions, and situations and/or resulting events, depending on their severity, could adversely affect our supply and/or distribution chain in the affected countries and the ability of customers or ultimate payers to purchase our medicines. This could adversely affect our business or results of operations.

While we have adopted cash management and treasury policies to manage the risk of not being able to access a sustainable flow of liquid funds (see the Financial risk management policies section of the Financial Review from page 79), we cannot be certain that these will be as effective as they are intended to be, in particular in the event of a global liquidity crisis. In addition, open positions where we are owed money and investments we have made in financial and non-financial institutions or money market funds cannot be guaranteed to be recoverable. Additionally, if we need access to external sources of financing to sustain and/or grow our business, such as the debt or equity capital financial markets, this may not be available on commercially acceptable terms, if at all, in the event of a severe and/or sustained economic downturn. This may, for instance, be the case in the event of any default by the Company on its debt obligations, which may materially adversely affect our ability to secure debt funding in the future or our financial condition in general. Further information on debt funding arrangements is contained in the Financial risk management policies section of the Financial Review from page 79.

It is still early to judge the impact of Brexit as it is unclear as to the trading relationships the UK will be able to negotiate with the EU and other significant trading partners. Any deterioration in market access or trading terms including customs duties, VAT or other tariffs that constitute real cost, delay or restrictions to the movement of goods and increased administration may materially adversely impact our financial performance.

Commercialisation risks	Impact

Failures or delays in the quality and execution of our commercial strategies

Commercial success of our Growth Platforms is a critical factor in sustaining or increasing global Product Sales and replacing lost Product Sales due to patent expiry. The successful launch of a new pharmaceutical product involves substantial investment in sales and marketing activities, launch stocks and other items. We may ultimately be unable to achieve commercial success for various reasons, including difficulties in manufacturing sufficient quantities of the product candidate for development or commercialisation in a timely manner, the impact of price control measures imposed by governments and healthcare authorities, the outcome of negotiations with third-party payers, erosion of IP rights, including infringement by third parties, failure to show a differentiated product profile and changes in prescribing habits.

The commercialisation of biologics is often more complex than for small molecule pharmaceutical products, primarily due to differences in the mode of administration, technical aspects of the product, and rapidly changing distribution and reimbursement environments.

We face particular challenges in Emerging Markets, including:

- More volatile economic conditions and/or political environments.
- Competition from multinational and local companies with existing market presence.
- The need to identify and to leverage appropriate opportunities for sales and marketing.
- Poor IP protection.
- Inadequate protection against crime (including counterfeiting, corruption and fraud).
- The need to impose developed market compliance standards.
- The need to meet a more diverse range of national regulatory, clinical, manufacturing and distribution requirements.
- Potential inadvertent breaches of local and international law.
- Not being able to recruit appropriately skilled and experienced personnel.
- Difficulty in identifying the most effective sales and marketing channels and routes to market.
- Intervention by national governments or regulators restricting market access and/or introducing adverse price controls.
- Difficulty in managing local partnerships such as co-promotion and co-marketing; both driving performance and adhering to AstraZeneca's compliance standards which are often higher than the market norm.
- Difficulties in cash repatriation due to strict foreign currency controls and lack of hard currency reserves in some Emerging Markets.
- Complexity inherent within a direct exports business from UK and Sweden operations to countries where we do not have a legal entity.

We may also seek to acquire complementary businesses or enter into other strategic transactions. The integration of an acquired business could involve incurring significant debt and unknown or contingent liabilities, as well as having a negative effect on our reported results of operations from acquisition-related charges, amortisation of expenses related to intangibles and charges for the implementation of long-term assets.

We may also experience difficulties in integrating geographically separated organisations, systems and facilities, and personnel with different organisational cultures. Disputes or difficulties in our relationship with our collaborators or partners may also arise, often due to conflicting priorities or conflicts of interest between parties.

Failure to execute our commercial strategies could materially adversely impact our business or results of operations.

If a new product does not succeed as anticipated or its rate of sales growth is slower than anticipated, there is a risk that we may be unable to fully recoup the costs incurred in launching it, which could materially adversely affect our business or results of operations.

Due to the complexity of the commercialisation process for biologics, the methods of distributing and marketing biologics could materially adversely impact our revenues from the sales of biologics medicines, such as *Synagis* and *FluMist/Fluenz*.

The failure to exploit potential opportunities appropriately in Emerging Markets or materialisation of the risks and challenges of doing business in such markets, including inadequate protection against crime (including counterfeiting, corruption and fraud) or inadvertent breaches of local and international law may materially adversely affect our reputation, business or results of operations.

Integration processes may also result in business disruption, diversion of management resources, the loss of key employees and other issues, such as a failure to integrate IT and other systems.

The incurrence of significant debt or liabilities due to the integration of an acquired business could cause deterioration in our credit rating and result in increased borrowing costs and interest expense. We may issue additional shares to pay for acquired businesses, which would result in the dilution of our then existing shareholders.

Supply chain and business execution risks	Impact

Failure to maintain supply of compliant, quality products

We may experience difficulties, delays and interruptions in the manufacturing and supply of our products for various reasons, including:

- Demand significantly in excess of forecast demand, which may lead to supply shortages (this is particularly challenging before launch).
- Supply chain disruptions, including those due to natural or man-made disasters at one of our facilities or at a critical supplier or vendor.
- Delays in construction of new facilities or the expansion of existing facilities, including those intended to support future demand for our products (the complexities associated with biologics facilities, especially for drug substance, increase the probability of delay).
- The inability to supply products due to a product quality failure or regulatory agency compliance action such as licence withdrawal, product recall or product seizure.
- Other manufacturing or distribution problems, including changes in manufacturing production sites, limits to manufacturing capacity due to regulatory requirements, changes in the types of products produced, or physical limitations or other business interruptions that could impact continuous supply.

We increasingly rely on third parties for the timely supply of goods, such as raw materials (for example, the API in some of our medicines and drug substances and/or finished drug products for some of our biologics medicines), equipment, formulated drugs and packaging, critical product components and services, all of which are key to our operations. Many of these goods are difficult to substitute in a timely manner or at all. We expect that external capacity for biologics drug substance production will remain constrained for the next few years and, accordingly, may not be readily available for supplementary production in the event that we experience an unforeseen need for such capacity.

Difficulties with manufacturing and supply, forecasting, distribution or third-party suppliers may result in product shortages, which may lead to lost Product Sales and materially adversely affect our reputation and revenues. Even slight variations in components or any part of the manufacturing process may lead to a product that is non-compliant and does not meet quality standards. This could lead to recalls, spoilage, product shortage, regulatory action and/or reputational harm.

Illegal trade in our products

The illegal trade in pharmaceutical products is widely recognised by industry, non-governmental organisations and governmental authorities to be increasing. Illegal trade includes counterfeiting, theft and illegal diversion (that is, when our products are found in a market where we did not send them and where they are not approved or not permitted/allowed to be sold). There is a risk to public health when illegally traded products enter the supply chain, as well as associated financial risk. Authorities and the public expect us to help reduce opportunities for illegal trade in our products through securing our supply chains, surveillance, investigation and supporting legal action against those found to be engaged in illegal trade.

Public loss of confidence in the integrity of pharmaceutical products as a result of illegal trade could materially adversely affect our reputation and financial performance. In addition, undue or misplaced concern about this issue may cause some patients to stop taking their medicines, with consequential risks to their health. Authorities may take action, financial or otherwise, if they believe we are liable for breaches in our own supply chains.

There is also a direct financial loss when, for example, counterfeit and/or illegally diverted products replace sales of genuine products in a market or genuine products are recalled following discovery of counterfeit products.

Reliance on third-party goods and services

AstraZeneca spends approximately $10 billion each year with trade suppliers. The spend supports the length of our value chain from discovery to manufacture and commercialisation of our medicines.

Many of our business-critical operations, including certain R&D processes, IT systems, HR, finance, tax and accounting services have been outsourced to third party providers. We are therefore heavily reliant on these third parties not just to deliver timely and high quality services, but also to comply with applicable laws and regulations and adhere to our ethical business expectations of third party providers.

The failure of outsource providers to deliver timely services, and to the required level of quality, or the failure of outsource providers to co-operate with each other, could materially adversely affect our financial condition or results of operations. Moreover, the failure of these third parties to operate in an ethical manner could adversely impact our reputation both internally and externally or even result in non-compliance with applicable laws and regulations.

Our business and financial results could also be materially adversely affected by disruptions caused by our failure to successfully manage either the integration of outsourced services or the transition process of insourcing services from third parties.

Supply chain and business execution risks	Impact

Failure of information security, data protection and cybercrime

We are dependent on effective IT systems. These systems support key business functions such as our R&D, manufacturing, supply chain and sales capabilities and are an important means of safeguarding and communicating data, including critical or sensitive information, the confidentiality and integrity of which we rely on. In addition, we must ensure that the personal data which we, or third-party vendors operating on our behalf, hold and process is protected in a manner that complies with the EU GDPR which was approved by the EU on 28 May 2016, and will enter into force in May 2018.

Examples of sensitive information that we protect include clinical trial records (patient names and treatments), personal information (employee bank details, home address), IP related to manufacturing process and compliance, key research science techniques, AstraZeneca property (theft) and privileged access (rights to perform IT tasks).

The size and complexity of our IT systems, and those of our third-party vendors (including outsource providers) with whom we contract, have significantly increased over the past decade and this makes such systems potentially vulnerable to service interruptions and security breaches from attacks by malicious third parties, or from intentional or inadvertent actions by our employees or vendors.

Significant changes in the business footprint and the implementation of the IT strategy, including the creation and use of captive offshore Global Technology Centres, could lead to temporary loss of capability.

We increasingly use the internet, digital content, social media, mobile applications and other forms of new technology to communicate internally and externally. The accessibility and instantaneous nature of interactions with such media may facilitate or exacerbate the risk of unauthorised data loss from within AstraZeneca. It may also lead to false or misleading statements being made about AstraZeneca, which may damage our reputation. As existing social media platforms expand and evolve, and new social media platforms emerge, it becomes increasingly challenging to identify new points of entry and to put structures in place to secure and protect sensitive information.

Any significant disruption to these IT systems, including breaches of data security or cyber security, failure to integrate new and existing IT systems or failure to prepare for emerging EU GDPR and other applicable laws, could harm our reputation and materially adversely affect our financial condition or results of operations.

While we invest heavily in the protection of our data and IT, we may be unable to prevent breakdowns or breaches in our systems that could result in disclosure of confidential or other sensitive information, damage to our reputation, regulatory penalties, financial losses and/or other costs.

The inability to effectively back up and restore data could lead to permanent loss of data that could result in non-compliance with applicable laws and regulations, and otherwise harm our business.

We and our vendors could be susceptible to third-party attacks on our information security systems. Such attacks are of ever-increasing levels of sophistication and are made by groups and individuals with a wide range of motives and expertise, including criminal groups, 'hacktivists' and others. From time to time we experience intrusions, including as a result of computer-related malware. We may be unable to ward off such attacks which could have an adverse affect on our business.

Inappropriate use of certain media vehicles could lead to the unauthorised or unintentional public disclosure of sensitive information (such as personally identifiable information on employees, healthcare professionals or patients, such as those enrolled in our clinical trials), which may damage our reputation, adversely affect our business or results of operations and expose us to legal risks and/or additional legal obligations. Similarly, the involuntary public disclosure of commercially sensitive information or an information loss could adversely affect our business or results of operations. In addition, negative posts or comments about us (or, for example, the safety of our products) on social media websites or other digital channels could harm our reputation.

Failure of critical processes

Unexpected events and/or events beyond our control could result in the failure of critical processes within the Company or at third parties on whom we are reliant.

The business faces threats to business continuity from many directions. Examples of material threats include:

> Disruption to our business if there is instability in a particular geographic region, including as a result of war, terrorism, riots, unstable governments, civil insurrection or social unrest.
> Natural disasters in areas of the world prone to extreme weather events and earthquakes.
> Cyber threats similar to those detailed in the Failure of information security, data protection and cybercrime section above.

Failure of critical processes may result in an inability to research, manufacture or supply products to patients. AstraZeneca has developed a Business Resilience framework which is designed to mitigate such risks. However, there is no guarantee that these measures will be sufficient to prevent business interruption.

This may expose the Company to litigation and/or regulatory action which may result in fines, loss of revenue and adversely affect the Company's financial results.

Any expected gains from productivity initiatives are uncertain

We continue to implement various productivity initiatives and restructuring programmes with the aim of enhancing the long-term efficiency of the business. However, anticipated cost savings and other benefits from these programmes are based on estimates and the actual savings may vary significantly or may not be achieved at all. In particular, these cost-reduction measures are often based on current conditions and cannot always take into account any future changes to the pharmaceutical industry or our operations, including new business developments or wage or price increases.

Our failure to successfully implement these planned cost-reduction measures, either through the successful implementation of employee relations processes (including consultation, engagement, talent management, recruitment and retention), or the possibility that these efforts do not generate the level of cost savings we anticipate, could materially adversely affect our business or results of operations.

Failure to attract and retain key personnel, and engage successfully with our employees

We rely heavily on recruiting and retaining talented employees with a diverse range of skills and capabilities to meet our strategic objectives.

We face intense competition for well-qualified individuals, as the supply of people with specific skills and significant leadership potential or in specific geographic regions may be limited and in the UK the added uncertainty created by Brexit could impact the hiring and retention of staff in some business-critical areas.

The successful delivery of our business objectives is dependent on high levels of engagement, commitment and motivation of the workforce.

The inability to attract and retain highly skilled personnel may weaken our succession plans for critical positions in the medium term, may materially adversely affect the implementation of our strategic objectives and could ultimately impact our business or results of operations.

Failure to engage effectively with our employees could lead to business disruption in our day-to-day operations, reduce levels of productivity and/or increase levels of voluntary turnover, all of which could ultimately materially adversely affect our business or results of operations.

Legal, regulatory and compliance risks	Impact

Failure to adhere to applicable laws, rules and regulations

Our many business operations are subject to a wide range of laws, rules and regulations from governmental and non-governmental bodies around the world.

Any failure to comply with these applicable laws, rules and regulations may result in us being investigated by relevant agencies and authorities and/or in legal proceedings being filed against us. Such investigations or proceedings could result in us becoming subject to civil or criminal sanctions and/or being forced to pay fines or damages. Relevant authorities have wide-ranging administrative powers to deal with any failure to comply with continuing regulatory oversight and this could affect us, whether such failure is our own or that of our contractors or external partners.

Material examples of statutes, rules and regulations impacting business operations include:

- Compliance with Good Manufacturing Practice.
- Local, national and international environment or occupational health and safety laws and regulations.
- Trade control laws governing our imports and exports including nationally and internationally recognised trade agreements, embargoes, trade and economic sanctions and anti-boycott requirements.
- Competition laws and regulations, including challenges from competition authorities and private damages actions.
- Rules and regulations established to promote ethical supply chain management.
- Financial regulations including, but not limited to, external financial reporting, taxation and money laundering.
- Employment practices.
- Disclosure of payments to healthcare professionals under the Sunshine Act and EFPIA legislation.
- Appropriate disclosure of community support, patient group support and product donations.

We have environmental and/or occupational health and safety-related liabilities at some current, formerly owned, leased and third-party sites. For more information on the most significant of these and for details on other significant litigation matters, please refer to Note 28 to the Financial Statements from page 182.

Failure to comply with applicable laws, rules and regulations; manage our liabilities; or to adequately anticipate or proactively manage emerging policy and legal developments could materially adversely affect our licence to operate, or results of operations; adversely affect our reputation; cause harm to people or the environment; and/or lead to fines or other penalties. For example, once a product has been approved for marketing by the regulatory authorities, it is subject to continuing control and regulation, such as the manner of its manufacture, distribution, marketing and safety surveillance. If regulatory issues concerning compliance with environmental, current Good Manufacturing Practice or safety monitoring regulations for pharmaceutical products (often referred to as pharmacovigilance) arise, this could lead to loss of product approvals, product recalls and seizures, and interruption of production, which could create product shortages and delays in new product approvals, and negatively impact patient access.

Safety and efficacy of marketed products is questioned

Our ability to accurately assess, prior to launch, the eventual efficacy or safety of a new product once in broader clinical use can only be based on data available at that time, which is inherently limited due to relatively short periods of product testing and relatively small clinical study patient samples.

Any unforeseen safety concerns or adverse events relating to our products or failure to comply with laws, rules and regulations relating to provision of appropriate warnings concerning the dangers and risks of our products that result in injuries could expose us to large product liability damages claims, settlements and awards, particularly in the US. Adverse publicity relating to the safety of a product or of other competing products may increase the risk of product liability claims.

Details of material product liability litigation matters can be found in Note 28 to the Financial Statements from page 182.

Serious safety concerns or adverse events relating to our products could lead to product recalls, seizures, loss of product approvals and interruption of supply and could materially adversely impact patient access, our reputation and financial revenues.

Significant product liability claims could also arise which could be costly, divert management attention or damage our reputation and demand for our products.

Unfavourable resolution of such current and similar future product liability claims could subject us to enhanced damages, require us to make significant provisions in our accounts relating to legal proceedings and could materially adversely affect our financial condition or results of operations, particularly where such circumstances are not covered by insurance. For more information, see the limited third party insurance coverage risk on page 219.

Adverse outcome of litigation and/or governmental investigations

We may be subject to various product liability, consumer, commercial, anti-trust, environmental, employment or tax litigation or other legal proceedings and governmental investigations. Litigation, particularly in the US, is inherently unpredictable and unexpectedly high awards for damages can result from an adverse verdict. In many cases, plaintiffs may claim enhanced damages in extremely high amounts. In particular, the marketing, promotional, clinical and pricing practices of pharmaceutical manufacturers, as well as the manner in which manufacturers interact with purchasers, prescribers and patients, are subject to extensive regulation, litigation and governmental investigation. Many companies, including AstraZeneca, have been subject to claims related to these practices asserted by federal and state governmental authorities and private payers and consumers, which have resulted in substantial expense and other significant consequences. Note 28 to the Financial Statements from page 182 describes the material legal proceedings in which we are currently involved.

Governmental investigations, for example under the US Foreign Corrupt Practices Act or federal or state False Claims Acts or other types of legal proceedings, regardless of their outcome, could be costly, divert management attention, or damage our reputation and demand for our products. Unfavourable resolution of current and similar future proceedings against us could subject us to criminal liability, fines, penalties or other monetary or non-monetary remedies, including enhanced damages, require us to make significant provisions in our accounts relating to legal proceedings and could materially adversely affect our business or results of operations.

Legal, regulatory and compliance risks	Impact

Failure to adhere to increasingly stringent anti-bribery and anti-corruption legislation

There is an increasing global focus on the implementation and enforcement of anti-bribery and anti-corruption legislation.

Two relevant pieces of legislation include the UK Bribery Act and the US Foreign Corrupt Practices Act, and many other countries where we operate are also enforcing their own laws more aggressively and/or adopting tougher new measures. There has also been an increase in co-operation and co-ordination between regulators across countries with respect to investigation and enforcement.

We have been the subject of anti-corruption investigations and there can be no assurance that we will not, from time to time, be subject to informal enquiries and formal investigations from governmental agencies. In the context of our business, governmental officials interact with us in various roles that are important to our operations, such as in the capacity of a regulator, partner or healthcare payer, reimburser or prescriber, among others. To the extent we are the subject of any such pending and material matters, details are included in Note 28 to the Financial Statements from page 182.

Despite taking measures to prevent breaches of applicable anti-bribery and anti-corruption laws by our personnel and associated third parties, breaches may still occur, potentially resulting in the imposition of significant penalties, such as fines, the requirement to comply with monitoring or self-reporting obligations, or debarment or exclusion from government sales or reimbursement programmes, any of which could materially adversely affect our reputation, business or results of operations.

Economic and financial risks	Impact

Failure to achieve strategic plans or meet targets and expectations

From time to time, we communicate our business strategy or our targets or expectations regarding our future financial or other performance (for example, the expectations described in Future prospects in the Financial Review on page 78). All such statements are of a forward-looking nature and are based on assumptions and judgements we make, all of which are subject to significant inherent risks and uncertainties, including those that we are unaware of and/or that are beyond our control.

There can be no guarantee that our financial targets or expectations will materialise on the expected timeline or at all. Actual results may deviate materially and adversely from any such target or expectation, including if one or more of the assumptions or judgements underlying any such target or expectation proves to be incorrect in whole or in part.

Any failure to successfully implement our business strategy, whether determined by internal or external risk factors, may frustrate the achievement of our financial or other targets or expectations and, in turn, materially damage our brand and materially adversely affect our business, financial position or results of operations.

Unexpected deterioration in the Company's financial position

A wide range of financial risks could result in a material deterioration in the Company's financial position.

As a global business, currency fluctuations can significantly affect our results of operations, which are reported in US dollars. Approximately 31% of our global 2017 Product Sales were in the US, which is expected to remain our largest single market for the foreseeable future. Product Sales in other countries are predominantly in currencies other than the US dollar, including the euro, Japanese yen, Chinese renminbi and Australian dollar.

Our consolidated balance sheet contains significant investments in intangible assets, including goodwill. The nature of the biopharmaceutical business is high risk and requires that we invest in a large number of projects in an effort to develop a successful portfolio of approved products. Our ability to realise value on these significant investments is often contingent upon, among other things, regulatory approvals, market acceptance, competition and legal developments. As such, in the course of our many acquisitions and R&D activities, we expect that some of our intangible assets will become impaired and be written off at some time in the future.

Inherent variability of biologics manufacturing increases the risk of write-offs of these product batches. Due to the value of the materials used, the carrying amount of biologic products is much higher than that of small molecule products. As we continue to grow our biologics business, we also increase the risk of potential impairment charges.

The costs associated with product liability litigation have increased the cost of, and narrowed the coverage afforded by, pharmaceutical companies' product liability insurance. To contain insurance costs, as of February 2006, we adjusted our product liability coverage profile, accepting uninsured exposure above $100 million. In addition, where claims are made under insurance policies, insurers may reserve the right to deny coverage on various grounds. For example, product liability litigation cases relating to *Farxiga* and *Nexium* in the US are not covered by third-party product liability insurance. See Note 28 to the Financial Statements from page 182 for details.

Movements in the exchange rates used to translate foreign currencies into US dollars may materially adversely affect our financial condition or results of operations. Some of our subsidiaries import and export goods and services in currencies other than their own functional currency, and so the financial results of such subsidiaries could be affected by currency fluctuations arising between the transaction and settlement dates. In addition, there are foreign exchange differences arising on the translation of investments in subsidiaries.

We have significant investments in goodwill and intangible assets as a result of our acquisitions of various businesses and our purchases of certain assets, such as product development and marketing rights. Impairment losses may materially adversely affect our financial condition or results of operations. Details of the carrying values of goodwill and intangible assets, and the estimates and assumptions we make in our impairment testing, are included in Notes 8 and 9 to the Financial Statements from page 154.

Financial liabilities arising due to product liability or other litigation, in respect of which we do not have insurance coverage, or if an insurer's denial of coverage is ultimately upheld, could require us to make significant provisions relating to legal proceedings and could materially adversely affect our financial condition or results of operations.

For more information, please see the Adverse outcome of litigation and/or governmental investigations risk on page 218.

The resolution of tax disputes regarding the profits to be taxed in individual territories can result in a reallocation of profits between jurisdictions and an increase or decrease in related tax costs, and has the potential to affect our cash flows, EPS and post-tax earnings. Claims, regardless of their merits or their outcome, are costly, divert management attention and may adversely affect our reputation.

Economic and financial risks	Impact

Unexpected deterioration in the Company's financial position *continued*

The integrated nature of our worldwide operations can produce conflicting claims from revenue authorities as to the profits to be taxed in individual countries. The majority of the jurisdictions in which we operate have double tax treaties with other foreign jurisdictions, which provide a framework for mitigating the incidence of double taxation on our revenues and capital gains.

The Company's worldwide operations are taxed under laws in the jurisdictions in which they operate. International standards governing the global tax environment regularly change. The Organisation for Economic Co-operation and Development (OECD) has proposed a number of changes under the Base Erosion and Profit Shifting (BEPS) Action Plans which are now being progressively implemented by tax authorities around the world.

Our defined benefit pension obligations are largely backed by assets invested across the broad investment market. Our most significant obligations relate to defined benefit pension funds in the UK, Sweden and the US. The largest obligation is in the UK.

If any double tax treaties should be withdrawn or amended, especially in a territory where a member of the AstraZeneca Group is involved in a taxation dispute with a tax authority in relation to cross-border transactions, such withdrawal or amendment, could materially adversely affect our financial condition or results of operations, as could a negative outcome of a tax dispute or a failure by tax authorities to agree through competent authority proceedings. Changes to the application of double tax treaties, as a result of the parent company of the Group no longer being an EU entity following Brexit, could also result in adverse consequences such as those described above. See the Financial risk management policies section of the Financial Review on page 79 for tax risk management policies and Note 28 to the Financial Statements from page 182 for details of current tax disputes.

Changes in tax regimes, such as the recently announced changes to the US federal tax regime effective 1 January 2018, could result in a material impact on the Company's cash tax liabilities and tax charge, resulting in either an increase or a reduction in financial results depending upon the nature of the change. We represent views to the OECD, governments and tax authorities through public consultations to ensure international institutions and governments understand the business implications of proposed law changes. Specific OECD BEPS recommendations that we expect to impact the Company include changes to patent box regimes, restrictions of interest deductibility and revised transfer pricing guidelines.

Sustained falls in asset values could reduce pension fund solvency levels, which may result in requirements for additional cash, restricting the cash available for our business. Changes to funding regulations for defined benefit pensions may also result in a requirement for additional cash contributions by the Company. If the present value of the liabilities increases due to a sustained low interest rate environment, an increase in expectations of future inflation, or an improvement in member longevity (above that already assumed), this could also reduce pension fund solvency ratios. The likely increase in the IAS 19 accounting deficit generated by any of these factors may cause the credit rating agencies to review our credit rating, with the potential to negatively affect our ability to raise debt and the price of new debt issuances. See Note 20 to the Financial Statements from page 164 for further details of the Group's pension obligations.

Failure in financial control or the occurrence of fraud

Effective internal controls are necessary for us to provide reliable financial reports and are designed to prevent and detect fraud. Lapses in controls and procedures could undermine the ability to prevent fraud or provide accurate disclosure of financial information on a timely basis. Testing of our internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements and may not prevent or detect misstatements or fraud.

Significant resources may be required to remediate any lapse or deficiency in internal controls.

Any such deficiency may also trigger investigations by a number of organisations, for example, the SEC, the DOJ or the UK Serious Fraud Office and may result in fines being levied against the Company or individual directors or officers.

Serious fraud may lead to potential prosecution or even imprisonment of senior management.

Geographical Review

This section contains further information about the performance of our products within the geographical areas in which our sales and marketing efforts are focused. Sales relate to Product Sales.

	World			Emerging Markets			US		Europe			Established ROW		
2017	Sales $m	Actual %	CER %	Sales $m	Actual %	CER %	Sales $m	Actual %	Sales $m	Actual %	CER %	Sales $m	Actual %	CER %
Oncology:														
Tagrisso	955	126	126	135	n/m	n/m	405	59	187	146	142	228	175	183
Faslodex	941	13	13	115	20	18	492	12	256	12	11	78	15	18
Zoladex	735	(10)	(10)	353	(1)	(1)	15	(57)	141	(10)	(8)	226	(16)	(15)
Iressa	528	3	3	251	8	8	39	70	112	(7)	(8)	126	(8)	(6)
Lynparza	297	36	35	18	n/m	n/m	141	11	130	60	58	8	n/m	n/m
Arimidex	217	(6)	(4)	118	7	10	7	(50)	34	(8)	(8)	58	(18)	(15)
Casodex	215	(13)	(11)	108	1	4	(1)	n/m	22	(19)	(19)	86	(23)	(21)
Imfinzi	19	n/m	n/m	–	–	–	19	n/m	–	–	–	–	–	–
Calquence	3	n/m	n/m	–	–	–	3	n/m	–	–	–	–	–	–
Others	114	10	13	28	12	16	–	–	3	(63)	(63)	83	17	20
Total Oncology	4,024	19	19	1,126	19	20	1,120	25	885	21	20	893	10	12
Cardiovascular & Metabolic Diseases:														
Crestor	2,365	(30)	(30)	784	9	11	373	(70)	666	(23)	(23)	542	(8)	(6)
Brilinta	1,079	29	29	224	19	21	509	46	295	14	13	51	16	11
Farxiga	1,074	29	28	232	74	73	489	7	242	29	28	111	91	90
Seloken/Toprol-XL	695	(6)	(4)	593	11	12	37	(61)	52	(42)	(41)	13	(19)	(19)
Onglyza	611	(15)	(16)	130	(8)	(10)	320	(15)	104	(21)	(21)	57	(19)	(20)
Bydureon	574	(1)	(1)	9	125	75	458	(1)	88	(12)	(11)	19	73	73
Atacand	300	(5)	(3)	178	10	12	19	(47)	86	(11)	(11)	17	(15)	(15)
Byetta	176	(31)	(30)	12	(50)	(50)	114	(30)	34	(24)	(22)	16	(24)	(24)
Symlin	48	20	20	–	–	–	48	20	–	–	–	–	–	–
Others	344	(13)	(12)	205	(10)	(7)	4	n/m	92	(23)	(24)	43	(14)	(12)
Total Cardiovascular & Metabolic Diseases	7,266	(10)	(10)	2,367	11	12	2,371	(26)	1,659	(12)	(13)	869	(1)	–
Respiratory:														
Symbicort	2,803	(6)	(6)	439	9	10	1,099	(12)	819	(10)	(10)	446	2	2
Pulmicort	1,176	11	12	840	20	23	156	(10)	92	(7)	(8)	88	(2)	(1)
Daliresp/Daxas	198	29	28	4	–	–	167	25	26	73	73	1	–	–
Tudorza/Eklira	150	(12)	(12)	2	n/m	n/m	66	(14)	73	(12)	(11)	9	–	–
Duaklir	79	25	25	–	n/m	n/m	–	–	77	24	24	2	–	–
Bevespi	16	n/m	n/m	–	–	–	16	n/m	–	–	–	–	–	–
Fasenra	1	n/m	n/m	–	–	–	1	n/m	–	–	–	–	–	–
Others	283	(10)	(9)	103	(25)	(24)	4	(44)	129	10	10	47	(6)	(6)
Total Respiratory	4,706	(1)	(1)	1,388	12	13	1,509	(8)	1,216	(5)	(5)	593	1	1
Other:														
Nexium	1,952	(4)	(3)	684	(1)	2	499	(10)	248	(1)	(3)	521	(3)	(1)
Synagis	687	1	1	–	–	–	317	(2)	370	5	5	–	–	–
Seroquel XR	332	(55)	(55)	62	(10)	(12)	175	(66)	78	(42)	(42)	17	–	–
Losec/Prilosec	271	(2)	(1)	140	9	10	11	10	77	(7)	(7)	43	(22)	(20)
Movantik/Moventig	122	34	34	–	n/m	n/m	120	33	2	n/m	n/m	–	–	–
FluMist/Fluenz	78	(25)	(28)	(1)	n/m	n/m	–	(100)	76	17	12	3	(50)	(50)
Others	714	(38)	(38)	383	(34)	(32)	47	(55)	142	(47)	(49)	142	(28)	(28)
Total Other	4,156	(18)	(17)	1,268	(14)	(12)	1,169	(28)	993	(14)	(15)	726	(11)	(9)
Total Product Sales	20,152	(5)	(5)	6,149	6	8	6,169	(16)	4,753	(6)	(7)	3,081	–	1

Geographical Review
continued

	World			Emerging Markets			US		Europe			Established ROW		
2016	Sales $m	Actual %	CER %	Sales $m	Actual %	CER %	Sales $m	Actual %	Sales $m	Actual %	CER %	Sales $m	Actual %	CER %
Oncology:														
Tagrisso	423	n/m	n/m	10	100	100	254	n/m	76	n/m	n/m	83	100	100
Faslodex	830	18	19	96	10	25	438	23	228	10	11	68	26	15
Zoladex	816	–	–	355	3	6	35	25	156	(8)	(4)	270	(1)	(7)
Iressa	513	(6)	(5)	233	(14)	(10)	23	n/m	120	(7)	(5)	137	–	(8)
Lynparza	218	n/m	n/m	7	n/m	n/m	127	81	81	n/m	n/m	3	n/m	n/m
Arimidex	232	(7)	(6)	110	7	15	14	(26)	37	(24)	(24)	71	(10)	(18)
Casodex	247	(7)	(9)	107	1	8	2	100	27	(7)	(7)	111	(15)	(23)
Others	104	(21)	(26)	25	(17)	(13)	–	n/m	8	(65)	(65)	71	18	7
Total Oncology	3,383	20	20	943	–	6	893	74	733	16	18	814	11	2
Cardiovascular & Metabolic Diseases:														
Crestor	3,401	(32)	(32)	721	5	12	1,223	(57)	866	(5)	(4)	591	4	(5)
Brilinta	839	36	39	189	69	80	348	45	258	12	15	44	19	22
Farxiga	835	70	72	133	82	96	457	75	187	48	52	58	81	72
Seloken/Toprol-XL	737	4	9	536	4	12	95	7	90	(6)	(5)	16	33	25
Onglyza	720	(8)	(6)	142	(11)	(4)	376	(10)	132	(6)	(5)	70	6	11
Bydureon	578	–	–	4	(50)	(25)	463	(4)	100	22	23	11	38	25
Atacand	315	(13)	(8)	162	(17)	(9)	36	6	97	(8)	(8)	20	(20)	(20)
Byetta	254	(20)	(19)	24	–	13	164	(22)	45	(26)	(25)	21	(5)	(9)
Symlin	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Others	437	(28)	(26)	228	(35)	(30)	40	(27)	119	(17)	(17)	50	(14)	(21)
Total Cardiovascular & Metabolic Diseases	8,116	(14)	(13)	2,139	1	8	3,202	(31)	1,894	–	1	881	6	(1)
Respiratory:														
Symbicort	2,989	(12)	(10)	402	2	10	1,242	(18)	909	(15)	(12)	436	8	5
Pulmicort	1,061	5	8	698	15	21	174	(13)	99	(15)	(14)	90	2	(3)
Daliresp/Daxas	154	48	48	4	n/m	n/m	134	29	15	100	100	1	n/m	n/m
Tudorza/Eklira	170	(11)	(9)	1	–	n/m	77	(25)	83	8	9	9	–	–
Duaklir	63	n/m	n/m	1	–	n/m	–	–	60	n/m	n/m	2	n/m	n/m
Bevespi	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Fasenra	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Others	316	22	27	137	8	13	11	(39)	118	34	38	50	108	108
Total Respiratory	4,753	(5)	(3)	1,243	10	17	1,638	(16)	1,284	(7)	(4)	588	12	8
Other:														
Nexium	2,032	(19)	(18)	690	(9)	(3)	554	(39)	251	(12)	(11)	537	(2)	(10)
Synagis	677	2	2	–	–	–	325	14	352	(7)	(7)	–	–	–
Seroquel XR	735	(28)	(27)	69	(17)	(7)	515	(28)	134	(33)	(32)	17	(32)	(32)
Losec/Prilosec	276	(19)	(17)	128	(15)	(9)	10	(44)	83	(14)	(13)	55	(26)	(31)
Movantik/Moventig	91	n/m	n/m	1	–	–	90	n/m	–	–	–	–	–	–
FluMist/Fluenz	104	(64)	(59)	1	n/m	n/m	33	(84)	64	(16)	3	6	(14)	(14)
Others	1,152	(23)	(20)	580	(9)	(4)	105	(54)	269	(27)	(21)	198	(29)	(27)
Total Other	5,067	(20)	(19)	1,469	(9)	(4)	1,632	(31)	1,153	(18)	(15)	813	(13)	(17)
Total Product Sales	21,319	(10)	(8)	5,794	–	6	7,365	(22)	5,064	(5)	(3)	3,096	2	(4)

All commentary in this section relates to Product Sales. The market definitions used in the geographical areas review below are defined in the Glossary on page 235.

2017 in brief

Sales decreased 5% in the year to $20,152 million (2016: $21,319 million; 2015: $23,641 million).

In 2017, sales in Emerging Markets increased 6% (CER: increased 8%) to $6,149 million (2016: $5,794 million; 2015: $5,822 million). China sales grew by 12% (CER: increased 15%) to $2,955 million (2016: $2,636 million; 2015: $2,530 million), representing 48% of total Emerging Markets sales. *Onglyza* and *Iressa* were included on the National Reimbursement Drug List (NRDL) in China in the year, as were *Brilinta*, *Faslodex* and *Seroquel XR*; the benefits of this inclusion are anticipated to favourably impact Product Sales after 2017. *Crestor* also had its 2nd line usage restriction removed and *Zoladex* was reclassified from the hormone and endocrine classification to oncology, which is expected to continue to support growth. *Tagrisso* was launched in China in April 2017.

In Emerging Markets, excluding China, Latin America sales were impacted by ongoing economic conditions, with sales in Latin America (ex-Brazil) declining by 12% (CER: declining by 10%) to $453 million (2016: $516 million; 2015: $643 million). Brazil sales increased by 4% (CER: decreased 5%) to $361 million (2016: $348 million; 2015: $381 million). Russia sales decreased by 1% (CER: decreased 14%) to $231 million (2016: $233 million; 2015: $231 million).

Sales in the US decreased 16% to $6,169 million (2016: $7,365 million; 2015: $9,474 million). The decline reflected generic medicine launches that impacted sales of *Crestor* and *Seroquel XR*. Unfavourable managed-care pricing and continued competitive intensity impacted sales of *Symbicort,* which declined by 12% to $1,099 million (2016: $1,242 million; 2015: $1,520 million). The New Oncology Growth Platform in the US, however, grew by 50% to $607m, primarily reflecting encouraging *Tagrisso* sales growth of 59% to $405 million (2016: $254 million; 2015: $15 million) in the year. The New CVMD Growth Platform increased sales by 5% in the US to $1,942 million (2016: $1,848 million; 2015: $1,662 million), reflecting strong performances from *Farxiga* and *Brilinta*. *Brilinta* grew by 46% in the US to $509 million (2016: $348 million; 2015: $240 million).

Sales in Europe decreased 6% (CER: decreased 7%) to $4,753 million in the year (2016: $5,064 million; 2015: $5,323 million). The New Oncology Growth Platform in Europe grew by 102% (CER: increased 99%) to $317 million (2016: $157 million; 2015: $27 million), partly driven by *Tagrisso* sales of $187 million (2016: $76 million; 2015: $4 million). *Lynparza* sales of $130 million (2016: $81m; 2015: $23m) represented growth of 60% (CER: growth at 58%). *Forxiga* sales growth of 29% (28% at CER) to $242 million (2016: $187 million; 2015: $126 million) was accompanied by *Brilique* growth of 14% (CER: growth of 13%) to $295 million (2016: $258 million; 2015: $230 million). These performances were more than offset by declines in other areas, including a 10% decline in *Symbicort* sales to $819 million (2016: $909 million; 2015: $1,076 million). *Symbicort* maintained its position, however, as the number one ICS/LABA medicine, despite competition from branded and analogue medicines. *Crestor* sales declined by 23% to $666 million (2016: $866 million; 2015: $916 million), reflecting the entry of generic medicines in certain markets in the year.

Sales in the Established Rest of World (ROW) in 2017 remained stable (CER: increased 1%) at $3,081 million (2016: $3,096 million; 2015: $3,022 million). Japan sales increased by 1% (CER: increased 4%) to $2,208 million (2016: $2,184 million; 2015: $2,020 million), partly reflecting the launch of *Tagrisso* and a new label for *Faslodex*. EGFR T790M-mutation testing rates in Japan continued to exceed 90% through the year, with full-year *Tagrisso* sales of $219 million (2016: $82 million; 2015: $nil) reflecting a high penetration rate in the currently-approved 2nd line setting. *Faslodex* sales in Japan were favourably impacted by a new label in the year; *Faslodex* sales in Japan increased by 14% (CER: increased 17%) to $72 million (2016: $63 million; 2015: $51 million).

The first *Crestor* competitor medicine was launched in Japan in the third quarter of 2017 and further generic competition entered the market in the fourth quarter of 2017. Full-year *Crestor* sales in Japan declined by 6% (CER: declined by 4%) to $489 million (2016: $521 million; 2015: $468 million). *Nexium* sales in Japan increased by 1% (CER: increased 4%) in the year to $439 million (2016: $436 million; 2015: $405 million) and sales of *Forxiga* increased by 89% (CER: increased 93%) in the year to $53 million (2016: $28 million; 2015: $16 million).

2016 in brief

Sales decreased 10% (CER: decreased 8%) in the year to $21,319 million (2015: $23,641 million; 2014: $26,095 million).

Sales growth for the year in Emerging Markets remained stable (CER: increased 6%) at $5,794 million (2015: $5,822 million; 2014: $5,827 million). Sales growth was impacted by challenging macro-economic conditions in Latin America, such as the current economic situation in Venezuela, where ex-Brazil sales decreased 20% (CER: decreased 7%) to $516 million (2015: $643 million; 2014: $730 million). The effects of significant reductions in Saudi Arabian governmental healthcare spending, as well as the reduction of AstraZeneca's activities in Venezuela, also adversely impacted sales. China sales increased 4% (CER: increased 10%) to $2,636 million (2015: $2,530 million; 2014: $2,242 million), and represent 45% of the Group's Emerging Markets sales. Sales in Brazil decreased 9% (CER: increased 2%) to $348 million (2015: $381 million; 2014: $451 million). The increase after eliminating exchange rate impacts reflects the strong performance of *Forxiga*, which increased 40% (CER: increased 50%) to $28 million (2015: $20 million; 2014: $5 million). Oncology medicines, which decreased 8% (CER: increased 1%) to $82 million (2015: $89 million; 2014: $99 million), and *Seloken*, which decreased 6% (CER: increased 6%) to $63 million (2015: $67 million; 2014: $84 million). Russia sales increased 1% (CER: increased 13%) to $233 million (2015: $231 million; 2014: $312 million), led by strong performances in Cardiovascular & Metabolic Diseases medicine sales, which increased 23% (CER: increased 38%) to $80 million (2015: $65 million; 2014: $89 million).

In 2016, sales in the US decreased 22% to $7,365 million (2015: $9,474 million; 2014: $10,120 million). The decline in US sales reflected the competition from generic *Crestor* medicines that entered the US market from July 2016. Unfavourable managed-care pricing and continued competitive intensity also impacted the sales of *Symbicort*.

Sales in Europe decreased 5% (CER: decreased 3%) to $5,064 million in the year (2015: $5,323 million; 2014: $6,638 million). Strong growth in sales of *Forxiga*, up 48% (CER: up 52%) to $187 million (2015: $126 million; 2014: $66 million), and *Brilique*, up 12% (CER: up 15%) to $258 million (2015: $230 million; 2014: $231 million), was more than offset by a 15% decrease in *Symbicort* sales (CER: 12% decrease) to $909 million (2015: $1,076 million; 2014: $1,462 million). However, *Symbicort* maintained its position as the number one ICS/LABA medicine by volume, despite competition from analogue medicines. *Lynparza* and *Tagrisso* sales increased to $81 million (2015: $23 million; 2014: $nil) and $76 million (2015: $4 million; 2014: $nil) respectively.

Sales in the Established ROW in 2016 increased 2% (CER: decreased 4%) to $3,096 million (2015: $3,022 million; 2014: $3,510 million). Sales of *Forxiga* in Established ROW increased 81% (CER: increased 72%), to $58 million (2015: $32 million; 2014: $17 million). *Nexium* sales decreased 2% (CER: decreased 10%) to $537 million (2015: $549 million; 2014: $606 million). Japan sales increased 8% (CER: decreased 3%) to $2,184 million (2015: $2,020 million;

Geographical Review *continued*

2014: $2,227 million), reflecting the biennial price reduction effective from April 2016 of around 6% after eliminating the exchange rate impact. The CER percentage decline in Japan was partly mitigated by stable sales of *Crestor* of $521 million (2015: $468 million; 2014: $502 million) in the year. Since the launch of *Tagrisso* in Japan in March 2016, sales amounted to $82 million (2015 & 2014: $nil).

Sales by Region

Emerging Markets

Sales in Emerging Markets increased 6% (CER: increased 8%) to $6,149 million (2016: $5,794 million; 2015: $5,822 million).

Oncology

Oncology sales in the Emerging Markets increased 19% (CER: increased 20%) to $1,126 million (2016: $943 million; 2015: $943 million).

Sales of *Tagrisso* were $135 million in the year (2016: $10 million; 2015: $nil).

Sales of *Iressa* increased by 8% to $251 million (2016: $233 million; 2015: $272 million). China sales increased by 24% (CER: increased 28%) to $144 million (2016: $116 million; 2015: $146 million), reflecting an improvement in patient access following the conclusion of the national negotiation process in 2016; *Iressa* was subsequently included on the NRDL. Other Emerging Markets sales were adversely impacted by competition from branded and generic medicines, most notably in the Republic of Korea.

Sales of *Faslodex* grew by 20% (CER: increased 18%) to $115 million (2016: $96 million; 2015: $87 million). In 2017, AstraZeneca received a label extension for *Faslodex* in Russia in the 1st line monotherapy setting, based on data from the FALCON trial. Russia sales grew by 29% in the year (CER: increased 14%) to $18 million (2016: $14 million; 2015: $9 million).

Sales of *Zoladex* declined by 1% to $353 million in the year (2016: $355 million; 2015: $345 million).

Cardiovascular & Metabolic Diseases

Cardiovascular & Metabolic Diseases sales in Emerging Markets increased 11% (CER: increased 12%) to $2,367 million (2016: $2,139 million; 2015: $2,120 million).

Sales of *Brilinta* for the year grew by 19% (CER: increased 21%) to $224 million (2016: $189 million; 2015: $112 million). Growth in Emerging Markets was reflected in a continued outperformance of the growth of the oral anti-platelet market. Encouraging sales performances were delivered in many markets.

Farxiga sales increased by 74% (CER: increased 73%) to $232 million (2016: $133 million; 2015: $73 million), reflecting ongoing launches and improved levels of patient access. In March 2017, *Forxiga* became the first SGLT2-inhibitor medicine to be approved in China.

Onglyza sales in Emerging Markets declined by 8% (CER: decreased 10%) to $130 million (2016: $142 million; 2015: $159 million). *Onglyza*, however, entered the NRDL in China in the year, underpinning fourth quarter 2017 Emerging Markets sales growth.

Respiratory

Respiratory sales in Emerging Markets increased 12% (CER: increased 13%) to $1,388 million (2016: $1,243 million; 2015: $1,132 million).

Sales of *Symbicort* grew by 9% (CER: increased 10%) to $439 million (2016: $402 million; 2015: $394 million), partly reflecting growth in China of 13% (CER: increased 17%) to $177 million (2016: $156 million; 2015: $124 million) and in Latin America (ex-Brazil), where sales grew by 24% (CER: increased 30%) to $46 million (2016: $37 million; 2015: $42 million).

Pulmicort sales increased by 20% (CER: increased 23%) to $840 million (2016: $698 million; 2015: $609 million), reflecting strong underlying volume growth, with sales in China, Middle East and North Africa proving particularly encouraging. Usage in China continued to progress, with an increasing prevalence of acute COPD and paediatric asthma accompanied by continued investment by AstraZeneca in new hospital nebulisation centres by around 2,000 to 15,000.

Other

Other sales in Emerging Markets decreased 14% (CER: decreased 12%) to $1,268 million (2016: $1,469 million; 2015: $1,627 million).

Nexium sales declined by 1% (CER: increased 2%) to $684 million (2016: $690 million; 2015: $761 million).

US

Sales in the US decreased 16% to $6,169 million (2016: $7,365 million; 2015: $9,474 million).

Oncology

Oncology sales in the US increased 25% to $1,120 million (2016: $893 million; 2015: $514 million).

Tagrisso sales in the US were $405 million (2016: $254 million; 2015: $15 million) and grew by 59%, with a steady increase in epidermal growth factor receptor (EGFR) T790M-mutation testing rates. In September 2017, the US National Comprehensive Cancer Network clinical-practice guidelines were updated to include the use of *Tagrisso* in the 1st line treatment of patients with metastatic EGFR-mutated non-small cell lung cancer (NSCLC). The use of *Tagrisso* in this indication is not yet approved by the FDA.

Iressa sales in the US increased by 70% to $39 million (2016: $23 million; 2015: $6 million).

Sales of *Lynparza* grew by 11% in the year to $141 million (2016: $127 million; 2015: $70 million). First-half sales were adversely impacted by the introduction of competing poly ADP ribose polymerase (PARP) inhibitor medicines. A much-improved performance in the second half, however, reflected the launch of tablets for patients regardless of BRCA-mutation status, for the treatment of 2nd line ovarian cancer. By the end of November 2017, *Lynparza* was the leading PARP inhibitor in the US, measured by total prescription volumes.

Faslodex sales increased by 12% to $492 million (2016: $438 million; 2015: $356 million), mainly reflecting a continued strong uptake of the combination with palbociclib, a medicine approved for the treatment of hormone-receptor-positive (HR+) breast cancer.

The sales of *Imfinzi* were $19 million (2016: $nil; 2015: $nil). *Imfinzi* launched in the US in May 2017. *Imfinzi* was approved under the FDA's Accelerated Approval pathway and launched on the same day as a fast-to-market, limited commercial opportunity, indicated for the 2nd line treatment of patients with locally-advanced or metastatic urothelial carcinoma (bladder cancer). AstraZeneca is actively preparing for the potential launch of *Imfinzi* in locally-advanced, unresectable NSCLC in the first half of 2018, reflecting the FDA regulatory submission acceptance and the award of Priority Review status in the fourth quarter of 2017.

The sales of *Calquence* were $3 million (2016 & 2015: $nil). *Calquence* delivered a promising performance in the number of new patient starts in previously-treated mantle cell lymphoma (MCL). The medicine was included within National Comprehensive Cancer Network guidelines from 15 November 2017.

Zoladex decreased 57% to $15 million (2016: $35 million; 2015: $28 million). On 31 March 2017, AstraZeneca completed an agreement with TerSera for the commercial rights to *Zoladex* in the US and Canada.

Cardiovascular & Metabolic Diseases

Cardiovascular & Metabolic Diseases sales in the US decreased 26% to $2,371 million (2016: $3,202 million; 2015: $4,634 million).

Sales of *Brilinta*, at $509 million (2016: $348 million; 2015: $240 million), represented an increase of 46% for the year. The performance was driven primarily by an increase in the average duration of therapy and strong growth in the number of patients sent home from hospital with *Brilinta*. Furthermore, *Brilinta* achieved a record total-prescription market share of 7.2% at the end of the year: days-of-therapy volume market-share data was particularly encouraging. The performance reflected the growth in demand, driven by updated preferred guidelines from the American College of Cardiology and the American Heart Association in 2016, as well as the narrowing of a competitor's label. *Brilinta* is the standard of care in the treatment of ST-segment elevation myocardial infarction and remained the branded oral anti-platelet market leader in the US in the period.

Farxiga sales in the year increased by 7% to $489 million (2016: $457 million; 2015: $261 million). The SGLT2-class growth was supported by growing evidence around cardiovascular (CV) benefits, including data from the CVD-REAL study that was published in March 2017.

Bydureon sales in the US declined by 1% to $458 million (2016: $463 million; 2015: $482 million), reflecting the prevailing level of competition and resulting price pressures. In the third quarter of the year, AstraZeneca launched the newly-approved injectable suspension autoinjector, known as *Bydureon BCise* in the US. The new autoinjector is a new formulation of *Bydureon* injectable suspension in an improved once-weekly, single-dose autoinjector device. It is designed for patient ease and convenience in a pre-filled device with a pre-attached hidden needle.

Crestor sales declined by 70% to $373 million (2016: $1,223 million; 2015: $2,844 million), reflecting the market entry in July 2016 of multiple *Crestor* generic medicines.

Respiratory

Respiratory sales in the US decreased 8% to $1,509 million (2016: $1,638 million; 2015: $1,945 million).

Sales of *Symbicort* in the US declined by 12% to $1,099 million (2016: $1,242 million; 2015: $1,520 million), in line with expectations of continued challenging conditions which were a result of the impact of managed-care access programmes on pricing within the class. Competition also remained intense from other classes, such as LAMA/LABA combination medicines.

Pulmicort sales in the US declined by 10% to $156 million (2016: $174 million; 2015: $200 million).

Daliresp/Daxas sales, representing 84% of global sales, increased by 25% to $167 million (2016: $134 million; 2015: $104 million), driven by increased adoption of the medicine which is the only oral, selective, long-acting inhibitor of the enzyme phosphodiesterase-4, an inflammatory agent in COPD.

Tudorza/Eklira sales in the US declined by 14% to $66 million (2016: $77 million; 2015: $103 million), reflecting lower levels of use of inhaled monotherapy medicines for COPD and the Group's commercial focus on the launch of *Bevespi*. On 17 March 2017, AstraZeneca announced that it had entered a strategic collaboration with Circassia for the development and commercialisation of *Tudorza* in the US. Circassia began its promotion of *Tudorza* in the US in May 2017. AstraZeneca will continue to book Product Sales of *Tudorza* in the US.

Bevespi was launched commercially in the US during early 2017. Prescriptions in the fourth quarter of 2017 tracked in line with other LAMA/LABA launches. The overall class in the US, however, continued to grow more slowly than anticipated. *Bevespi* was the first medicine launched using the Group's *Aerosphere* Delivery Technology delivered in a pressurised metered-dose inhaler.

Other

Other sales in the US decreased 28% to $1,169 million (2016: $1,632 million; 2015: $2,381 million).

Nexium sales in the US declined by 10% to $499 million (2016: $554 million; 2015: $902 million) in the year, reflecting a true-up adjustment.

Synagis sales decreased by 2% to $317 million (2016: $325 million; 2015: $285 million), constrained by the guidelines from the American Academy of Pediatrics Committee on Infectious Diseases, which restricted the number of patients eligible for preventative therapy with *Synagis*.

Sales of *Seroquel XR* in the US, where several competitors launched generic *Seroquel XR* medicines from November 2016, declined by 66% to $175 million (2016: $515 million; 2015: $716 million).

Europe

Sales in Europe decreased 6% (CER: decreased 7%) to $4,753 million (2016: $5,064 million; 2015: $5,323 million).

Oncology

Oncology sales in Europe increased 21% to $885 million (2016: $733 million; 2015: $635 million).

Tagrisso sales of $187 million (2016: $76 million; 2015: $4 million) represented growth of 146% (CER: increased 142%) were driven by a continued uptake, positive reimbursement decisions and a continued growth in testing rates. *Tagrisso* was reimbursed in 15 European countries at the end of the year and was under reimbursement review in additional European countries, with positive decisions anticipated in 2018.

Iressa sales declined in Europe by 7% (CER: decreased 8%) to $112 million (2016: $120 million; 2015: $128 million).

Lynparza sales in Europe increased by 60% (CER: increased 58%) to $130 million (2016: $81 million; 2015: $23 million), reflecting high BRCA-testing rates and a number of successful launches, most recently in Finland and the Republic of Ireland.

Sales of *Faslodex* increased by 12% (CER: increased 11%) to $256 million (2016: $228 million; 2015: $207 million).

Zoladex sales declined by 10% (CER: decreased 8%) to $141 million (2016: $156 million; 2015: $171 million), reflecting generic competition mainly in Central and Eastern Europe.

Cardiovascular & Metabolic Diseases

Cardiovascular & Metabolic Disease sales in Europe decreased 12% (CER: decreased 13%) to $1,659 million (2016: $1,894 million; 2015: $1,901 million).

Sales of *Brilique* in Europe increased by 14% (CER: increased 13%) to $295 million (2016: $258 million; 2015: $230 million), reflecting indication leadership across a number of markets and bolstered by the inclusion in the high-risk, post-myocardial infarction (HR PMI) guidelines from the European Society of Cardiology in 2017. Volume share reached 6.5% at the end of the year, with improvements delivered across the major markets: *Brilique* continued to outperform the oral anti-platelet market in the year. *Brilique* gained further reimbursement in key markets in its HR PMI indication in the 60mg dose.

Geographical Review *continued*

Forxiga sales in Europe increased by 29% (CER: increased 28%) to $242 million (2016: $187 million; 2015: $126 million) as the medicine continued to gain market share in the innovative oral class.

Onglyza sales in the year declined by 21% to $104 million (2016: $132 million; 2015: $141 million), reflecting the broader dynamic of shift away from the dipeptidyl peptidase-4 (DPP-4 class).

Bydureon sales in Europe declined by 12% (CER: decreased 11%) in the year to $88 million (2016: $100 million; 2015: $81 million), reflecting the impact of increased levels of competition.

Crestor sales declined by 23% to $666 million (2016: $866 million; 2015: $916 million), reflecting the launch of generic medicines in certain markets such as France and Spain.

Respiratory

Respiratory sales in Europe decreased 5% to $1,216 million (2016: $1,284 million; 2015: $1,383 million).

Symbicort sales declined by 10% to $819 million (2016: $909 million; 2015: $1,076 million), reflecting the level of competition from other branded and *Symbicort*-analogue medicines. However, *Symbicort* continued to retain its class-leadership position and stabilise volume share in the LABA/ICS class.

Other

Other sales in Europe decreased 14% (CER: decreased 15%) to $993 million (2016: $1,153 million; 2015: $1,404 million).

Sales of *Nexium* declined by 1% (CER: decreased 3%) to $248 million (2016: $251 million; 2015: $284 million) and *Seroquel XR* sales declined by 42% to $78 million (2016: $134 million; 2015: $202 million), reflecting the impact of generic competition.

FluMist/*Fluenz* sales in Europe increased by 17% (CER: increased 12%) to $76 million (2016: $64 million; 2015: $76 million), primarily driven by higher usage rates in the UK, which reflects the favourable impact of the UK National Immunisation Programme.

Established ROW

Sales in Established ROW remained stable (CER: increased 1%) to $3,081 million (2016: $3,096 million; 2015: $3,022 million).

Oncology

Oncology sales in Established ROW increased 10% (CER: increased 12%) to $893 million (2016: $814 million; 2015: $733 million).

Tagrisso's testing rates in Japan continued to exceed 90% through the year, with full-year sales of $219 million (2016: $82 million; 2015: $nil) reflecting a high penetration rate in the currently approved 2nd line EGFR T790M-mutation setting.

In June 2017, a label extension based upon the FALCON trial in the 1st line setting was approved in Japan, where *Faslodex* sales grew by 14% (CER: increased 17%) in the year to $72 million (2016: $63 million; 2015: $51 million). *Zoladex* sales fell by 16% (CER: decreased 15%) to $226 million (2016: $270 million; 2015: $272 million), driven by increased competition.

Cardiovascular & Metabolic Diseases

Cardiovascular & Metabolic Diseases sales in Established ROW decreased 1% (CER: stable) to $869 million (2016: $881 million; 2015: $834 million).

Sales of *Forxiga* in Established ROW increased 91% (CER: increased 90%) to $111 million (2016: $58 million; 2015: $32 million). In Japan sales of *Forxiga* grew at 89% (CER: increased 93%) to $53 million (2016: $28 million; 2015: $16 million).

In Japan, where Shionogi is a partner, *Crestor* maintained its position as the leading statin. Sales declined by 6% (CER: decreased 4%) to $489 million (2016: $521 million; 2015: $468 million), however, reflecting the recent entry of multiple *Crestor* competitors in the market in the second half of the year.

Respiratory

Respiratory sales in Established ROW increased 1% to $593 million (2016: $588 million; 2015: $527 million).

Symbicort sales increased 2% to $446 million (2016: $436 million; 2015: $404 million). In Japan, where Astellas assists as a promotional partner, sales declined by 3% (stable at CER) to $205 million (2016: $211 million; 2015: $176 million).

Other

Other sales in Established ROW decreased 11% (CER: decreased 9%) to $726 million (2016: $813 million; 2015: $928 million).

Sales of *Nexium* in Japan increased by 1% (CER: increased 4%) to $439 million (2016: $436 million; 2015: $405 million), which represented 84% of *Nexium* sales in Established ROW.

Sustainability: supplementary information

External assurance

Bureau Veritas has provided independent external assurance to a limited level on the following sustainability information contained within this Annual Report:

Based on the evidence provided and subject to the scope, objectives and limitations defined in the full assurance statement, nothing has come to the attention of Bureau Veritas causing them to believe that the sustainability information contained within this Annual Report is materially misstated. Bureau Veritas is a professional services company that has a long history of providing independent assurance services in environmental, health, safety, social and ethical management and disclosure.

The full assurance statement, which includes Bureau Veritas's scope of work, methodology, overall opinion, and limitations and exclusions, is available on our website, www.astrazeneca.com.

Carbon reporting

We have reported on all of the emission sources required under the Quoted Companies Greenhouse Gas Emissions (Directors' Reports) Regulations 2013. These sources fall within our consolidated Financial Statements. We do not have responsibility for any emission sources that are not included in our consolidated Financial Statements.

We have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition). Emission factors for electricity have been derived from the International Energy Agency (IEA), USEPA eGRID, US Green-e and the Association of Issuing Bodies (AIB) databases and for all other fuels and emission sources from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Bureau Veritas has undertaken a limited assurance on the 2017 GHG emissions data. The assurance statement, including scope, methodology, overall opinion, and limitations and exclusions, is available on our website, www.astrazeneca.com.

Global greenhouse gas emissions data for the period 1 January 2017 to 31 December 2017

	Tonnes CO_2e		
	2017	2016	2015[1]
Emissions from: Scope 1: Combustion of fuel and operation of facilities[2]	**291,652**	309,661	318,633
Scope 2 (Market-based): Electricity (net of market instruments), heat, steam and cooling purchased for own use[3]	**182,847**	218,770	348,664
Scope 2 (Location-based): Electricity, heat, steam and cooling purchased for own use[3]	**278,870**	288,210	285,052
Company's chosen intensity measurement: Scope 1 + Scope 2 (Market-based) emissions reported above normalised to million US dollar revenue	**21.1**	23.0	27.0
Scope 3 Total: Emissions from all 15 Greenhouse Gas Protocol Scope 3 Categories[4] (one year in arrears)	**5,942,808**	7,497,338	6,310,359
Scope 3 in our Operational Footprint: Supply chain emissions: Upstream emissions from personal air travel, goods transport, waste incineration, and first tier active pharmaceutical ingredients and formulation & packaging suppliers (>90% of category spend, energy only, one year in arrears); Downstream emissions from HFA propellants released during patient use of our inhaled medicines	**1,184,050**	1,130,640	1,109,893
2016-2025 Strategy 'Operational Footprint' KPI: Scope 1 + Scope 2 (Market-based) + our Operational Footprint Scope 3 sources. Baseline year is 2015	**1,658,548**	1,659,071	1,777,190
2016-2025 Strategy Scope 3 intensity measurement KPI: Scope 3 emissions from all 15 Greenhouse Gas Protocol Scope 3 Categories normalised to million US dollar revenue. Includes Operational Scope 3 emissions. Baseline year is 2015 (one year in arrears)	**317**	375	300

[1] Regular review of the data is carried out to ensure accuracy and consistency. This has led to changes in the data from previous years. The data quoted in this Annual Report are generated from the revised data.
[2] Included in this section are greenhouse gases from direct fuel combustion, process and engineering emissions at our sites and from fuel use in our vehicle fleet.
[3] Greenhouse gases from imported electricity are calculated using the GHG Protocol Scope 2 Guidance (January 2015) requiring the dual reporting using two emissions factors for each site – market-based and location-based. Location-based factors are the grid average emissions factor for the country (or subregion in the US) that a site is in. Market-based factors are more specific to the site and local energy market, taking account of the residual energy mix a site is sourcing power from and any certified renewable power purchased by a site.
[4] GHG Protocol Scope 3 Categories: Purchased goods and services; Capital goods; Fuel- and energy-related activities; Upstream transportation and distribution; Waste generated in operations; Business travel; Employee commuting; Upstream leased assets; Downstream transportation and distribution; Processing of sold products; Use of sold products; End-of-life treatment of sold products; Downstream leased assets; Franchises; Investments.

Shareholder Information

The principal markets for trading in AstraZeneca shares are the London Stock Exchange, the Stockholm Stock Exchange and the New York Stock Exchange. Ordinary Shares of $0.25 each in AstraZeneca PLC are listed on the London Stock Exchange and the shareholder register is maintained by Equiniti Limited, the Ordinary Share registrar. Shares listed on the Stockholm Stock Exchange are issued under the Euroclear Services Agreement by Euroclear Sweden AB, the Swedish Central Securities Depositary. Shares listed on the New York Stock Exchange are in the form of American Depositary Shares (ADSs), evidenced by American Depositary Receipts (ADRs) issued by the Company's ADR depositary, Citibank, N.A. Two ADSs are equivalent to one Ordinary Share. Before 27 July 2015 the ratio was one ADS per one Ordinary Share.

Ordinary Share registrar

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Annual general meeting (AGM)

The 2018 AGM will be held on 18 May 2018. The meeting place will be in London, UK. Shareholders holding Ordinary Shares directly are entitled to attend and vote at the meeting or may submit a proxy voting instruction in advance, by following the instructions in the notice of AGM.

If you hold shares listed in Stockholm or hold ADRs, information relating to voting and attendance will be included in the relevant notice of AGM.

If you hold your shares through a nominee, your nominee provider will be able to advise you of their arrangements in relation to voting and attendance.

Dividends

Dividend dates for 2018 are shown in the financial calendar on page 229. A first interim dividend is normally announced in July/August and paid in September and a second interim dividend is normally announced in January/February and paid in March. Dividends are paid in GBP, SEK and US$, depending on where the eligible shares are listed. Further information on dividends declared can be found in the Shareholder Information section of AstraZeneca's website at www.astrazeneca.com.

Shareholders holding Ordinary Shares directly may opt for dividends to be paid straight to their bank or building society account, rather than being paid by cheque. To elect for this swift and secure method of payment, contact the Ordinary Share registrar, visit www.shareview.com or fill in the mandate form that will be sent to you with your next dividend cheque. If you hold shares listed in Stockholm, you should contact your personal broker or, if you hold a VP account, contact the bank that services your VP account. If you hold ADRs directly you should contact Shareholder Services on the number provided. If you hold your shares through a nominee, you should direct any queries relating to your shareholding and dividend payments to the nominee provider.

Shareholder communications

Copies of shareholder communications and annual reports are available on AstraZeneca's website at www.astrazeneca.com. If you hold Ordinary Shares directly, currently receive hard copies of shareholder communications and/or the annual report and would rather receive these documents electronically, you can manage your communication preferences at www.shareview.com or by contacting the Ordinary Share registrar. If your record on the Ordinary Share register has been duplicated you may receive multiple copies of shareholder communications; if this is the case please contact the Ordinary Share registrar so that this can be rectified.

Holders of shares listed in Stockholm should contact Computershare AB, PO Box 610, SE-182 16 Danderyd, (telephone +46 (0)8 588 04 200) and holders of ADRs should contact the ADR depositary or their personal broker with queries relating to shareholder communications.

Shareview

Holders of Ordinary Shares may create a portfolio at www.shareview.co.uk to view and manage their AstraZeneca shareholding. Shareview is a free and secure online service provided by the Ordinary Share registrar that allows users to, among other things, update personal details, manage communication preferences, view dividend information and manage direct dividend payments.

ShareGift

Shareholders that hold only a small number of shares, the value of which makes it uneconomical to sell them, may wish to consider donating them to charity through ShareGift, an independent charity share donation scheme (registered charity number 1052686). Further information about ShareGift can be found on its website at www.sharegift.org or by calling +44 (0)20 7930 3737.

The Unclaimed Assets Register

AstraZeneca provides information to the Unclaimed Assets Register (UAR) relating to unclaimed dividends paid on Ordinary Shares. The UAR database provides a facility to search for financial assets that may have been forgotten and can be contacted on +44 (0)333 000 0182 or uarenquiries@uk.experian.com.

Shareholder fraud warning

Shareholders of AstraZeneca and many other companies have reported receiving unsolicited calls and correspondence relating to their shareholdings and investment matters. Shareholders are advised to be very cautious of any unsolicited approaches and to note that reputable firms authorised by the Financial Conduct Authority (FCA) are very unlikely to make such approaches. Such approaches are likely to be part of a 'boiler room scam' attempting to defraud shareholders.

Shareholders are advised to familiarise themselves with the information on scams available on the FCA website, www.fca.org.uk/consumers and within the FAQs in the Investors section of AstraZeneca's website, www.astrazeneca.com.

Any suspected scams or fraudulent approaches should be reported to the FCA via its website and to AstraZeneca's Ordinary Share registrar, using the contact details on this page.

Investor Relations

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Financial calendar

Event	Provisional date
Second interim dividend for 2017	
Ex-dividend date	15 February 2018
Record date	16 February 2018
Payment date	19 March 2018
Announcement of first quarter results for 2018	18 May 2018
Annual general meeting (AGM)	18 May 2018
Announcement of second quarter results for 2018	26 July 2018
First interim dividend for 2018	
Ex-dividend date	9 August 2018
Record date	10 August 2018
Payment date	10 September 2018
Announcement of third quarter results for 2018	8 November 2018
Financial year end	31 December 2018

History and development of the Company

AstraZeneca PLC was incorporated in England and Wales on 17 June 1992 under the Companies Act 1985. It is a public limited company domiciled in the UK. The Company's registered number is 2723534 and its registered office is at 1 Francis Crick Avenue, Cambridge Biomedical Campus, Cambridge CB2 0AA, UK (telephone +44 (0)20 3749 5000). From February 1993 until April 1999, the Company was called Zeneca Group PLC. On 6 April 1999, the Company changed its name to AstraZeneca PLC.

The Company was formed when the pharmaceutical, agrochemical and specialty chemical businesses of Imperial Chemical Industries PLC were demerged in 1993. In 1999, the Company sold the specialty chemical business. Also in 1999, the Company merged with Astra of Sweden. In 2000, it demerged the agrochemical business and merged it with the similar business of Novartis to form a new company called Syngenta AG. In 2007, the Group acquired MedImmune, a biologics and vaccines business based in the US.

In 1999, in connection with the merger between Astra and Zeneca, the Company's share capital was redenominated in US dollars. On 6 April 1999, Zeneca shares were cancelled and US dollar shares issued, credited as fully paid on the basis of one dollar share for each Zeneca share then held. This was achieved by a reduction of capital under section 135 of the Companies Act 1985. Upon the reduction of capital becoming effective, all issued and unissued Zeneca shares were cancelled and the sum arising as a result of the share cancellation credited to a special reserve, which was converted into US dollars at the rate of exchange prevailing on the record date. This US dollar reserve was then applied in paying up, at par, newly created US dollar shares.

At the same time as the US dollar shares were issued, the Company issued 50,000 Redeemable Preference Shares for cash, at par. The Redeemable Preference Shares carry limited class voting rights, no dividend rights and are capable of redemption, at par, at the option of the Company on the giving of seven days' written notice to the registered holder of the Redeemable Preference Shares.

A total of 826 million Ordinary Shares were issued to Astra shareholders who accepted the merger offer before the final closing date, 21 May 1999. The Company received acceptances from Astra shareholders representing 99.6% of Astra's shares and the remaining 0.4% was acquired in 2000, for cash.

Issued share capital, shareholdings and share prices

At 31 December 2017, the Company had 87,934 registered holders of 1,266,221,605 Ordinary Shares. There were 107,486 holders of Ordinary Shares held under the Euroclear Services Agreement, representing 10.4% of the issued share capital of the Company and 1,849 registered holders of ADSs, representing 17.7% of the issued share capital of the Company.

Ordinary Shares in issue

	2013	2014	2015	2016	**2017**
Ordinary Shares in issue – millions					
At year end	1,257	1,263	1,264	1,265	**1,266**
Weighted average for year	1,252	1,262	1,264	1,265	**1,266**
Stock market price per Ordinary Share (London Stock Exchange)					
Highest (pence)	3612.0	4823.5	4863.0	5220.0	**5508.0**
Lowest (pence)	2909.5	3549.5	3903.5	3774.0	**4194.0**
At year end (pence)	3574.5	4555.5	4616.5	4437.5	**5121.0**

Analysis of shareholdings as a percentage of issued share capital at 31 December

Number of Ordinary Shares[1]	2013 %	2014 %	2015 %	2016 %	**2017 %**
1 – 250	0.5	0.5	0.5	0.5	**0.5**
251 – 500	0.6	0.6	0.6	0.5	**0.5**
501 – 1,000	0.8	0.7	0.7	0.6	**0.6**
1,001 – 5,000	1.1	1.0	0.9	0.8	**0.8**
5,001 – 10,000	0.2	0.2	0.2	0.2	**0.2**
10,001 – 50,000	1.0	1.0	0.9	0.9	**1.0**
50,001 – 1,000,000	12.3	13.3	13.0	12.3	**11.9**
Over 1,000,000	83.5	82.7	83.2	84.2	**84.5**

[1] Includes Euroclear and ADR holdings.

Shareholder Information
continued

Reported high and low share prices during the year

		Ordinary Shares London Stock Exchange[1]		Ordinary Shares Stockholm Stock Exchange[2]		ADRs New York Stock Exchange[3]	
		High (pence)	Low (pence)	High (SEK)	Low (SEK)	High (US$)	Low (US$)
2016	– Quarter 1	4562.0	3890.0	584.0	452.8	33.90	27.95
	– Quarter 2	4467.0	3774.0	592.0	458.2	30.25	27.26
	– Quarter 3	5220.0	4469.5	556.0	456.6	34.50	29.97
	– Quarter 4	5096.0	4007.0	581.5	448.5	33.00	25.81
2017	– Quarter 1	4974.5	4194.0	558.0	470.6	31.80	26.72
	– Quarter 2	5508.0	4566.0	619.0	534.0	35.36	29.76
	– Quarter 3	5192.0	4325.0	578.0	466.2	34.16	28.88
	– Quarter 4	5180.0	4705.0	581.0	541.0	34.78	32.09
	– July	5192.0	4325.0	578.0	471.8	34.16	28.88
	– August	4564.0	4384.0	491.9	466.2	30.34	28.96
	– September	4955.0	4573.5	547.5	479.6	34.00	30.07
	– October	5176.0	5022.0	568.0	552.5	34.78	33.49
	– November	5180.0	4777.0	581.0	546.5	34.56	32.87
	– December	5121.0	4705.0	568.5	541.0	34.70	32.09

[1] For shares listed on the London Stock Exchange, the reported high and low middle market closing quotations are derived from the Daily Official List.
[2] For shares listed on the Stockholm Stock Exchange, the high and low closing sales prices are as stated in the Official List.
[3] For ADRs listed on the New York Stock Exchange, the reported high and low sales prices are as reported by Dow Jones (ADR quotations).

US holdings

At 31 January 2018, the proportion of Ordinary Shares represented by ADSs was 17.7% of the issued share capital of the Company. At 31 January 2018 there were 87,700 registered holders of Ordinary Shares, of which 703 were based in the US and there were 1,850 record holders of ADRs, of which 1,828 were based in the US.

Major shareholdings

At 31 December 2017, the following persons had disclosed an interest in the issued Ordinary Share capital of the Company in accordance with the requirements of rules 5.1.2 or 5.1.5 of the UK Listing Authority's Disclosure Guidance and Transparency Rules:

Shareholder	Number of Ordinary Shares	Date of disclosure to Company[1]	**Number of Ordinary Shares disclosed as a percentage of issued share capital at 31 December 2017**
BlackRock, Inc.	100,885,181	8 December 2009	**7.97**
Investor AB	51,587,810	2 February 2012	**4.07**
The Capital Group Companies, Inc.	63,029,311	14 August 2017	**4.98**

[1] Since the date of disclosure to the Company, the interest of any person listed above in Ordinary Shares may have increased or decreased. No requirement to notify the Company of any increase or decrease arises unless the holding passes a notifiable threshold in accordance with rules 5.1.2 or 5.1.5 of the UK Listing Authority's Disclosure Guidance and Transparency Rules.

So far as the Company is aware, no other person held a notifiable interest in the issued Ordinary Share capital of the Company. No changes to major shareholdings were disclosed to the Company between 31 December 2017 and 31 January 2018.

Changes in the percentage ownerships disclosed by major shareholders during the past three years are set out below. Major shareholders do not have different voting rights.

Shareholder	**31 January 2018**	31 January 2017	31 January 2016	31 January 2015
BlackRock, Inc.	**7.97**	7.97	7.98	7.99
Investor AB	**4.07**	4.08	4.08	4.08
The Capital Group Companies, Inc.	**4.98**	3.00	3.00	< 3.00

So far as the Company is aware, it is neither directly nor indirectly owned or controlled by one or more corporations or by any government.

The Company does not know of any arrangements, the operation of which might result in a change in the control of the Company.

Directors' and officers' shareholdings

At 31 January 2018, the total amount of the Company's voting securities owned by Directors and officers of the Company was:

Title of class	Amount owned	Percentage of class
Ordinary Shares	**657,098**	**0.05**

Options to purchase securities from registrant or subsidiaries

(a) At 31 January 2018, options outstanding to subscribe for Ordinary Shares were:

Number of shares	Subscription price (pence)	Normal expiry date
2,116,201	**1882-3929**	**2017-2023**

The weighted average subscription price of options outstanding at 31 January 2018 was 3118 pence. All options were granted under Company employee share schemes.

(b) Included in paragraph (a) are options granted to Directors and officers of the Company as follows:

Number of shares	Subscription price (pence)	Normal expiry date
2,495	**3307-3597**	**2018-2021**

(c) Included in paragraph (b) are options granted to individually named Directors. Details of these option holdings at 31 December 2017 are shown in the Remuneration Report on page 124.

During the period 1 January 2018 to 31 January 2018, no Director exercised any options.

Related party transactions

During the period 1 January 2018 to 31 January 2018, there were no transactions, loans, or proposed transactions between the Company and any related parties which were material to either the Company or the related party, or which were unusual in their nature or conditions (see also Note 30 to the Financial Statements on page 189).

Articles of Association

AstraZeneca PLC's current Articles were adopted by shareholders at the Company's AGM held on 24 April 2015. Any amendment to the Articles requires the approval of shareholders by a special resolution at a general meeting of the Company.

Objects

The Company's objects are unrestricted.

Directors

The Board has the authority to manage the business of the Company, for example, through powers to allot and repurchase its shares, subject where required to shareholder resolutions. Subject to certain exceptions, Directors do not have power to vote at Board meetings on matters in which they have a material interest.

The quorum for meetings of the Board is a majority of the full Board, of whom at least four must be Non-Executive Directors. In the absence of a quorum, the Directors do not have power to determine compensation arrangements for themselves or any member of the Board.

The Board may exercise all the powers of the Company to borrow money. Variation of these borrowing powers would require the passing of a special resolution of the Company's shareholders.

All Directors must retire from office at the Company's AGM each year and may present themselves for election or re-election. Directors are not prohibited, upon reaching a particular age, from submitting themselves for election or re-election.

Within two months of the date of their appointment, Directors are required to beneficially own Ordinary Shares of an aggregate nominal amount of at least $125, which currently represents 500 shares.

Rights, preferences and restrictions attaching to shares

As at 31 December 2017, the Company had 1,266,221,605 Ordinary Shares and 50,000 Redeemable Preference Shares in issue. The Ordinary Shares represent 99.98% and the Redeemable Preference Shares represent 0.02% of the Company's total share capital (these percentages have been calculated by reference to the closing mid-point US$/GBP exchange rate on 31 December 2017 as published in the London edition of the Financial Times newspaper).

As agreed by the shareholders at the Company's AGM held on 29 April 2010, the Articles were amended with immediate effect to remove the requirement for the Company to have an authorised share capital, the concept of which was abolished under the Companies Act 2006. Each Ordinary Share carries the right to vote at general meetings of the Company. The rights and restrictions attaching to the Redeemable Preference Shares differ from those attaching to Ordinary Shares as follows:

- The Redeemable Preference Shares carry no rights to receive dividends.
- The holders of Redeemable Preference Shares have no rights to receive notices of, attend or vote at general meetings except in certain limited circumstances. They have one vote for every 50,000 Redeemable Preference Shares held.
- On a distribution of assets of the Company, on a winding-up or other return of capital (subject to certain exceptions), the holders of Redeemable Preference Shares have priority over the holders of Ordinary Shares to receive the capital paid up on those shares.
- Subject to the provisions of the Companies Act 2006, the Company has the right to redeem the Redeemable Preference Shares at any time on giving not less than seven days' written notice.

There are no specific restrictions on the transfer of shares in the Company, which is governed by the Articles and prevailing legislation.

The Company is not aware of any agreements between holders of shares that may result in restrictions on the transfer of shares or that may result in restrictions on voting rights. The Company is also not aware of any arrangements under which financial rights are held by a person other than the holder of the shares.

Action necessary to change the rights of shareholders

In order to vary the rights attached to any class of shares, the consent in writing of the holders of three quarters in nominal value of the issued shares of that class or the sanction of a special resolution passed at a general meeting of such holders is required.

General meetings

AGMs require 21 clear days' notice to shareholders. Subject to the Companies Act 2006, other general meetings require 14 clear days' notice.

For all general meetings, a quorum of two shareholders present in person or by proxy, and entitled to vote on the business transacted, is required unless each of the two persons present is a corporate representative of the same corporation; or each of the two persons present is a proxy of the same shareholder.

Shareholders and their duly appointed proxies and corporate representatives are entitled to be admitted to general meetings.

Limitations on the rights to own shares

There are no limitations on the rights to own shares.

Shareholder Information *continued*

Documents on display

The Articles and other documents concerning the Company which are referred to in this Annual Report may be inspected at the Company's registered office at 1 Francis Crick Avenue, Cambridge Biomedical Campus, Cambridge CB2 0AA, UK.

Compliance requirements under Listing Rule 9.8.4

Other than as set out below, the Company has nothing to report under Listing Rule 9.8.4.

Item	Location of details in Annual Report
Details of any long-term incentive schemes	Note 27 of the Financial Statements and Directors' Remuneration Report
Shareholder waiver of dividends	Page 98 in the Corporate Governance Report

Property

Substantially all of our properties are held freehold, free of material encumbrances and are fit for their purpose. For more information please refer to Note 7 to the Group Financial Statements on page 153.

Tax information for shareholders

Taxation for US persons

The following summary of material UK and US federal income tax consequences of ownership of Ordinary Shares or ADR held as capital assets by the US holders described below is based on current UK and US federal income tax law, including the US/UK double taxation convention relating to income and capital gains, which entered into force on 31 March 2003 (the Convention). This summary does not describe all of the tax consequences that may be relevant in light of the US holders' particular circumstances and tax consequences applicable to US holders subject to special rules (such as certain financial institutions, entities treated as partnerships for US federal income tax purposes, persons whose functional currency for US federal income tax purposes is not the US dollar, tax-exempt entities, persons subject to alternative minimum tax, persons subject to the Medicare contribution tax on 'net investment income', or persons holding Ordinary Shares or ADRs in connection with a trade or business conducted outside of the US). US holders are urged to consult their tax advisers regarding the UK and US federal income tax consequences of the ownership and disposition of Ordinary Shares or ADRs in their particular circumstances.

This summary is based in part on representations of Citibank as depositary for ADRs and assumes that each obligation in the deposit agreement among the Company and the depositary and the holders from time to time of ADRs and any related agreements will be performed in accordance with its terms. The US Treasury has expressed concerns that parties to whom American depositary shares are released before shares are delivered to the depositary (pre-release), or intermediaries in the chain of ownership between holders and the issuer of the security underlying the American depositary shares, may be taking actions that are inconsistent with the claiming, by US holders of American depositary shares, of foreign tax credits for US federal income tax purposes. Such actions would also be inconsistent with the claiming of the reduced tax rates, described below, applicable to dividends received by certain non-corporate US holders. Accordingly, the availability of the reduced tax rates for dividends received by certain non-corporate US holders could be affected by actions that may be taken by parties to whom ADRs are pre-released.

For the purposes of this summary, the term 'US holder' means a beneficial owner of Ordinary Shares or ADRs that is, for US federal income tax purposes, a citizen or resident of the US, a corporation (or other entity taxable as a corporation) created or organised in or under the laws of the US, any state in the US or the District of Columbia, or an estate or trust, the income of which is subject to US federal income taxation regardless of its source.

This summary assumes that we are not, and will not become, a passive foreign investment company, as discussed below.

UK and US income taxation of dividends

The UK does not currently impose a withholding tax on dividends paid by a UK company, such as the Company.

For US federal income tax purposes, distributions paid by the Company to a US holder are included in gross income as foreign source ordinary dividend income to the extent paid out of the Company's current or accumulated earnings and profits, calculated in accordance with US federal income tax principles. The Company does not maintain calculations of its earnings and profits under US federal income tax principles and so it is expected that distributions generally will be reported to US holders as dividends. The amount of the dividend will be the US dollar amount received by the depositary for US holders of ADRs (or, in the case of Ordinary Shares, the US dollar value of the foreign currency payment, determined at the spot rate of the relevant foreign currency on the date the dividend is received by the US holders, regardless of whether the dividend is converted into US dollars), and it will not be eligible for the dividends received deduction generally available to US corporations. If the dividend is converted into US dollars on the date of receipt, US holders of Ordinary Shares generally should not be required to recognise foreign currency gains or losses in respect of the dividend income. They may have foreign currency gain or loss (taxable at the rates applicable to ordinary income) if the amount of such dividend is converted into US dollars after the date of its receipt.

Subject to applicable limitations and the discussion above regarding concerns expressed by the US Treasury, dividends received by certain non-corporate US holders of Ordinary Shares or ADRs may be taxable at favourable US federal income tax rates. US holders should consult their own tax advisers to determine whether they are subject to any special rules which may limit their ability to be taxed at these favourable rates.

Taxation on capital gains

Under present English law, individuals who are neither resident nor ordinarily resident in the UK, and companies which are not resident in the UK, will not be liable for UK tax on capital gains made on the disposal of their Ordinary Shares or ADRs, unless such Ordinary Shares or ADRs are held in connection with a trade, profession or vocation carried on in the UK through a branch or agency or other permanent establishment.

A US holder will generally recognise US source capital gains or losses for US federal income tax purposes on the sale or exchange of Ordinary Shares or ADRs in an amount equal to the difference between the US dollar amount realised and such holder's US dollar tax basis in the Ordinary Shares or ADRs. US holders should consult their own tax advisers about the treatment of capital gains, which may be taxed at lower rates than ordinary income for non-corporate US holders and capital losses, the deductibility of which may be subject to limitations.

Passive Foreign Investment Company (PFIC) rules

We believe that we were not a PFIC for US federal income tax purposes for the year ended 31 December 2017. However, since PFIC status depends on the composition of our income and assets, and the market value of our assets (including, among others, less than 25% owned equity investments), from time to time, there can be no assurance that we will not be considered a PFIC for any taxable year. If we were treated as a PFIC for any taxable year during which Ordinary Shares or ADRs were held, certain adverse tax consequences could apply to US holders.

Information reporting and backup withholding

Payments of dividends and sales proceeds that are made within the US or through certain US-related financial intermediaries may be subject to information reporting and backup withholding, unless: (i) the US holder is a corporation or other exempt recipient; or (ii) in the case of backup withholding, the US holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding. The amount of any backup withholding from a payment to a US holder will be allowed as a credit against the holder's US federal income tax liability and may entitle the holder to a refund, provided that the required information is timely supplied to the US Internal Revenue Service (IRS).

Certain US holders who are individuals (or certain specified entities), may be required to report information relating to securities issued by non-US persons (or foreign accounts through which the securities are held), generally on IRS Form 8938, subject to certain exceptions (including an exception for securities held in accounts maintained by US financial institutions). US holders should consult their tax advisers regarding their reporting obligations with respect to the Ordinary Shares or ADRs.

UK inheritance tax

Under the current Double Taxation (Estates) Convention (the Estate Tax Convention) between the US and the UK, Ordinary Shares or ADRs held by an individual shareholder who is domiciled for the purposes of the Estate Tax Convention in the US, and is not for the purposes of the Estate Tax Convention a national of the UK, will generally not be subject to UK inheritance tax on the individual's death or on a chargeable gift of the Ordinary Shares or ADRs during the individual's lifetime, provided that any applicable US federal gift or estate tax liability is paid, unless the Ordinary Shares or ADRs are part of the business property of a permanent establishment of the individual in the UK or, in the case of a shareholder who performs independent personal services, pertain to a fixed base situated in the UK. Where the Ordinary Shares or ADRs have been placed in trust by a settlor who, at the time of settlement, was a US domiciled shareholder, the Ordinary Shares or ADRs will generally not be subject to UK inheritance tax unless the settlor, at the time of settlement, was a UK national, or the Ordinary Shares or ADRs are part of the business property of a permanent establishment of the individual in the UK or, in the case of a shareholder who performs independent personal services, pertain to a fixed base situated in the UK. In the exceptional case where the Ordinary Shares or ADRs are subject to both UK inheritance tax and US federal gift or estate tax, the Estate Tax Convention generally provides for double taxation to be relieved by means of credit relief.

UK stamp duty reserve tax and stamp duty

A charge to UK stamp duty or UK stamp duty reserve tax (SDRT) may arise on the deposit of Ordinary Shares in connection with the creation of ADRs. The rate of stamp duty or SDRT will generally be 1.5% of the value of the consideration or, in some circumstances, the value of the Ordinary Shares. There is no 1.5% SDRT charge on the issue of Ordinary Shares (or, where it is integral to the raising of new capital, the transfer of Ordinary Shares) into the ADR arrangement.

No UK stamp duty will be payable on the acquisition or transfer of existing ADRs provided that any instrument of transfer or written agreement to transfer is executed outside the UK and remains at all times outside the UK. An agreement for the transfer of ADRs will not give rise to a liability for SDRT.

A transfer of, or an agreement to, transfer Ordinary Shares will generally be subject to UK stamp duty or SDRT at 0.5% of the amount or value of any consideration, provided, in the case of stamp duty, it is rounded up to the nearest £5.

Transfers of Ordinary Shares into CREST will generally not be subject to stamp duty or SDRT, unless such a transfer is made for a consideration in money or money's worth, in which case a liability to SDRT will arise, usually at the rate of 0.5% of the value of the consideration. Paperless transfers of Ordinary Shares within CREST are generally liable to SDRT at the rate of 0.5% of the value of the consideration. CREST is obliged to collect SDRT from the purchaser on relevant transactions settled within the system.

Exchange controls and other limitations affecting security holders

There are no governmental laws, decrees or regulations in the UK restricting the import or export of capital or affecting the remittance of dividends, interest or other payments to non-resident holders of Ordinary Shares or ADRs.

There are no limitations under English law or the Articles on the right of non-resident or foreign owners to be the registered holders of, or to exercise voting rights in relation to, Ordinary Shares or ADRs or to be registered holders of notes or debentures of the Company or its wholly-owned subsidiary, Zeneca Wilmington Inc.

Exchange rates

The following information relating to average and spot exchange rates used by AstraZeneca is provided for convenience:

	SEK/US$	US$/GBP
Average rates (statement of comprehensive income, statement of cash flows)		
2015	8.3950	1.5357
2016	8.5286	1.3673
2017	**8.5835**	**1.2835**
End of year spot rates (statement of financial position)		
2015	8.4114	1.4816
2016	9.1162	1.2272
2017	**8.2467**	**1.3468**

Trade Marks

AstraZeneca, the AstraZeneca logotype, and the AstraZeneca symbol are all trade marks of the Group.

The following brand names which appear in italics in this Annual Report are trade marks of the Group:

Trade mark			
Accolate[1]	*Diprivan*[3]	*Movantik*	*Seroquel XR*
Arimidex	*Duzallo*	*Moventig*	*Symbicort*
Atacand	*EMLA*[3]	*Myalept*[7]	*Symbicort SMART*
Atacand HCT	*Entocort*[4]	*Naropin*[3]	*Symbicort Turbuhaler*
Atacand Plus	*Farxiga*	*Nexium*	*Symlin*
BCise	*Fasenra*	*Nolvadex*	*Synagis*[9]
Bevespi Aerosphere	*Faslodex*	*Onglyza*	*Tagrisso*
Bricanyl	*Fluenz*	*Oxis Turbuhaler*	*Tenormin*[10]
Brilinta	*FluMist*	*Plendil*	*Toprol-XL*
Brilique	*Forxiga*	*Pressair*	*Turbuhaler*
Bydureon	*Genuair*	*Prilosec*	*Vimovo*
Byetta	*Imdur*[5]	*Pulmicort*	*Xigduo*
Calquence	*Imfinzi*	*Pulmicort Flexhaler*	*Xylocaine*[3]
Caprelsa[2]	*Iressa*	*Pulmicort Respules*	*Xylocard*[3]
Carbocaine[3]	*Kombiglyze*	*Pulmicort Turbuhaler*	*Xyloproct*[3]
Casodex	*Komboglyze*	*Qtern*	*Zavicefta*[11]
Citanest[3]	*Losec*	*Respules*	*Zestril*[10]
Cosudex	*Lynparza*	*Rhinocort*[8]	*Zoladex*
Crestor	*Marcaine*[3]	*Rhinocort Aqua*[8]	*Zomig*
Daliresp	*Meronem*[6]	*Seloken*	*Zurampic*
Daxas	*Merrem*[6]	*Seroquel*	

[1] AstraZeneca assigned this trade mark in the US to Par Pharmaceuticals Inc. effective 5 January 2015.
[2] AstraZeneca assigned this trade mark to Genzyme Corporation effective 30 September 2015.
[3] AstraZeneca divested these trade marks to Aspen group effective 1 November 2017.
[4] AstraZeneca assigned this trade mark in the US to Elan Pharma International Limited effective 15 December 2015, and in the rest of the world to Tillots Pharma AG effective 16 July 2015.
[5] AstraZeneca assigned this trade mark to Everest Future Limited effective 1 May 2016.
[6] AstraZeneca assigned *Meronem* and *Merrem* to Pfizer Inc. in most markets outside the US effective 23 December 2016.
[7] AstraZeneca assigned this trade mark to Aegerion effective 9 January 2015.
[8] AstraZeneca assigned *Rhinocort* and *Rhinocort Aqua* to Cilag GmbH International outside the US effective 5 December 2016.
[9] AstraZeneca owns this trade mark in the US only. AbbVie owns it in the rest of the world.
[10] AstraZeneca assigned these trade marks in the US to Alvogen Pharma US Inc. effective 9 January 2015.
[11] AstraZeneca assigned this trade mark to Pfizer Inc. effective 23 December 2016.

The following brand names which appear in italics in this Annual Report are trade marks licensed to the Group by the entities set out below:

Trade mark	Licensor or Owner
Duaklir	Almirall, S.A.
Eklira	Almirall, S.A.
Epanova	Chrysalis Pharma AG
Tudorza	Almirall, S.A.

The following brand names which appear in italics throughout this Annual Report are not owned by or licensed to the Group and are owned by the entities set out below:

Trade mark	Owner
Avastin	Genentech, Inc.
Darzalex	Johnson & Johnson
Keytruda	MSD
Lipitor	Pfizer Ireland Pharmaceuticals
messenger RNA Therapeutics	Moderna Therapeutics, Inc.
Vidaza	Celgene Corporation

Glossary

Market definitions

Region	Country				
US	US				
Europe	Albania*	Czech Republic	Hungary	Luxembourg*	Serbia and Montenegro*
	Austria	Denmark	Iceland*	Malta*	Slovakia
	Belgium	Estonia*	Ireland	Netherlands	Slovenia*
	Bosnia and Herzegovina*	Finland	Israel*	Norway	Spain
	Bulgaria	France	Italy	Poland	Sweden
	Croatia	Germany	Latvia*	Portugal*	Switzerland
	Cyprus*	Greece	Lithuania*	Romania	UK
Established ROW	Australia	Canada	Japan	New Zealand	
Emerging Markets	Algeria	Costa Rica	Iraq*	Pakistan*	Syria*
	Argentina	Cuba*	Jamaica*	Palestine*	Taiwan
	Aruba*	Dominican Republic*	Jordan*	Panama	Thailand
	Bahamas*	Ecuador*	Kazakhstan	Peru	Trinidad and Tobago*
	Bahrain*	Egypt	Kuwait*	Philippines	Tunisia*
	Barbados*	El Salvador	Lebanon*	Qatar*	Turkey
	Belarus*	Georgia*	Libya*	Russia	Ukraine*
	Belize*	Guatemala	Malaysia	Saudi Arabia	United Arab Emirates
	Bermuda*	Honduras	Mexico	Singapore	Uruguay*
	Brazil	Hong Kong	Morocco*	South Africa	Venezuela*
	Chile	India	Nicaragua	South Korea	Vietnam
	China	Indonesia	Oman*	Sri Lanka*	Yemen*
	Colombia	Iran*	Other Africa*	Sudan*	

* IQVIA, IQVIA Midas Quantum Q3 2017 data is not available or AstraZeneca does not subscribe for IQVIA quarterly data for these countries.

The above table is not an exhaustive list of all the countries in which AstraZeneca operates, and excludes countries with revenue in 2017 of less than $1 million.

Established Markets means US, Europe and Established ROW.

North America means US and Canada.

Other Established ROW means Australia and New Zealand.

Other Emerging Markets means all Emerging Markets except China.

Other Africa includes Angola, Botswana, Ethiopia, Ghana, Kenya, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe.

Asia Area comprises India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand and Vietnam.

US equivalents

Terms used in this Annual Report	US equivalent or brief description
Accruals	Accrued expenses
Called-up share capital	Issued share capital
Creditors	Liabilities/payables
Debtors	Receivables and prepaid expenses
Earnings	Net income
Employee share schemes	Employee stock benefit plans
Fixed asset investments	Non-current investments
Freehold	Ownership with absolute rights in perpetuity
Loans	Long-term debt
Prepayments	Prepaid expenses
Profit	Income
Share premium account	Premiums paid in excess of par value of Ordinary Shares
Short-term investments	Redeemable securities and short-term deposits

Glossary *continued*

The following abbreviations and expressions have the following meanings when used in this Annual Report:

Abbott – Abbott Laboratories.

AbbVie – AbbVie Inc.

ACA (Affordable Care Act) – the US Patient Protection and Affordable Care Act which was signed into law on 23 March 2010 as amended by the Health Care and Education Reconciliation Act which was signed into law on 30 March 2010.

Acerta Pharma – Acerta Pharma B.V.

ACS – acute coronary syndromes.

Actavis – Actavis plc.

ADC Therapeutics – ADC Therapeutics Sàrl.

ADR – an American Depositary Receipt evidencing title to an ADS.

ADS – an American Depositary Share representing half an underlying Ordinary Share.

Aegerion – Aegerion Pharmaceuticals, Inc.

AGM – an Annual General Meeting of the Company.

Allergan – Allergan plc.

Almirall – Almirall, S.A.

Amgen – Amgen, Inc.

Amplimmune – Amplimmune, Inc.

Amylin – Amylin Pharmaceuticals, LLC (formerly Amylin Pharmaceuticals, Inc.).

ANDA – an abbreviated new drug application, which is a marketing approval application for a generic drug submitted to the FDA.

Annual Report – this Annual Report and Form 20-F Information 2017.

API – active pharmaceutical ingredient.

Aralez – Aralez Pharmaceuticals Trading DAC.

Ardea – Ardea Biosciences, Inc.

Articles – the Articles of Association of the Company.

Aspen – Aspen Global Incorporated.

Astellas – Astellas Pharma Inc.

Astra – Astra AB, being the company with whom the Company merged in 1999.

AstraZeneca – the Company and its subsidiaries.

ATM – Ataxia telangiectasia mutated.

AZIP – AstraZeneca Investment Plan.

BACE – beta secretase cleaving enzyme.

biologic(s) – a class of drugs that are produced in living cells.

biosimilars – a copy of a biologic that is sufficiently similar to meet regulatory requirements.

BMS – Bristol-Myers Squibb Company.

Board – the Board of Directors of the Company.

Bureau Veritas – Bureau Veritas UK Limited.

CDP – a not-for-profit that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.

Celgene – Celgene International Sàrl/Celgene Corporation.

CEO – the Chief Executive Officer of the Company.

CER – constant exchange rates.

CFDA – China Food and Drug Administration.

CFO – the Chief Financial Officer of the Company.

CHMP – the Committee for Medicinal Products for Human Use.

Cilag – Cilag GmbH International.

Circassia – Circassia Pharmaceuticals plc.

CIS – Commonwealth of Independent States.

CMS – China Medical System Holdings Ltd.

Code of Ethics – the Group's Code of Ethics.

Company or Parent Company – AstraZeneca PLC (formerly Zeneca Group PLC (Zeneca)).

COPD – chronic obstructive pulmonary diseases.

CREST – UK-based securities settlement system.

CRISPR – clustered regularly interspaced short palindromic repeats.

CRL – Complete Response Letter.

CROs – contract research organisations.

CRUK – Cancer Research UK.

CV – cardiovascular.

CVMD – Cardiovascular & Metabolic Diseases.

Daiichi Sankyo – Daiichi Sankyo, Inc.

Definiens – Definiens AG.

Director – a director of the Company.

DJSI – Dow Jones Sustainability Index.

DOJ – the United States Department of Justice.

DTR – UK Disclosure Guidance and Transparency Rules.

earnings per share (EPS) – profit for the year after tax and non-controlling interests, divided by the weighted average number of Ordinary Shares in issue during the year.

EC – European Commission.

EFPIA – European Federation of Pharmaceutical Industries and Associations.

EGFR – epidermal growth factor receptor.

EMA – European Medicines Agency.

Entasis – Entasis Therapeutics Ltd and Entasis Therapeutics Inc.

EPO – European Patent Office.

ESMO – European Society for Medical Oncology.

ESPC – Early Stage Product Committee.

ESRD – end-stage renal disease.

EVP – Executive Vice-President.

EU – the European Union.

EU 5 – European Union Five (France, Germany, Italy, Spain and the UK).

FDA – the US Food and Drug Administration, which is part of the US Department of Health and Human Services Agency, which is the regulatory authority for all pharmaceuticals (including biologics and vaccines) and medical devices in the US.

FDC – fixed-dose combination.

FibroGen – FibroGen, Inc.

FRC – Financial Reporting Council.

GAAP – Generally Accepted Accounting Principles.

GDPR – General Data Protection Regulation.

Gilead – Gilead Sciences, Inc.

GMD – Global Medicines Development.

GPPS – Global Product and Portfolio Strategy.

gross margin – the margin, as a percentage, by which sales exceed the cost of sales, calculated by dividing the difference between the two by the sales figure.

Group – AstraZeneca PLC and its subsidiaries.

Grünenthal – Grünenthal Group.

GSK – GlaxoSmithKline plc.

HHA – Healthy Heart Africa programme.

HR – human resources.

IA – the Group's Internal Audit Services function.

IAS – International Accounting Standards.

IAS 19 – IAS 19 'Employee Benefits'.

IAS 32 – IAS 32 'Financial Instruments: Presentation'.

IAS 39 – IAS 39 'Financial Instruments: Recognition and Measurement'.

IASB – International Accounting Standards Board.

ICS – inhaled corticosteroid.

IFPMA – International Federation of Pharmaceutical Manufacturers and Associations.

IFRS – International Financial Reporting Standards or International Financial Reporting Standard, as the context requires.

IFRS 8 – IFRS 8 'Operating Segments'.

IMED – Innovative Medicines and Early Development.

Incyte – Incyte Corporation.

Innate Pharma – Innate Pharma S.A.

Insmed – Insmed, Inc.

IO – immuno-oncology.

IP – intellectual property.

Ironwood – Ironwood Pharmaceuticals, Inc.

IS – information services.

ISAs – International Standards on Auditing.

IT – information technology.

Johnson & Johnson – Johnson & Johnson.

KPI – key performance indicator.

krona or SEK – references to the currency of Sweden.

Kyowa Hakko Kirin – Kyowa Hakko Kirin Co., Ltd.

LABA – long-acting beta2-agonist.

LAMA – long-acting muscarinic antagonist.

LCM projects – significant life-cycle management projects (as determined by potential revenue generation), or line extensions.

Lean – means enhancing value for customers with fewer resources.

LEO Pharma – LEO Pharma A/S.

Lilly – Eli Lilly and Company.

LSPC – Late Stage Product Committee.

LTI – long-term incentive, in the context of share plan remuneration arrangements.

MAA – a marketing authorisation application, which is an application for authorisation to place medical products on the market. This is a specific term used in the EU and European Economic Area markets.

mAb – monoclonal antibody, a biologic that is specific, that is, it binds to and attacks one particular antigen.

major market – US, EU, Japan (JP) and China (CN).

MAT – moving annual total.

MedImmune – MedImmune, LLC (formerly MedImmune, Inc.).

MEK – part of the mitogen-activated protein kinase (MAPK) pathway.

MI – myocardial infarction.

Moderna – Moderna Therapeutics, Inc.

MSD – Merck & Co., Inc., which is known as Merck in the US and Canada and MSD in other territories.

NCD – non-communicable disease.

NDA – a new drug application to the FDA for approval to market a new medicine in the US.

NME – new molecular entity.

Novartis – Novartis Pharma AG.

Novo Nordisk – Novo Nordisk A/S.

NSAID – a non-steroidal anti-inflammatory drug.

NSCLC – non-small cell lung cancer.

NSTE-ACS – non-ST-Elevation acute coronary syndromes.

NYSE – the New York Stock Exchange.

n/m – not meaningful.

OECD – the Organisation for Economic Co-operation and Development.

OIC – opioid-induced constipation.

Omthera – Omthera Pharmaceuticals, Inc.

operating profit – sales, less cost of sales, less operating costs, plus operating income.

Ordinary Share – an ordinary share of $0.25 each in the share capital of the Company.

Orphan Drug – a drug which has been approved for use in a relatively low-incidence indication (an orphan indication) and has been rewarded with a period of market exclusivity; the period of exclusivity and the available orphan indications vary between markets.

OTC – over-the-counter.

Paediatric Exclusivity – in the US, a six-month period of exclusivity to market a drug which is awarded by the FDA in return for certain paediatric clinical studies using that drug. This six-month period runs from the date of relevant patent expiry. Analogous provisions are available in certain other territories (such as European Supplementary Protection Certificate (SPC) paediatric extensions).

PARP – an oral poly ADP-ribose polymerase.

PD-L1 – an anti-programmed death-ligand 1.

Pearl Therapeutics – Pearl Therapeutics, Inc.

Pfizer – Pfizer, Inc.

PhRMA – Pharmaceutical Research and Manufacturers of America.

Phase I – the phase of clinical research where a new drug or treatment is tested in small groups of people (20 to 80) to check that the drug can achieve appropriate concentrations in the body, determine a safe dosage range and identify side effects. This phase includes healthy volunteer studies.

Phase II – the phase of clinical research which includes the controlled clinical activities conducted to evaluate the effectiveness of the drug in patients with the disease under study and to begin to determine the safety profile of the drug. Phase II studies are typically conducted in small- or medium-sized groups of patients and can be divided into Phase IIa studies, which tend to be designed to assess dosing requirements, and Phase IIb studies, which tend to assess safety and efficacy.

Phase III – the phase of clinical research which is performed to gather additional information about effectiveness and safety of the drug, often in a comparative setting, to evaluate the overall benefit/risk profile of the drug. Phase III studies usually include between several hundred and several thousand patients.

PHC – personalised healthcare.

PMDA – Pharmaceuticals and Medical Devices Agency of Japan.

pMDI – pressurised metered-dose inhaler.

pound sterling, £, GBP or pence – references to the currency of the UK.

Pozen – POZEN, Inc.

primary care – general healthcare provided by physicians who ordinarily have first contact with patients and who may have continuing care for them.

Proof of Concept – data demonstrating that a candidate drug results in a clinical change on an acceptable endpoint or surrogate in patients with the disease.

Glossary *continued*

PSP – AstraZeneca Performance Share Plan.

PTE – Patent Term Extension, an extension of up to five years in the term of a US patent relating to a drug which compensates for delays in marketing resulting from the need to obtain FDA approval. The analogous right in the EU is an SPC.

Qiagen – Qiagen NV.

R&D – research and development.

Recordati – Recordati S.p.A.

Redeemable Preference Share – a redeemable preference share of £1 each in the share capital of the Company.

Regulatory Data Protection (RDP) – see Intellectual Property on page 32.

Regulatory Exclusivity – any of the IP rights arising from generation of clinical data and includes Regulatory Data Protection, Paediatric Exclusivity and Orphan Drug status.

RNA – ribonucleic acid.

Roche – F. Hoffmann-La Roche AG.

ROW – rest of world.

RSV – respiratory syncytial virus.

Sanofi – SANOFI S.A./Sanofi Pasteur, Inc.

Sarbanes-Oxley Act – the US Sarbanes-Oxley Act of 2002.

SDRT – UK stamp duty reserve tax.

SEC – the US Securities and Exchange Commission, the governmental agency that regulates the US securities industry and stock markets.

Seroquel – *Seroquel* IR and *Seroquel XR*.

SET – Senior Executive Team.

SG&A costs – selling, general and administrative costs.

SGLT2 – sodium-glucose co-transporter 2.

SHE – Safety, Health and Environment.

Shionogi – Shionogi & Co. Ltd.

Shire – Shire plc.

SLE – systemic lupus erythematosus.

SPC – supplementary protection certificate.

specialty care – specific healthcare provided by medical specialists who do not generally have first contact with patients.

Spirogen – Spirogen Sàrl.

SSE – the Stockholm Stock Exchange.

Takeda – Takeda Pharmaceutical Company Limited.

TerSera – TerSera Therapeutics LLC.

Teva – Teva Pharmaceuticals USA, Inc.

Total Revenue – the sum of Product Sales and Externalisation Revenue.

TSR – total shareholder return, being the total return on a share over a period of time, including dividends reinvested.

UK – United Kingdom of Great Britain and Northern Ireland.

UK Corporate Governance Code – the UK Corporate Governance Code published by the FRC in September 2014 that sets out standards of good practice in corporate governance for the UK.

US – United States of America.

US dollar, US$, USD or $ – references to the currency of the US.

Valeant – Valeant Holdings Ireland/Valeant Pharmaceutical International, Inc.

WHO – World Health Organization, the United Nations' specialised agency for health.

YHP – Young Health Programme.

ZS Pharma – ZS Pharma, Inc.

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Important information for readers of this Annual Report

Cautionary statement regarding forward-looking statements

The purpose of this Annual Report is to provide information to the members of the Company. The Company and its Directors, employees, agents and advisers do not accept or assume responsibility to any other person to whom this Annual Report is shown or into whose hands it may come and any such responsibility or liability is expressly disclaimed. In order, among other things, to utilise the 'safe harbour' provisions of the US Private Securities Litigation Reform Act of 1995 and the UK Companies Act 2006, we are providing the following cautionary statement: This Annual Report contains certain forward-looking statements with respect to the operations, performance and financial condition of the Group, including, among other things, statements about expected revenues, margins, earnings per share or other financial or other measures. Forward-looking statements are statements relating to the future which are based on information available at the time such statements are made, including information relating to risks and uncertainties. Although we believe that the forward-looking statements in this Annual Report are based on reasonable assumptions, the matters discussed in the forward-looking statements may be influenced by factors that could cause actual outcomes and results to be materially different from those expressed or implied by these statements. The forward-looking statements reflect knowledge and information available at the date of the preparation of this Annual Report and the Company undertakes no obligation to update these forward-looking statements. We identify the forward-looking statements by using the words 'anticipates', 'believes', 'expects', 'intends' and similar expressions in such statements. Important factors that could cause actual results to differ materially from those contained in forward-looking statements, certain of which are beyond our control, include, among other things, those factors identified in the Risk section from page 210 of this Annual Report. Nothing in this Annual Report should be construed as a profit forecast.

Inclusion of Reported performance, Core financial measures and constant exchange rate growth rates

AstraZeneca's determination of non-GAAP measures together with our presentation of them within our financial information may differ from similarly titled non-GAAP measures of other companies.

Statements of competitive position, growth rates and sales

In this Annual Report, except as otherwise stated, market information regarding the position of our business or products relative to its or their competition is based upon published statistical sales data for the 12 months ended 30 September 2017 obtained from IQVIA, a leading supplier of statistical data to the pharmaceutical industry. Unless otherwise noted, for the US, dispensed new or total prescription data and audited sales data are taken, respectively, from IQVIA National Prescription Audit and IQVIA National Sales Perspectives for the 12 months ended 31 December 2017; such data is not adjusted for Medicaid and similar rebates. Except as otherwise stated, these market share and industry data from IQVIA have been derived by comparing our sales revenue with competitors' and total market sales revenues for that period, and except as otherwise stated, growth rates are given at CER. For the purposes of this Annual Report, unless otherwise stated, references to the world pharmaceutical market or similar phrases are to the 54 countries contained in the IQVIA database, which amounted to approximately 96% (in value) of the countries audited by IQVIA.

AstraZeneca websites

Information on or accessible through our websites, including www.astrazeneca.com, www.astrazenecaclinicaltrials.com and www.medimmune.com, does not form part of and is not incorporated into this Annual Report.

External/third-party websites

Information on or accessible through any third-party or external website does not form part of and is not incorporated into this Annual Report.

Figures

Figures in parentheses in tables and in the Financial Statements are used to represent negative numbers.

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This Annual Report is also available on our website, www.astrazeneca.com/annualreport2017