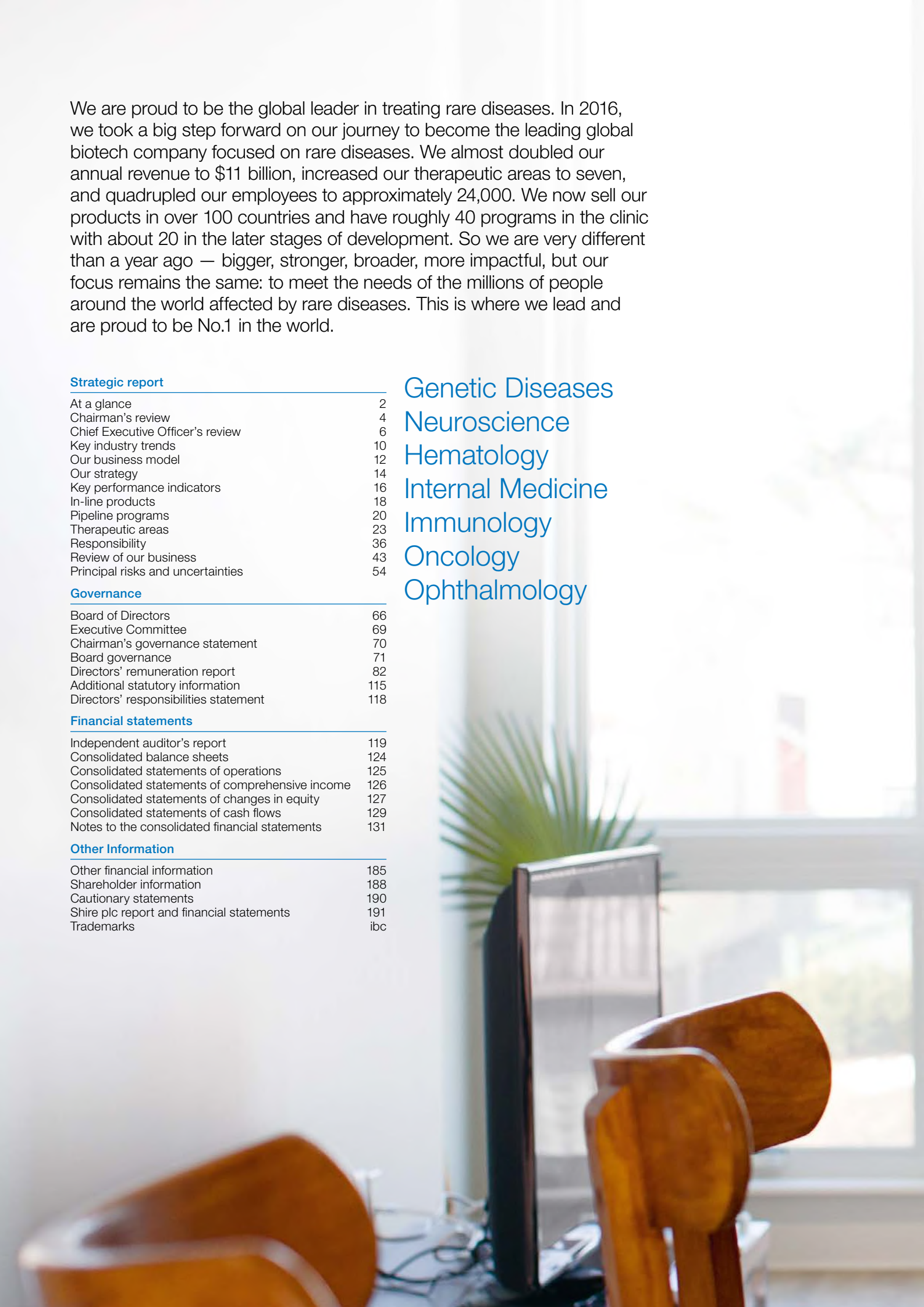
Shire

The global leader in rare diseases

Annual Report 2016

We are proud to be the global leader in treating rare diseases. In 2016, we took a big step forward on our journey to become the leading global biotech company focused on rare diseases. We almost doubled our annual revenue to $11 billion, increased our therapeutic areas to seven, and quadrupled our employees to approximately 24,000. We now sell our products in over 100 countries and have roughly 40 programs in the clinic with about 20 in the later stages of development. So we are very different than a year ago — bigger, stronger, broader, more impactful, but our focus remains the same: to meet the needs of the millions of people around the world affected by rare diseases. This is where we lead and are proud to be No.1 in the world.

Genetic Diseases
Neuroscience
Hematology
Internal Medicine
Immunology
Oncology
Ophthalmology

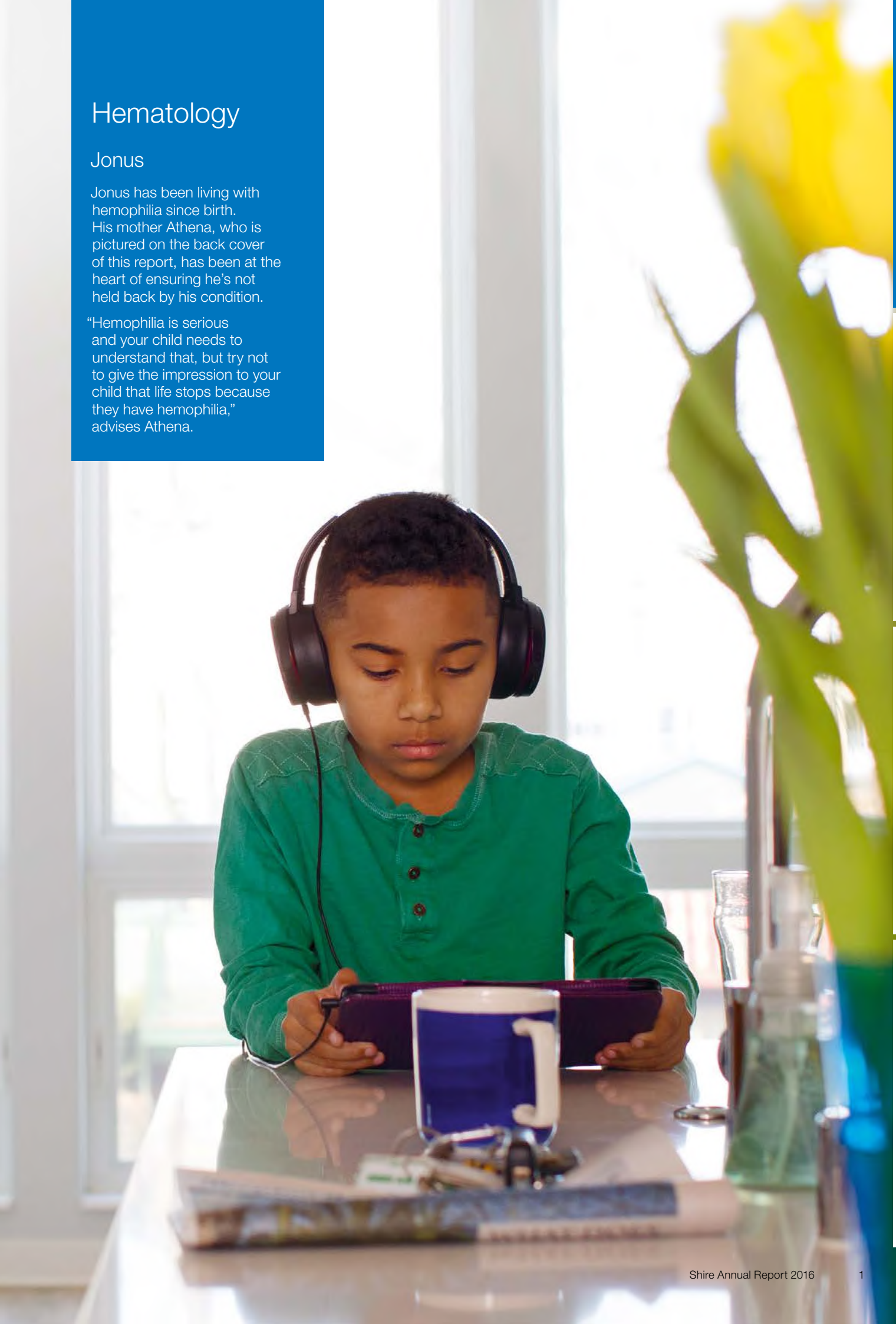


Hematology

Jonus

Jonus has been living with hemophilia since birth. His mother Athena, who is pictured on the back cover of this report, has been at the heart of ensuring he's not held back by his condition.

"Hemophilia is serious and your child needs to understand that, but try not to give the impression to your child that life stops because they have hemophilia," advises Athena.



Focused on serving people with rare diseases

2016 sales by therapeutic area

Genetic Diseases
$2,698m

Neuroscience
$2,490m

Hematology
Therapeutic area acquired with Baxalta on June 3, 2016
$2,241m

Internal Medicine
$1,756m

Immunology
Therapeutic area acquired with Baxalta on June 3, 2016
$1,516m

Oncology
Therapeutic area acquired with Baxalta on June 3, 2016
$131m

Ophthalmology
$54m

Where we operate

North America
Latin America
Europe
Asia

North America employees
58%

Financial highlights

Total revenue
$11.4bn

Product sales
$10.9bn

Non GAAP cash generation[4]
$3.5bn

Non GAAP EBITDA[1, 5]
$4.7bn

Non GAAP operating income[3]
$4.4bn

Non GAAP EBITDA margin[5]
39%

Non GAAP adjusted ROIC[2]
7%

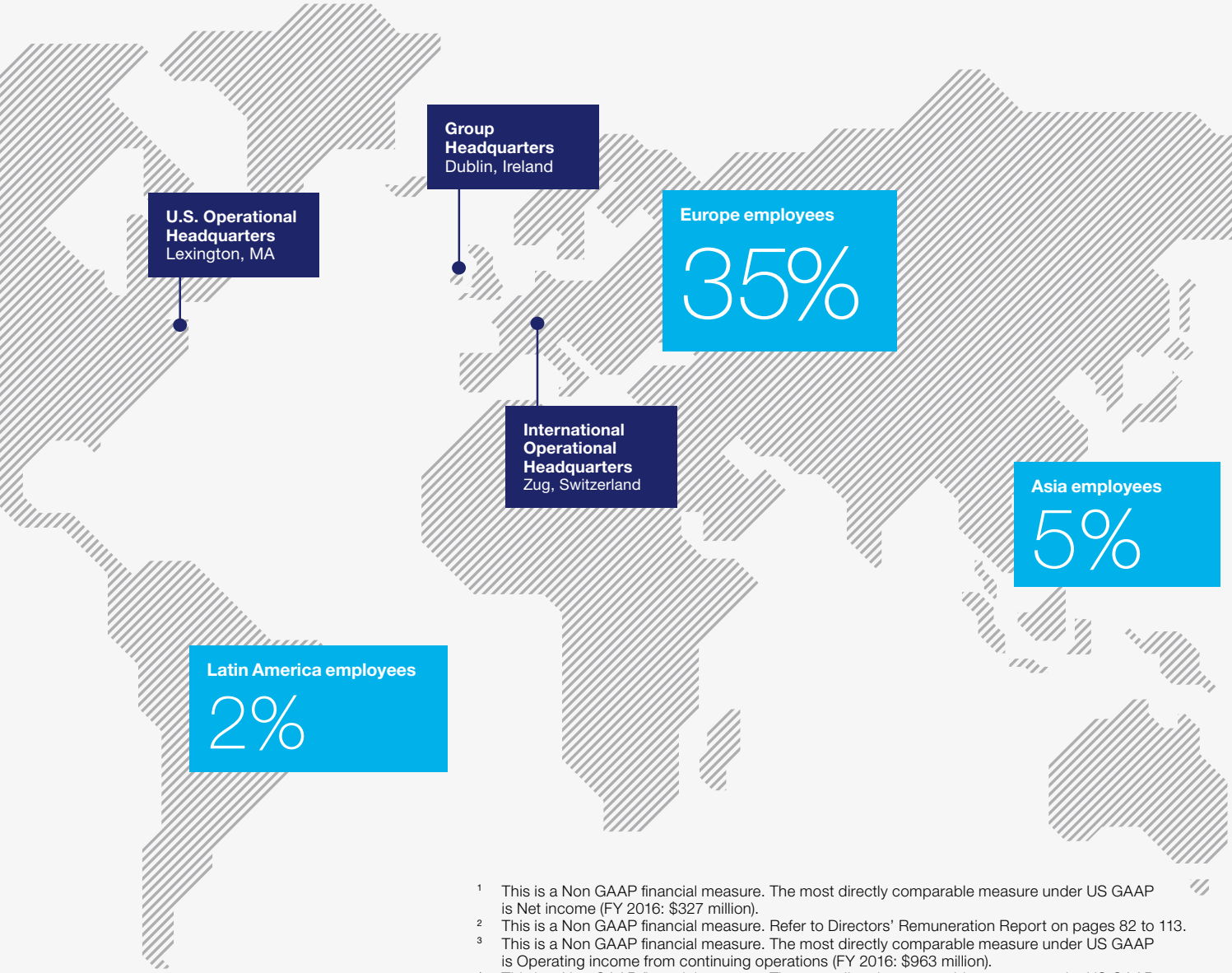
R&D pipeline programs

Countries medicines available

100+

Employees

23,906



1 This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net income (FY 2016: $327 million).
2 This is a Non GAAP financial measure. Refer to Directors' Remuneration Report on pages 82 to 113.
3 This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Operating income from continuing operations (FY 2016: $963 million).
4 This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net cash provided by operating activities (FY 2016: $2,659 million).
5 Non GAAP earnings before interest, tax, depreciation and amortization ("EBITDA") as a percentage of product sales, excluding royalties and other revenues and cost of sales related to contract manufacturing revenue. The most directly comparable measure under US GAAP is Net income (FY 2016: 3 percent).

Results include legacy Baxalta since June 2016. For a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP, see pages 185 to 187.

A year of transformation and growth

> The patient is at the center of everything we do at Shire. This drives how we discover, develop and deliver new medicines, and guides how we interact and support our patient communities.

This year has been one of transformation for Shire — one where we are now recognized as the world leader in the treatment of rare diseases.

With the acquisitions of Dyax and Baxalta, we have grown from 6,000 employees at the start of 2016 to approximately 24,000 today, and have expanded the reach of our global sales from 72 to over 100 countries. During this time, Shire launched four new drugs, including XIIDRA®, the first and only product approved in the U.S. to treat both the signs and symptoms of dry eye disease. We also expanded and progressed our pipeline so we now have roughly 40 programs in the clinic with about 20 in the later stages of development. These accomplishments set the stage for Shire's continued growth and are just a few examples of the many achievements highlighted in this Annual Report.

The patient is at the center of everything we do at Shire. This drives how we discover, develop and deliver new medicines, and guides how we interact and support our patient communities. During 2016, Shire provided a multi-year grant to the SeriousFun Children's Network to enable young people with rare illnesses to have a life-changing experience at summer camp and to help their families bond through Family Weekend programs. Many families have told us about the extraordinary impact of these experiences, a sentiment echoed by our employees who volunteered with SeriousFun.

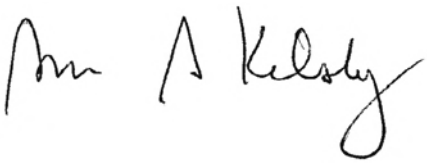
Shire is also a leader in responsibility and sustainability. The company was recognized by Scrip's Pharma as "Company of the Year" in 2016. We were once again included in the FTSE4Good Index, which measures globally recognized standards for corporate responsibility. Newsweek ranked Shire as the number one greenest company in its 2016 Green Rankings. Our commitment to transparency was recognized by AllTrials, as Shire was the only company to have published results for all clinical trials completed during the past 10 years.

Our business is not without its challenges. We operate in an environment with significant political and market volatility. Shire's strategy is to deliver products that are innovative and differentiated, enabling us to provide value to patients and payers, while creating value for shareholders.

I would like to thank Flemming Ornskov, Shire's CEO, and his leadership team for their vision, passion and exceptional performance. We are now a global industry leader and forward-thinking organization. This is driven by the company's focus on innovation and high performance. I would also like to acknowledge Shire employees for their commitment to the company, and to patients, especially during a time of major transformation. I particularly want to recognize the thousands of Shire employees who participated in Shire's Global Day of Service, helping to improve local communities.

During the year, the Board played an important role, especially as the company completed the Baxalta acquisition, the largest in our history. My sincerest thanks to fellow Board members for their many contributions. In 2016, Gail Fosler and Albert Stroucken, formerly Baxalta Directors, joined our Board as Non-Executive Directors. In early 2017, Ian Clark, former CEO of Genentech, also joined the Shire Board. You can read more about the Board in the Governance section, beginning on page 66.

Looking forward, our priorities are to progress revenue growth, further develop the product pipeline, and continue to integrate the Baxalta business while reducing the associated debt. We will continue to be responsible and responsive to our communities while remaining focused on delivering long-term value to shareholders. I am confident we have the right team, the right strategy and the right resources in place to accomplish these goals. It is my privilege to be a part of this organization.



Susan Kilsby
Chairman

Sharp focus High impact

> We've long believed we have a unique opportunity to champion underserved patient communities by placing them at the center of all we do. 2016 was a standout year as Shire became the global leader in rare diseases — a position we are determined to build on as we go forward.

Year in review

February

Shire partner, Shionogi, submits New Drug Application in Japan for ADHD treatment for children

30th Anniversary with innovative global program to benefit children with Rare Diseases

January

Completion of acquisition of Dyax

Shire moves up 10 positions on the Global 100 Sustainability Index

Dyax Corp.®

A game changing year

2016 was a transformational year for Shire. We took a big step forward in serving people with rare diseases with the acquisition of Baxalta, which added three new therapeutic areas including category leadership in hematology and immunology and a growing franchise in oncology. As a result of the acquisition and strong performance across our combined portfolio, we achieved record revenue of $11.4 billion, almost double 2015's $6.4 billion.

Since successfully navigating and finalizing the Baxalta acquisition, we are ahead of plan on the massive task of integration and delivering promised synergies. We are now approximately 24,000 people strong and are bringing our products to patients in over 100 countries.

We also completed the $6 billion acquisition of Dyax to expand our industry-leading portfolio in Hereditary Angioedema ("HAE") and we in-licensed from Pfizer a very promising candidate for Crohn's disease and ulcerative colitis.

Our employees did an outstanding job staying focused and delivering for patients during a time of significant change. In 2016, we also launched truly innovative products to address high unmet medical needs.

- The launch of XIIDRA, the only prescription eye drop approved in the U.S. for the treatment of signs and symptoms of dry eye disease, was another big success. We had an exceptional new drug launch, demonstrating our strength in commercial excellence and capturing 19 percent of market share within four months. This marks an outstanding entry into ophthalmics and we aim to further build a leadership position in this therapeutic area.
- We launched CUVITRU™ in the U.S., a convenient at-home, subcutaneous treatment for primary immunodeficiency. Convenience is important to our patients and their families because many of our medicines are given as infusions or injections, through various devices and delivery methods.
- Outside the U.S., we gained EU Marketing Authorization of ONIVYDE® for the treatment of metastatic adenocarcinoma of the pancreas in adult patients who have had gemcitabine-based therapy. ONIVYDE is the first and only approved treatment option for this patient population.

These new therapies exemplify our commitment to new-to-class, potentially best-in-class, or novel treatments for rare diseases.

All in all, 2016 was a standout year where we achieved our goal of becoming the leading biotech company focused on rare diseases. Today, 75 percent of our pipeline and 65 percent of our sales are in rare diseases.

A unique need — and model — for biotech innovation

Rare diseases, most of which are genetic and are present throughout a person's entire life, pose a significant medical and economic burden for patients, communities and healthcare systems. There are more than 7,000 known rare diseases impacting 350 million people worldwide. Millions more have specialized conditions. What these figures do not reflect are the untold number of mothers, fathers, friends and family who watch a loved one struggle with health challenges that, in many cases, cannot be adequately addressed today. Nearly 50 percent of the time these loved ones are children.

What's more, delays to diagnosis are commonly experienced by patients with rare diseases, and can lead to serious consequences for their health, as well as the wider healthcare system.

April

- Submits NDA to FDA for new formulation of VYVANSE® (lisdexamfetamine dimesylate) CII as chewable tablets
- Positive results of SHP465 safety and efficacy study in children and adolescents with ADHD

May

- Positive CHMP opinion in Europe for REVESTIVE® (Teduglutide) for pediatric patients with Short Bowel Syndrome
- Campaign to support international Mucopolysaccharidosis ("MPS") awareness day

Baxalta

June

- Top-line results for Phase 2 trial of SHP607 in extremely premature infants
- Positive topline results of SHP465 efficacy and safety study in adults with ADHD
- Shire and Kamada announce FDA approval of expanded label for self-infusion of GLASSIA® for the treatment of emphysema due to severe AAT deficiency
- Launch of 2016 excellence in ADHD patient group awards

June

- License SHP647 from Pfizer, adding to established and leading gastrointestinal portfolio
- FDA breakthrough therapy designation for SHP621 and SHP625, investigational products for rare gastrointestinal conditions
- Completion of decentralized procedure in Europe for immunoglobulin treatment CUVITRU
- Completion of combination with Baxalta creating the global leader in Rare Diseases

These facts are what drive our unique model for biotech innovation. It is a mix of internal knowledge, capabilities and research, combined with collaborations with external partners, and supplemented by business development and M&A. We are very flexible in our approach, combining internal and external to create the best routes to innovation.

At the same time, we are extremely focused on growing and leading in our chosen therapeutic areas. We see our patient communities as key partners in innovation. Close, long-term relationships with patients, their doctors and caregivers make all the difference in finding solutions for the challenges of their often-lifetime conditions. We have also significantly expanded our support services in helping patient's gain access to and stay on our medicines.

An exciting late-stage clinical portfolio

Our pipeline has transformed in recent years, and now includes compounds with potential rare disease indications at all stages of development. Most of the products are new-to-class, potentially best-in-class or novel. We have 17 Phase 3 programs and most are expected to launch by the end of 2020, if approved. These include:

- SHP465, the first new treatment in almost a decade for Attention Deficit Hyperactivity Disorder ("ADHD").
- SHP621, recently granted breakthrough therapy designation by the U.S. FDA for eosinophilic esophagitis, a serious, chronic rare disease.
- SHP643, recently granted breakthrough therapy designation by the U.S. FDA for hereditary angioedema ("HAE"). If we are able to replicate the clinical data we saw in earlier trials and if SHP643 is approved, we believe this product has the potential to be an advancement in the way HAE patients are treated, offer significant benefit to patients, and serve as a key growth driver for Shire's business.
- SHP607, our treatment for neonatal complications, has had positive Phase 2 results and is now going into Phase 3, with the potential to significantly impact the health of premature infants.

> "We want to be known for our focus on underserved patient communities and our ability to be a high growth company that is run very efficiently, and has a laser focus on innovation in a select area of rare diseases."

With approximately 40 programs in the clinic and about 20 in the later stages of development, we now have the deepest, and most innovative, pipeline in our 30-year history.

A commitment to doing the right thing

Our employees lead the way in ensuring we have a positive impact on society. In addition to their day-to-day focus on patients and a commitment to doing the right thing at work, they are also involved in our communities. In 2016, approximately 6,500 employees participated in our Global Day of Service in 150 locations around the world. Together, they donated over 25,000 hours of their time. This was for one event. We know our people and teams are dedicated to helping others throughout the year and also to using our resources in a responsible way. In fact, the company has received awards and recognition for our responsibility efforts and I encourage you to read on in this report to learn more.

It is an honor to work alongside our talented and dedicated employees and I'm thrilled that Shire is a place where people like to work, where we not only attract the best at all levels but also invest in their ongoing education and development. We saw a surge in job applications in 2016, also mirroring the greater recognition we have gained in our industry as a biotech leader.

Building on our leading position

We have a strong track record of excellent commercial execution and delivering on short and medium-term financial promises

Gail Fosler, appointed as Non-Executive Director in June

Albert Stroucken, appointed as Non-Executive Director in June

July

SHP626 (Volixibat) receives FDA Fast Track designation for an investigational treatment for adults who have Nonalcoholic Steatohepatitis ("NASH") with liver fibrosis

ADYNOVATE phase 3 efficacy and safety data in children to be showcased during International Congress of the World Federation of Hemophilia

July

Launch of pediatric indication for immunodeficiency treatment HYQVIA® in Europe

FDA approves XIIDRA (lifitegrast ophthalmic solution) 5 percent — The only treatment indicated for the signs and symptoms of Dry Eye Disease

Extension of market authorization in Europe for REVESTIVE (teduglutide) for the treatment of pediatric patients with Short Bowel Syndrome ("SBS")

August

First prescription eye drop, XIIDRA launched (lifitegrast ophthalmic solution) 5 percent is now available in the U.S.

VONVENDI®, the first and only recombinant treatment for adults affected by von Willebrand disease, launches in the U.S.

FDA approval of ADYNOVATE® with BAXJECT III reconstitution system

September

Shire closes public offering of $12.1 billion senior notes

U.S. FDA approval of CUVITRU™ [immune globulin subcutaneous (human), 20 percent solution] treatment for Primary Immunodeficiency

to our shareholders. We like to set stretch goals and the integration of Baxalta has not distracted us from this focus.

As we grow, we want to retain the touch and feel of a small biotech so we have the benefits both of scale and agility. It's about very simple, very flat and rapid decision-making. We support this through innovation and operational excellence, through the interplay between our key strategic centers in Zug, Boston and Dublin, and through our In-line, Pipeline and Corporate Committees.

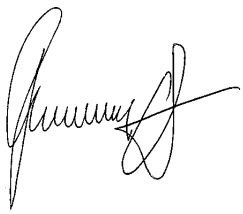
Speed matters, especially to the patients who are waiting for treatments, and that's why we've built a fast-paced, entrepreneurial, international culture where we give people freedom and opportunity to excel while also setting a high bar for being ethical and responsible.

Our teams will continue to support people with rare diseases through every step of their journey. This includes targeted diagnostic approaches to help improve the pathway to diagnosis, assistance programs for those with limited financial resources and personalized life-long programs that support on-going treatment and enhance quality of life. We also remain committed to working alongside partners, doctors, patient advocacy organizations, governments and payers to deliver value and meaningful outcomes that help ease the long-term economic burden of these diseases for patients, communities and healthcare systems.

While each rare disease community is small on its own; together they make one large rare disease population in need of solutions. Shire is in a leading position to provide these solutions on a global scale, enabling more patients and families around the world to live their lives to the fullest.

> "It has been a banner year for us and we were pleased to see our performance honored by our peers when Shire was named Scrip's Pharma Company of the Year in 2016."

Thank you for your continued support.



Flemming Ornskov, MD, MPH
Chief Executive Officer

October

Granted EU marketing authorization of ONIVYDE®, in combination with 5-fluorouracil ("5-FU") and leucovorin ("LV"), for the treatment of Metastatic Adenocarcinoma of the Pancreas in adult patients who have progressed following gemcitabine-based therapy

November

Shire to establish rare disease innovation hub in Cambridge, Mass.

CUVITRU launches in the U.S. for Primary Immunodeficiency

2016 Global day of service

Investor day showcases strength of rare disease pipeline and commercial portfolio

October

Update to VYVANSE® (lisdexamfetamine dimesylate) U.S. labeling to include new longer-term maintenance of efficacy data in adults with moderate to severe Binge Eating Disorder

Patent trial and appeal board upholds the validity of LIALDA® patent

December

Shire named "Pharma Company of the Year" by Scrip

Increasingly innovative and specialized

Biopharma companies are under increased pressure by a wide range of stakeholders to deliver innovative and cost-effective therapies which address key unmet medical needs.

There is an increased emphasis on companies focusing on new ways of maximizing impact in well-defined therapeutic areas.

Consequently, business models in the biopharma industry are going through a period of rapid and unprecedented change. New ways of engaging partners in the pharma ecosystem are being implemented. Technological advances are being exploited across the life sciences. And there is an increasing demand for demonstration of real-world value of approved drugs. In this new environment, emerging leaders will be nimble companies that focus on targeting specific unmet therapeutic needs, and doing so on a global level.

Unprecedented innovation

Innovation has always been a key characteristic of the pharma industry, but today there are unprecedented expectations by all stakeholders in therapeutic advancements, including patients, regulators and payors. To address this need, geographic innovation hubs have been established which are operating in new ways to bring together academics, biotech start-ups, venture capital, teaching hospitals, technology companies and biopharma companies. In this regard, the Boston/Cambridge hub has become established as a world leader. In parallel, advances in our knowledge of the molecular basis of disease are generating an increasingly diverse range of potential therapeutic modalities beyond classic small molecules, including protein, antibody and RNA-based therapeutics, gene and cell therapy, and gene editing. These approaches are intersecting with novel clinical trial designs and increasingly sophisticated use of biomarkers which serve to stratify patients, identify responders, and ultimately may lead to accelerated approval pathways. Taken together, these advanced approaches to drug development are ushering in a new era of healthcare innovation.

Constantly advancing standards of care

Increasing demand for value and efficacy from all stakeholders, combined with the already high quality of products available for many diseases, is fueling an ever-stronger expectation of excellence in therapeutic products. Treatments must not only exhibit medical breakthroughs, but also demonstrate concrete value to payers and society as a whole. As a result, new products compete to demonstrate improvement against an ever-rising bar set by current and future standard of care therapies.

So what does this mean for industry players?

Companies across biotech and pharma are generally responding to these challenges by focusing on developing products with particularly high therapeutic impact and/or targeting specific patient segments with the highest unmet medical needs where significant value can be demonstrated.

Rare diseases is a unique and attractive area in the biopharma sector

Why rare diseases?	Unique capabilities required
Large opportunity for innovation • Over 7,000 diseases, of which only 5 percent have treatments • Increasing share of approvals in U.S., EU and Japan • Often accelerated development due to priority review and phase-skipping	**Commercial** • Ability to leverage global commercial infrastructure • Best-in-class patient support initiatives • Strong voice with payors, governments, and advocacy initiatives
Significant medical burden for patient and healthcare systems • Life-altering conditions for patients and their caregivers • Large demands on healthcare systems due to repeated hospital visits, symptomatic treatments and ongoing care • Societal economic burden due to patient and caregiver leave and loss of productivity	**R&D** • Broader base of therapeutic areas, relationships and expertise expands optionality • Specialized research and development expertise • Expanded experience base in dealing with unique challenges of rare disease R&D
	Manufacturing • Broader base of therapeutic areas, relationships and expertise expands optionality • Specialized research and development expertise • Expanded experience base in dealing with unique challenges of rare disease R&D

Focusing on patient impact

Products that make a particularly high impact on the lives of patients not only demonstrate improvement on classical scientific or clinical measures of safety and efficacy, but further demonstrate progress on the measures that matter most to patients, for example quality of life or ability to maintain independence. In many cases, developing this type of evidence requires novel trial designs, new endpoint measurements, and post-approval commitments.

Leading in rare diseases

The winners in this new world will be highly focused, highly collaborative and determined to lead in their chosen area. This plays well to Shire's strategy of being the leading global biopharma company focused on rare diseases. We are determined to build on our leadership, and to deliver ever-greater impact and value for all our stakeholders.

Targeting specific patient segments

Rather than relying on broad approaches to all patients with a specific disease, companies are targeting therapies for specific patient segments. This involves a number of activities: R&D efforts to better understand the range of pathologies present within heterogeneous diseases; stratifying patient populations via companion diagnostics; sophisticated development strategies to demonstrate benefit in specific patient types; and an increasing need for effective educational programs to clarify the specific utility of products.

The rising value of category leadership

As innovation, focus and collaboration increasingly become the watchwords of the industry, category leadership comes to the fore. The big opportunity is to be the hub in a network of expertise and technology focused on delivering innovation to a specific set of patients. Category leadership yields numerous advantages, including increased opportunity and capability to identify and develop innovative, market-changing therapies; greater access to markets; operating as a partner of choice; stronger engagement with physicians and patients; and the ability to apply these leadership advantages across numerous products in the company's portfolio.

Increasing breadth and depth of collaboration

Working together has never been more important in biopharma, as increasingly innovative modes of treatment require relationships among all the parties who contribute to generating novel and effective therapies. Mature biopharma companies are partnering with innovative early stage companies to access cutting-edge science and technologies, and contributing their know-how in regulatory, clinical trial execution and development of combination therapies. Long-term relationships with contract organizations with global research, clinical development, and manufacturing capabilities are being forged, providing flexibility, expertise, and reach. Frequent and collaborative interactions with regulators, open dialog with relevant payers and health technology assessment ("HTA") bodies, and engagement with patient advocacy groups are all key aspects of this age of collaboration.

Rare diseases — a big opportunity

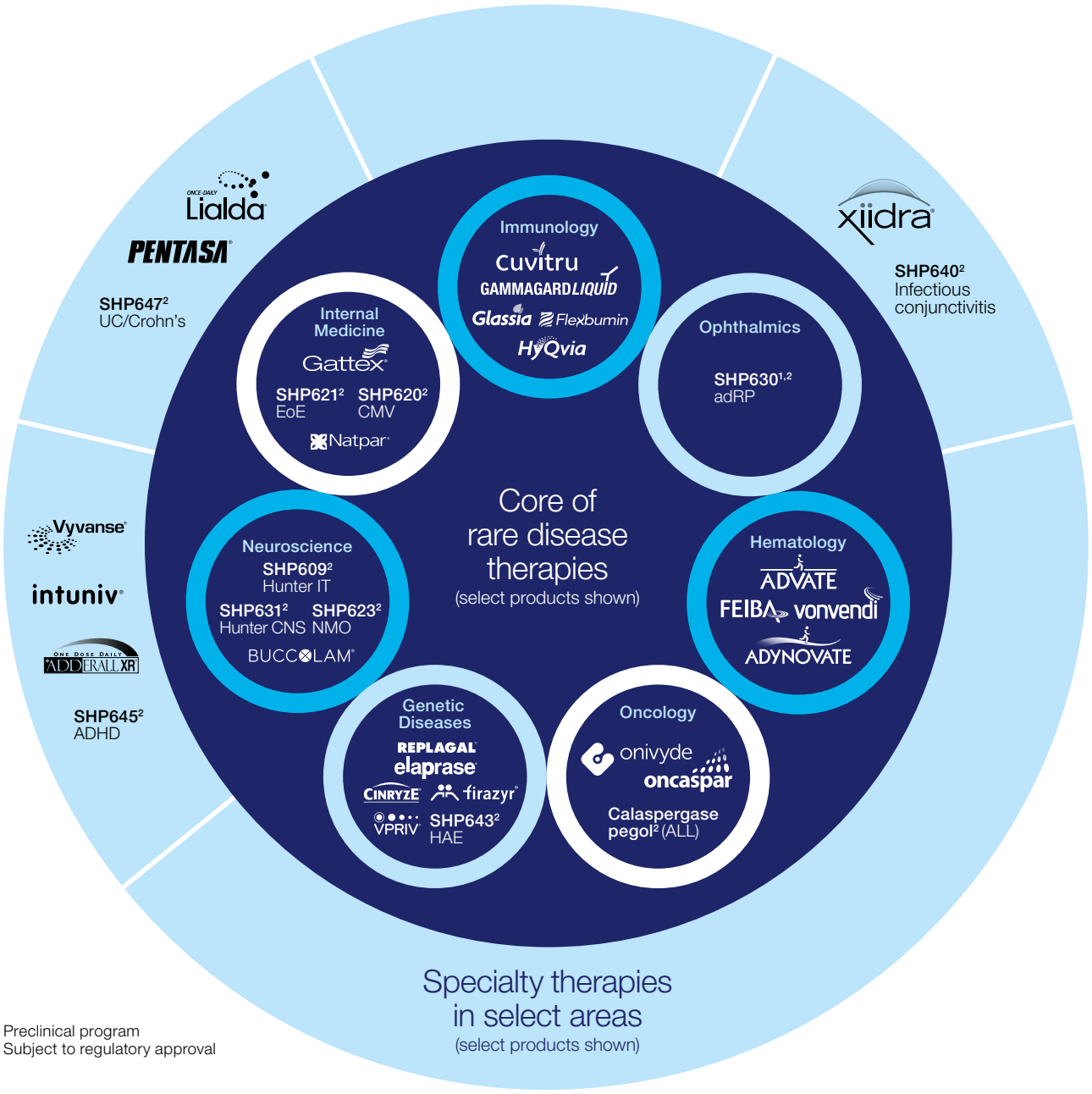
It is estimated that 350 million people worldwide suffer from the approximately 7,000 known rare diseases — and only 5 percent of these diseases have therapies available today. Frequently, correct diagnosis can take five years or more, and multiple incorrect diagnoses often occur before the disease is accurately identified. Health care providers frequently do not recognize the signs and symptoms of rare diseases, and patients and caregivers lack information and struggle to get proper treatment.

Rare diseases is our chosen area of focus. It is where we lead; where we are strongest; where we are determined to make the biggest difference and create the greatest value globally.

Our way of leading in rare diseases

We maintain a sharp focus on rare diseases to deliver high impact for patients, sustained corporate growth and increased value for society.

We are focused on developing and delivering life-changing medicines for underserved patients with rare diseases. We are sharply focused on patient populations with extraordinarily high unmet needs — often, their conditions are not well understood, even within the healthcare community, and there may be few or no effective therapies. We bring unique expertise and innovative technologies to select therapeutic areas where we see tremendous opportunity to enhance patients' lives and establish a durable leadership position in the industry. While rare conditions form the core area of highest emphasis, we often see additional opportunities to apply our expertise and therapeutic area leadership to certain highly specialized, non-rare indications where we see the opportunity to bring innovation to enable patients to live fuller lives.

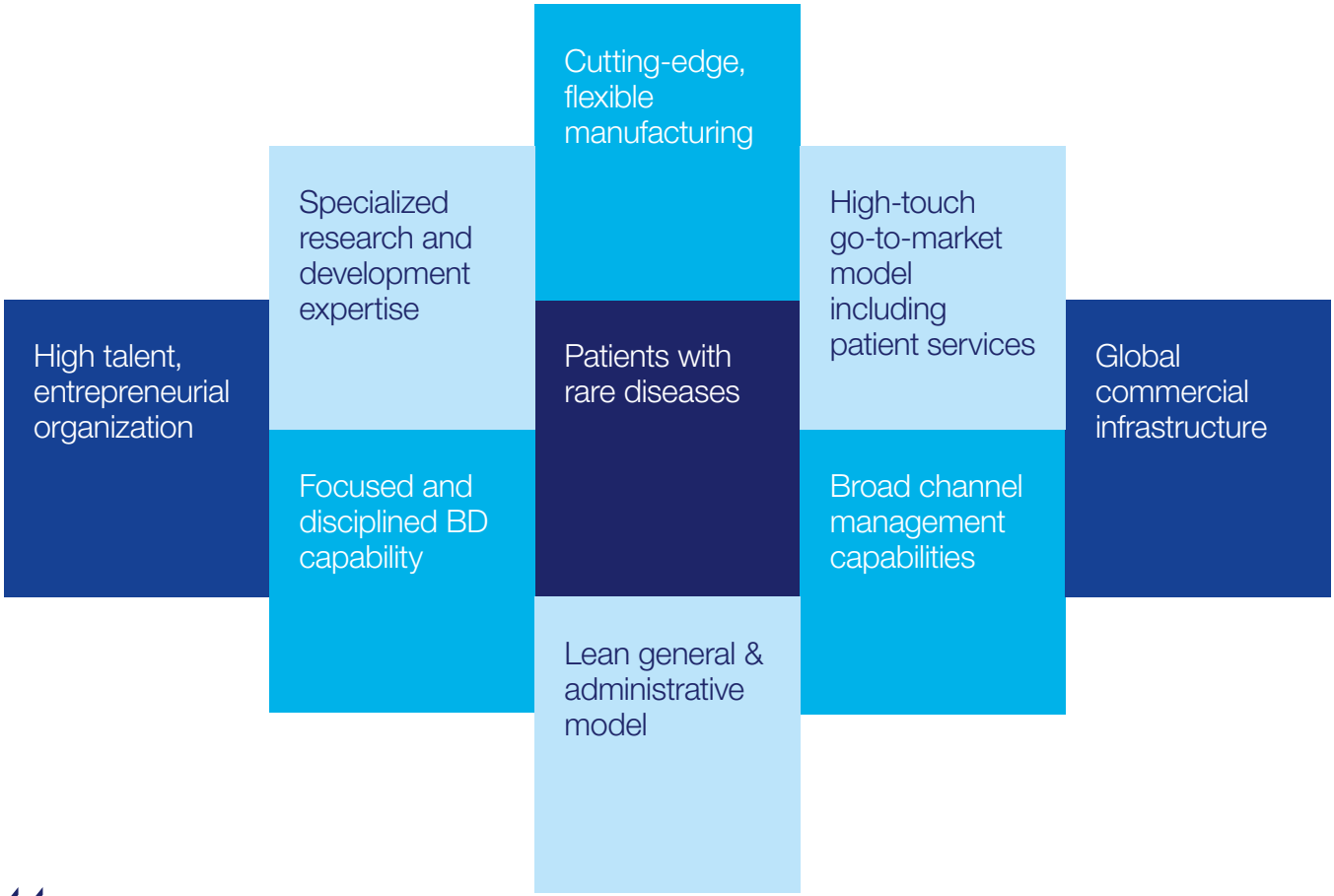


1 Preclinical program
2 Subject to regulatory approval

We build a portfolio of products through a combination of focused internal research and development, collaborations with leading institutions, and strong business development capabilities.
We begin by identifying gaps in current medical care where patients with serious illnesses are significantly impacted by either the lack of effective therapies or shortcomings in the available treatments. We listen carefully to patients, advocacy groups, and our network of leading clinicians to deeply understand patient needs. We seek to match these opportunities with promising scientific innovations which offer the potential to deliver a meaningful therapeutic advance. We are agnostic to the specific technologies involved and where they originate — we are exclusively focused on identifying the most promising ways to address patient needs. Frequently, this mindset leads us to collaborate and partner with leading research institutions and emerging "start-up" companies with novel therapeutic approaches. We employ a sophisticated business development capability that enables us to continually survey the landscape, identify promising approaches, and rapidly strike agreements to advance these potential next-generation therapies. We then apply our specialized, world-class development and commercialization resources to rapidly deliver these innovations to patients.

As the leader in rare diseases, we invest in and develop the unique capabilities required for successful development and commercialization of high-impact products.
We have built a broad constellation of unique, industry leading capabilities that allows us to maintain our leadership in rare diseases, and that positions us as the partner of choice in this area. For example, within our R&D organization we have specialized expertise that enables us to address the challenges of developing new medicines in rare disease indications, such as recruiting hard-to-find patients, navigating ill-defined current standards of treatment, and pioneering unprecedented regulatory pathways. Similarly, once new therapies are approved, we then apply sophisticated approaches to increase diagnosis rates, support patients as they initiate therapy, and productively engage with patients, leading treatment centers and advocacy organizations. Our nimble global supply network is also tailored to the unique challenges of reliably delivering potentially life-saving rare disease therapies to often diffuse global patient populations.

Our scale and focus specifically on rare diseases enables us to invest deeply in these capabilities, with high impact. We apply our expertise and skills to the task of bringing new, cutting-edge therapies for conditions where, in many cases, no therapy has existed. Combined with our sharp focus on execution, we ensure that the most underserved patients around the world have access to the critical therapies they need.



"We bring unique expertise and innovative technologies to select therapeutic areas where we see tremendous opportunity to enhance patients' lives and establish a durable leadership position in the industry."

Focusing on four key strategic drivers

Growth

We seek to drive performance from our marketed products to optimize revenue growth and cash generation.

Progress in 2016

- Completed acquisitions of Dyax and Baxalta, adding rare disease assets to Shire's Genetic Diseases franchise and establishing franchises in Hematology, Immunology, and Oncology
- Enhanced size and value of our portfolio of commercial products to drive Shire revenue to $11.4 billion (+78 percent compared to 2015). Global sales footprint expanded to 109 countries, with commercial operations in 68 countries
- Received approvals and launched XIIDRA (U.S.; Dry Eye Disease), CUVITRU (U.S., Europe; primary immunodeficiency), ONIVYDE (Europe; 2nd line metastatic pancreatic cancer), and VONVENDI (U.S., von Willebrand Disease)
- New indications, geographies, and patient populations for ADYNOVATE/ADYNOVI, LIALDA, and VYVANSE
- Expansion of Cambridge, MA operations as a rare disease innovation hub

Priorities for 2017

- Expand therapeutic area leadership by enhancing commercial capabilities, increasing our global footprint and broadening our portfolio of best-in-class products
- Focus on commercial execution and new product launches, including geographical expansions to continue the building of global brands across our seven franchises
- Effectively execute our late stage clinical development pipeline to support future growth

Key performance indicators

- Net product sales, Non GAAP cash generation

+ See also page 16 — Key performance indicators

Innovation

We build our future assets through both R&D and business development to deliver innovation and value for future growth.

Progress in 2016

- Expanded pipeline to roughly 40 programs in the clinic, the largest in Shire's history, with about 20 in the later stages of development (in registration, in Phase 3 or ready to enter Phase 3)
- Resubmitted SHP465 (U.S.; ADHD) to FDA, decision expected on or around June 2017
- Achieved 2 Breakthrough Therapies designations (SHP621 for eosinophilic esophagitis; SHP625 for progressive familial intrahepatic cholestasis type 2), 1 Fast Track designation (SHP626; nonalcoholic steatohepatitis)
- Strengthened gastrointestinal disease pipeline via in-licensing of SHP647, a Phase 3-ready asset for inflammatory bowel disease ("IBD")

Priorities for 2017

- Submit regulatory filings for VONVENDI (EU; von Willibrand disease), FIRAZYR (Japan; hereditary angioedema), VYVANSE (ADHD; Japan), and XIIDRA (EU; dry eye disease)
- Drive execution excellence on our late stage clinical development portfolio to support future growth, including Phase 3 readouts for SHP643 (hereditary angioedema/ HAE), SHP609 (Intrathecal delivery for Hunter's Disease), and topline data supporting ONIVYDE submission in Japan
- Supplement our early-stage pipeline to support sustained future growth

Key performance indicators

- Number and potential value of products in clinical development pipeline

+ See also page 16 — Key performance indicators

Our strategy

Our strategy is to grow and create long-term value by being the leading global biotech company focused on developing and delivering high impact medicines for rare diseases. To this end, we work together to excel across four key strategic drivers: growth, innovation, efficiency and people.

Efficiency

We operate a lean and agile integrated organization and reinvest for growth.

Progress in 2016

- Exceeded goals and benchmarks related to speed and synergy capture in the Baxalta integration. Mid-year, increased initial estimates on total synergy capture to $700 million+ by Year 3
- Aligned on combined approach for commercial operations, market access, and patient services, while beginning international commercial site consolidations and initiating a manufacturing network optimization program
- Decisions taken to exit Biosimilars and streamline Oncology portfolio obtained in the Baxalta acquisition, to maintain focus on high value rare and specialty conditions

Priorities for 2017

- Drive synergies and profitability through global scale and lean general and administrative ("G&A") model
- Build on progress of Baxalta integration to date
- Continue optimization of portfolio
- Reduce leverage

Key performance indicators

- Non GAAP EBITDA margin, Non GAAP ROIC, Non GAAP net debt/Non GAAP EBITDA ratio

+ See also page 17 — Key performance indicators

People

We foster a high-performance, patient-focused culture where we attract, retain and promote the best talent practices.

Progress in 2016

- Grew organization to approximately 24,000 employees globally, following integrations of Dyax and Baxalta, while maintaining favorable metrics on employee retention and morale
- Rolled out new organizational structure, incorporating top talent from Shire, Baxalta, and Dyax
- Served our patients and communities through events such as Shire's Global Day of Service, in which more than 6,500 Shire employees volunteered over 25,000 hours in 150 locations around the world
- Announced a multi-year partnership with SeriousFun Children's Network, supporting 16 camps around the world for children and their families living with serious illnesses. The partnership allows for a variety of engagement opportunities, strengthening our deep commitment to the patients and families who are affected by rare diseases. In 2016, Shire employees donated over 5,000 hours of volunteer time with SeriousFun camps, globally

Priorities for 2017

- Continue to support and enhance an entrepreneurial, patient-focused culture
- Retain the best talent and practices.

Key performance indicator

- Number of employees

+ See also page 17 — Key performance indicators

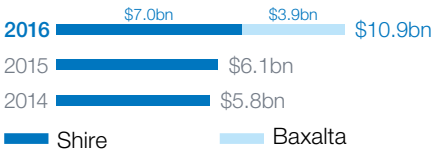
Key performance indicators

Growth

We seek to drive performance from our marketed products to optimize revenue growth and cash generation.

Net product sales $10.9bn

The recent acquisition of Baxalta marks a significant step in our growth. We achieved product sales growth of 78 percent in 2016 to $10.9 billion, driven by record legacy Shire product sales and the inclusion of legacy Baxalta franchises since June 2016. Legacy Shire product sales increased 15 percent compared to 2015, with all legacy Shire franchises exhibiting double digit growth, with Genetic Diseases up 12 percent, Neuroscience up 13 percent and Internal Medicine up 17 percent. In addition, we launched XIIDRA in August 2016 and our Ophthalmology franchise contributed sales of $54 million. Legacy Baxalta franchises represented $3.9 billion of 2016 product sales.



Non GAAP cash generation[1] $3.5bn

Non GAAP cash generation increased 43 percent to $3.5 billion primarily due to strong cash receipts from higher sales, partially offset by costs related to the Baxalta integration and a payment associated with the termination of a biosimilar collaboration acquired with Baxalta.

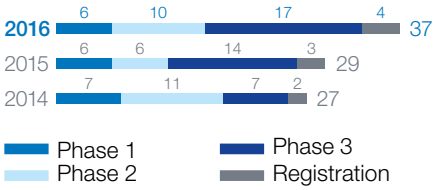
Innovation

We build our future assets through both R&D and business development to deliver innovation and value for future growth.

Number of programs in pipeline (excluding preclinical assets) 37

During 2016, Shire continued to focus on its R&D efforts with an investment of $1.4 billion. In 2016, we had 37 clinical development programs in our pipeline, the largest in Shire's history.

- Four products gained regulatory approval including U.S. approval of XIIDRA for the treatment of signs and symptoms of dry eye disease, U.S. approval of CUVITRU for the treatment of immunodeficiency disorders, European approval of ONIVYDE for the treatment of pancreatic cancer, and U.S. approval of VONVENDI for the treatment of adults affected by von Willebrand disease ("VWD").
- The pipeline has been further strengthened by the completed acquisitions of Dyax and Baxalta in 2016.
- The continued advancement of Shire's late stage pipeline with a total of approximately 20 programs in Phase 3 or registration, is the most robust rare disease-focused pipeline in the industry.



In 2016, we measured our performance against our strategic priorities through both financial and non-financial KPIs. We believe that these KPIs represent meaningful and relevant measures of our performance and are an important illustration of our ability to achieve our objectives.

Efficiency

We operate a lean and agile integrated organization and reinvest for growth.

Non GAAP EBITDA margin[1] 39%

We achieved a 39 percent Non GAAP EBITDA margin for 2016, primarily due to the impact of lower margin product franchises acquired with Baxalta and XIIDRA launch and promotional costs. Non GAAP EBITDA for 2016 was approximately $4.7 billion, an increase of 61 percent.

2016	**39%**
2015	43%
2014	44%

Non GAAP ROIC[2] 7.0%

As expected, we saw lower Non GAAP ROIC of 7.0 percent in 2016, as substantial business development activity, primarily the acquisitions of Baxalta and Dyax, significantly increased the invested capital in the business. Through these transactions we acquired a number of long duration commercial and pipeline assets. As these products launch and we continue to execute on our synergy plans we expect Non GAAP ROIC to increase.

2016	**7.0%**
2015	10.3%
2014	14.7%

Non GAAP Net Debt/Non GAAP EBITDA[1] 4.8x

Only includes legacy Baxalta EBITDA since June 2016

Non GAAP net debt to Non GAAP EBITDA ratio increased from 2014-16 as we deployed capital to purchase ViroPharma, NPS, Dyax and Baxalta. These acquisitions transformed Shire into the leader in rare diseases and added a number of long duration assets to our inline portfolio and R&D portfolios. As we continue to focus on execution and integration it's anticipated this ratio will come down in 2017, which will include a full year of Baxalta EBITDA and repayments of debt. As such, we are targeting Non GAAP net debt to Non GAAP EBITDA being between 2-3x by the end of 2017.

2016	**4.8x**
2015	0.5x
2014	(0.8x)

People

We foster a high-performance, patient-focused culture where we attract, retain and promote the best talent.

Number of employees 23,906

We grew to 23,906 employees following the integration of Baxalta, while maintaining metrics of employee retention and morale. The company also rolled out a new organizational structure incorporating top talent from Shire, Baxalta, and Dyax. The company now employs 23,906 employees across 68 countries around the globe, bringing together a wealth of diverse talent, which is a key driver of the company's success. Our commitment to diversity and inclusion has been given a major boost by the Baxalta acquisition. The benefit of our diverse workforce comes from respecting, considering and including different views into our work every day. Our growing global reach gives us the opportunity to bring to our business, for the benefit of our patients, greater depth of experiences and capabilities.

2016	**23,906**
2015	5,548
2014	5,016

Employment by region
as at December 31, 2016

1	North America	58%
2	Europe	35%
3	Latin America	2%
4	Asia	5%

[1] For a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP, see pages 185 to 187.
[2] This is a Non GAAP financial measure. Refer to Directors' remuneration report on pages 82 to 114.

Multiple growth drivers across the portfolio

To drive continued growth we focus on commercial excellence.

Genetic Diseases

- Growth in FIRAZYR and LSD portfolio primarily due to an increase in number of patients on therapy
- Increase to the number of patients on therapy with CINRYZE

elaprase®

REPLAGAL®

firazyr®

CINRYZE®

VPRIV®

Neuroscience

- VYVANSE continues to perform strongly, with growth driven by increased use in adults in the U.S., pricing improvement, and continued growth in international markets
- New Drug Application for SHP465 for treatment of ADHD re-submitted to FDA with decision anticipated mid-2017

Vyvanse®

ONE DOSE DAILY ADDERALL XR®

intuniv®

Hematology

- ADYNOVATE label in the U.S. expanded to include children under 12 and use in surgical settings
- First and only registered medical device (myPKFit) to enable personalization of ADVATE prophylaxis
- Launched VONVENDI in the U.S., the only recombinant treatment for adults with von Willebrand disease

ADYNOVATE®

FEIBA®

ADVATE® my PK FiT®

vonvendi®

Genetic Diseases

Sales

$2,698m

+12%

2015: $2,399m

Neuroscience

Sales

$2,490m

+13%

2015: $2,200m

Hematology[1]

Sales

$2,241m

Ophthalmology

Sales

$54m

Internal Medicine

- LIALDA sales benefiting from continued market share growth
- Growth from an increase in new patients on GATTEX/ REVESTIVE and NATPARA

Immunology

- HYQVIA continues to add new patients and was approved in 33 countries as of December 31, 2016
- CUVITRU, subcutaneous immune globulin replacement therapy launched in the U.S. in November. International launches to follow in 2017

Oncology

- ONCASPAR continues to perform well in the U.S.; further growth expected internationally, as commercial launches are initiated across EU
- ONIVYDE granted approval in the EU for the treatment of patients with metastatic adenocarcinoma of the pancreas. Launched in first two markets in 2016 with additional countries to follow in 2017

Ophthalmology

- Positive contribution from XIIDRA since August 2016, with strong early prescription trends and market share gains, as well as increasing levels of managed care access
- Regulatory submission made in Canada

Internal Medicine

Sales

$1,756m

+17%

2015: $1,501m

Immunology[1]

Sales

$1,516m

Oncology[1]

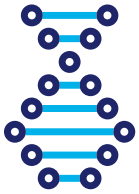
Sales

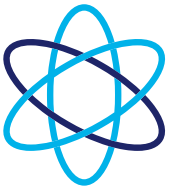
$131m

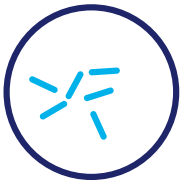
[1] Therapeutic area acquired with Baxalta on June 3, 2016.

Shaping future treatments

Innovation is the lifeblood of our current and future success — we now have 37 programs in the clinic with 21 in the later stages of development, with a significant focus on areas of high unmet medical need and rare disease patient populations.


35+


6


10

Preclinical

At this initial stage, the focus is on researching the feasibility and safety of a potential new product. This lays the foundation for clinical trials. We currently have 35+ preclinical research programs underway.

- Internally developed and via partnership
- Both rare disease and specialty conditions
- Multiple modalities including new chemical entities, Monoclonal antibodies, proteins, and gene therapy

Key

● Rare indication
✳ Non-rare indication

[1] Phase 3 expected to start in 2017
[2] Phase 2/3 programs shown as Phase 3

Phase 1

This stage is typically the first time a medicine is tested on humans. The emphasis is on examining effectiveness, side effects and safety. We currently have six programs in Phase 1.

- ● **SHP611**
  MLD
- ● **SHP622**
  Friedreich's Ataxia
- ● **SHP623**
  Neuromyelitis optica
- ● **SHP631:** neurocognitive decline associated with Hunter syndrome
- ● **SHP655**
  Hereditary thrombotic thrombocytopenic purpura
- ● **SHP656**
  Hemophilia A

Phase 2

In Phase 2 we carry out further clinical trials, continuing to investigate efficacy and safety and deepening our understanding, for example of dosage levels. We currently have 10 programs in Phase 2.

- ● **ONIVYDE**
  First-line pancreatic cancer
- ● **ONIVYDE (Japan)**
  Pancreatic cancer post-gemicitabine
- ● **SHP607**
  Complications of prematurity
- ● **SHP625**
  Alagille syndrome ("ALGS")
- ● **SHP625 (PFIC)**
  Progressive familial intrahepatic cholestasis
- ✳ **SHP626**
  Nonalcoholic steatohepatitis ("NASH")
- ✳ **SHP640**[1]
  Infectious conjunctivitis
- ✳ **SHP647**[1]
  Crohn's disease
- ✳ **SHP647**[1]
  Ulcerative colitis
- ✳ **SHP652**
  Systemic lupus erythematosus

Phase 3

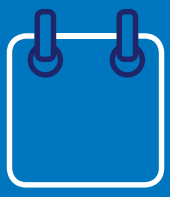
This is the final stage of clinical trials before registration. It focuses on confirming the effectiveness and safety of the product compared to a placebo or another treatment. We currently have 17 Phase 3 programs.

- **GLASSIA**
  Acute Graft vs. Host Disease
- **Calaspargase pegol**
  Acute lymphoblastic leukemia
- **CINRYZE**
  Antibody Mediated Rejection
- **CINRYZE (Japan)**
  HAE prophylaxis
- **CINRYZE SC**
  HAE prophylaxis
- **FIRAZYR (Japan)**[2]
  Acute HAE
- **GATTEX (Japan)**
  Short bowel syndrome
- **HYQVIA + KIOVIG:** chronic inflammatory Demyelinating polyneuropathy
- **OBIZUR**
  CHAWI surgery
- **OBIZUR (CHAWI on demand)**
  Hemophilia A with inhibitors
- ✳ **SHP555 (U.S.)**
  Chronic constipation
- **SHP609**[2]
  Hunter Syndrome — intrathecal delivery
- **SHP620**
  Cytomegalovirus infection
- **SHP621**
  Eosinophilic esophagitis
- **SHP643**
  Hereditary angioedema prophylaxis
- **VONVENDI (EU)**
  Von Willebrand disease
- ✳ **VYVANSE (Japan)**[2]
  ADHD

Registration

Building on the data and understanding gained during the earlier phases, the focus here is on filing for regulatory approval from the relevant authorities. We currently have four programs at this stage of our pipeline.

- **ADYNOVATE (EU)**
  Hemophilia A
- ✳ **INTUNIV (Japan)**
  ADHD
- **NATPAR (EU)**
  Hypoparathroidism
- ✳ **SHP465**
  ADHD



Upcoming milestones

Some of the key anticipated events that we expect in 2017.

NATPAR
EU Filing

INTUNIV
Anticipated Japan Approval*

VYVANSE (Japan)
Filing

NATPAR
Anticipated EU Approval*

SHP643 (HAE)
Phase 3 Data

FIRAZYR (Japan)
Filing

SHP656 (BAX826)
Proof of Concept

SHP611 MLD
Top line Phase 1/2 Data

VONVENDI
EU Filing

SHP465
Anticipated U.S. Approval*

ADYNOVI
Anticipated EU Approval*

Calaspargase pegol (ALL)
BLA Filing

XIIDRA
EU Filing

ONIVYDE (Japan)
Top line data

Hunter IT
Phase 3 data

* Subject to regulatory approval

Therapeutic areas

Genetic Diseases

Investing in manufacturing

We continue to invest in expanding our global biotechnology manufacturing capability. In Ireland for example, we are creating a new $400 million facility at Piercetown, County Meath. This state-of-the-art biologics manufacturing campus will play a key part in meeting the rising demand for our innovative treatments for Lysosmal Storage Diseases ("LSD").

Our focus on Lysosmal Storage Diseases ("LSD")

For International Gaucher Day on October 1, 2016, we launched our "Spotlight on Gaucher" initiative on social media to raise awareness about Gaucher Disease. The initiative generated over 8,500 engagements and it was endorsed by the European Gaucher Association ("EGA") and the National Gaucher Foundation ("NGF") in the U.S.

As part of our ongoing Fabry Disease education for patients and their families, we launched a series of short films called "Fabry Family Tree". The films help raise awareness of Fabry Disease as a genetic condition, its impact on other family members and the importance of early diagnosis.

Our focus on Hereditary Angioedema ("HAE")

We have seen strong growth in our HAE products, driven by demand in the U.S., Europe and Latin America.

Key products

elaprase

REPLAGAL

VPRIV

CINRYZE

firazyr

(LSD) Hunter Syndrome

Hunter Syndrome, also known as mucopolysaccharidosis II ("MPS II"), is a rare X-linked genetic disorder that primarily affects males. Physical manifestations may include distinct facial features, a large head and enlarged abdomen. In many cases, the central nervous system may also be affected. Hunter Syndrome does not manifest the same way in all people; the rate of symptom progression varies widely, but in all cases it is a serious, progressive, life-limiting disorder.

Hunter syndrome occurs in approximately 1 in 162,000 male live births. It is caused by a deficiency or absence of the enzyme iduronate 2-sulfatase ("I2S") which results in a build-up of glycosaminoglycans ("GAGs") in cells throughout the body.

(HAE) Hereditary Angioedema

HAE is an autosomal dominant disorder characterized by recurrent episodes of edema that typically involve the extremities, abdomen, external genitalia, face, or oropharynx. Abdominal attacks are often associated with severe abdominal pain, nausea, and vomiting and may lead to hospitalization and occasionally to unnecessary exploratory surgery. Laryngeal attacks are associated with a substantial risk of death.

HAE affects approximately 1 in 10,000 to 50,000 people worldwide. Approximately 50 percent of HAE patients begin to have episodes of swelling under the age of 10 years. Occasionally, HAE patients do not begin to show adverse effects until their late teens or early adulthood. Approximately 75 percent of patients have a family history of attacks.

(LSD) Gaucher Disease

Gaucher Disease is a rare genetic disorder caused by the deficiency or absence of the enzyme glucocerebrosidase. This missing enzyme means that the body is unable to break down and recycle specific fatty substances called glucocerebrosides ("Gb 1"). The glucocerebrosides accumulate mainly in the spleen, liver and bone marrow. Common symptoms may include enlarged liver and spleen, anemia, low platelet counts (thrombocytopenia), and skeletal abnormalities.

Gaucher Disease is the most common lysosomal storage disease ("LSD"). It affects approximately 1 in 50,000-100,000 people.

(LSD) Fabry Disease

Fabry Disease is a rare X-linked inherited genetic disease. It is caused by the deficiency, absence or incomplete functioning of an enzyme called alpha-galactosidase A. Over time this can result in the accumulation of a waste substance called globotriaosylceramide ("Gb-3") in cells, causing progressive damage to tissues and major organs.

Fabry Disease equally affects all ethnic groups. It has an estimated birth prevalence of approximately 1:40,000 to 117,000. Males with Fabry Disease will always display the characteristic signs and symptoms of the condition.

Total sales

$2,698m

25% of total product sales

Therapeutic areas

Neuroscience

Donna
Living with ADHD

Donna is in her 40s. She was diagnosed with ADHD in 2011. She works long hours at a hospital. When not working, she loves spending time at the park with her two children — her six-year-old son and her 11-year-old daughter, who also has ADHD.

> “Managing my household, job, family, and volunteer commitments is important and can be challenging. I like to find time to calm my mind by taking walks, reading, and enjoying the fresh air.”

Our focus on Neuroscience

We develop and sell leading treatments for three key areas of neuroscience: ADHD, BED and epilepsy.

Our products include VYVANSE, a treatment for ADHD and moderate to severe BED in adults. On October 17, 2016, we announced the approval of a supplemental NDA by the FDA. The VYVANSE label now includes the new longer-term maintenance of efficacy data in adults with moderate to severe BED. VYVANSE received approval from Health Canada for the treatment of BED in adults in September 2016 and was launched in Q1 2017.

Key products

Vyvanse®

ONE DOSE DAILY ADDERALL XR®

intuniv®

BUCCOLAM®

EQUASYM® XL

Attention-Deficit/Hyperactivity Disorder ("ADHD")

ADHD is a neurodevelopmental disorder. It manifests as a persistent pattern of inattention and/or hyperactivity/ impulsivity that interferes with patients' functioning or development. It may continue from childhood into adulthood. ADHD can occur alongside other conditions and its symptoms may overlap with those of other psychiatric disorders.

ADHD affects an estimated 11 percent of school-aged children and 4.4 percent of adults in the U.S.

Epilepsy

Epilepsy is a chronic neurobiological disorder characterized by unpredictable seizures. A seizure is a sudden burst of excessive brain electrical activity leading to the disruption of normal communication between nerve cells in the brain. If a seizure is not stopped rapidly it could lead to brain damage.

Active epilepsy affects 0.4-1 percent of the population with higher prevalence in younger kids and elderly people. Despite treatment, approximately 30 percent of patients with epilepsy have uncontrolled epilepsy and suffer from seizures.

Binge Eating Disorder ("BED")

BED is a DSM-5 recognized eating disorder. It is characterized by regularly consuming an abnormally large amount of food in a short period of time, experiencing a loss of control over eating and feeling significant distress about binge eating. BED is associated with significant psychiatric comorbidity.

BED's lifetime prevalence in U.S. adults is approximately 2.6 percent. It affects both men and women, with twice as many U.S. women affected than men.

Total sales

$2,490m

23% of total product sales

Therapeutic areas

Hematology

Jonus
Living with hemophilia

Jonus is now in elementary school. His mum Athena and the rest of his family are doing everything they can to make sure Jonus gets to be a kid. Whether that's riding the blue bike he chose for his fourth birthday or learning the viola.

Our focus on Hematology

We are one of the leading providers of treatments for hemophilia and von Willebrand disease ("VWD").

ADYNOVATE was approved in Switzerland in September 2016 and launched in October.

BAXJECT III reconstitution system gained U.S. approval in July.

We launched myPKFiT the first and only registered medical device to enable personalization of ADVATE prophylaxis in France in September.

We sell RIXUBIS in 17 markets around the world and plan launches in over ten more countries over the next 18 months.

OBIZUR is approved in eight countries and we plan to launch it in an additional 11 countries in 2017.

FEIBA is the only bypass therapy with a differentiated label indicated for prophylaxis.

We launched VONVENDI in the U.S. in August. VONVENDI is the only recombinant treatment for adults living with VWD.

Key products

ADYNOVATE

FEIBA

ADVATE

myPKFiT

vonvendi

Hemophilia

Hemophilia is a rare genetic disorder caused by a missing or defective factor, leading to a bleeding problem. People with hemophilia do not bleed any faster than normal, but they can bleed for longer. Their blood does not have enough clotting factor, a protein in blood that controls bleeding. About 1 in 10,000 people are born with hemophilia. Although it is passed down from parents to children, about 1/3 of cases are caused by a spontaneous mutation in a gene.

The most common type of hemophilia is hemophilia A. This means the person does not have enough clotting factor VIII (factor eight). Around 80 to 85 percent of hemophilia sufferers have Hemophilia A. The less common form is Hemophilia B, also called factor IX ("FIX") deficiency or Christmas disease. A person with hemophilia B does not have enough factor IX (factor nine).

Approximately 400,000 people worldwide are living with hemophilia; many are infants and young children. Less than half are diagnosed. Only one quarter are receiving adequate treatment and only one third receive prophylaxis. Less than 5 percent achieve zero bleeds. Approximately 15-20 percent of hemophilia sufferers will develop antibodies (inhibitors) to the factor therapy used to treat or prevent bleeding episodes. This is one of the most serious complications of hemophilia.

Von Willebrand Disease ("VWD")

Von Willebrand disease (VWD) is the most common type of bleeding disorder. People with VWD have a problem with a protein in their blood called von Willebrand factor ("VWF") that helps control bleeding. When a blood vessel is injured and bleeding occurs, VWF helps cells in the blood, called platelets, mesh together and form a clot to stop the bleeding. People with VWD do not have enough VWF, or it does not work the way it should. It therefore takes longer for blood to clot and for bleeding to stop.

VWD is generally less severe than other bleeding disorders. Many people with VWD may not know that they have the disorder because their bleeding symptoms are very mild. For most people with VWD, the disorder causes little or no disruption to their lives except when there is a serious injury or need for surgery. However, with all forms of VWD, there can be bleeding problems. It is estimated that up to 1 percent of the world's population suffers from VWD. Research has shown that as many as 9 out of 10 people with VWD have not been diagnosed.

Total sales

$2,241m

21% of total product sales

Therapeutic areas

Internal Medicine

Kevin
Living with Short Bowel Syndrome

Kevin had a tough start to life because of his condition. He is now married with two daughters, including his youngest Nora. After careers in the restaurant industry and as an emergency worker, Kevin is now a dedicated caretaker for his children. He devotes his time to supporting his wife who works at the local hospital, looking after his daughters, and maintaining his health.

Our focus on Internal Medicine

GATTEX/REVESTIVE continued to perform well in 2016, with sales increasing 55 percent, primarily due to an increase in the numbers of patients on therapy. Strong uptake in the U.S. continues and the rollout across Europe and Canada has also seen strong uptake. We achieved pediatric label extension in Europe. Looking ahead, we are focusing on bringing access to more SBS patients around the world.

NATPARA also continued to perform well with sales increasing 250 percent, primarily due to an increase in the numbers of patients on therapy. We launched a new campaign in the U.S. We anticipate receiving EMA Marketing Authorization in 2017.

In September 2016, LIALDA was approved in Japan for the treatment of adults with ulcerative colitis ("UC").

LIALDA/MEZAVANT sales rose 16 percent due to increased prescription demand.

Key products

Lialda (once-daily) · mezavant (once-daily)

Gattex · Revestive

PENTASA

Natpar

Resolor

Short Bowel Syndrome ("SBS")

In adults, SBS is a clinically significant reduction in intestinal absorptive capacity as a consequence of surgical resection of the intestine due to disease, trauma, congenital defects or complications of surgery. People with SBS are unable to maintain protein energy, fluid, electrolyte or micronutrient balances when on a conventionally accepted normal diet.

The prevalence of SBS is estimated to be 0.4 to 6.0 per 1,000,000 in Europe. In the U.S., approximately 10,000 to 20,000 patients receive home-delivered total parenteral nutrition (TPN) for SBS.

Hypoparathyroidism ("HPT")

HPT is a rare disorder that mainly occurs when the parathyroid glands are damaged either due to surgery, an autoimmune disease or a genetic disorder and are therefore not able to produce enough parathyroid hormone ("PTH"). Diminished PTH results in hypocalcemia and hyperphosphatemia. Symptoms of hypocalcemia include muscle spasms, cramps and brain fog.

The prevalence in the U.S. is estimated to be 25-37 per 100,000. The total number of individuals with hypoparathyroidism is estimated at about 77,000. In Europe the prevalence is estimated at 24 per 100,000 in Denmark and 10.2 per 100,000 in Norway. The majority of patients are female.

Total sales

$1,756m

16% of total product sales

Ulcerative colitis ("UC")

UC is an inflammatory bowel disease ("IBD") that causes long-lasting inflammation and ulcers (sores) in the digestive tract. UC affects the innermost lining (mucosa) of the large intestine (colon) and rectum. Sufferers typically experience UC flares separated by periods of remission.

UC is thought to affect 120 to 200 per 100,000 people throughout the Western world. It has the highest incidence in Northern Europe, the United Kingdom and North America. UC usually affects people aged 15 to 30 and men and women equally.

Therapeutic areas

Immunology

Grace
Living with a primary immunodeficiency

Five-year old Grace loves all kinds of art, from painting to drawing. She also loves learning and when she grows up, she wants to be a veterinarian who rides a unicorn! Grace has lots of support from her three older siblings who also have a primary immunodeficiency.

Our focus on Immunology

We are currently targeting four main areas of immunology: Primary Immunodeficiency ("PI"), Hypovolemia/Hypoalbuminemia, AAT Deficiency, and Severe Congenital Protein C Deficiency ("SCPCD").

In 2016, CUVITRU was launched in the U.S. for the treatment of PI in adult and pediatric patients two years of age and older, and CUVITRU was approved in the EU.

We launched a new FDA approved self-infusion indication for AAT Deficiency — GLASSIA is the first and only AAT deficiency treatment with this indication.

Key products

HyQvia

Flexbumin

Kiovig

Glassia

Total sales

$1,516m

14% of total product sales

Severe Congenital Protein C Deficiency ("SCPCD")

Protein C ("PC") is a natural anti-coagulant that is essential for ensuring effective and controlled blood coagulation. PC deficiency can be caused by mutation of the PC gene (congenital PC deficiency) or as a result of other conditions (acquired PC deficiency). The severity of the deficiency is determined by the remaining plasma activity of PC.

Severe congenital PC deficiency ("SCPCD") is very rare, with an incidence rate of 1 in 500,000-4,000,000 births. It is associated with serious clinical manifestations that are caused by excessive blood coagulation. For example, purpura fulminans ("PF") — a life-threatening condition characterized by thromboses within small vessels and capillaries — often presents within hours of birth. SCPCD can also result in venous thromboembolism ("VTE"). Both PF and VTE can be fatal.

Hypovolemia/ Hypoalbuminemia

Hypovolemia is the reduction in circulating blood volume through loss or redistribution of fluid. It is a major cause of shock. Causes of hypovolemia include blood loss (external or internal haemorrhage), plasma loss (burns), loss of fluids and electrolytes (diarrhoea, vomiting), and redistribution (pancreatitis, sepsis).

Hypoalbuminemia is a decrease in albumin concentration in the plasma below normal levels. It can be due to loss or reduced production of albumin. Causes of hypoalbuminemia include acute or chronic inflammation, nephrotic syndrome, enteropathies, malnutrition, heart failure, and liver cirrhosis

AAT Deficiency

AAT deficiency is a natural anti-inflammatory protein that inactivates proteases released during inflammation. Patients with congenital AAT deficiency develop lung and liver damage. Of the estimated 100,000 people with AAT Deficiency worldwide, 90 percent are currently undiagnosed.

Primary Immunodeficiency ("PI")

PI includes more than 300 inherited disorders primarily affecting the antibodies of the immune system.

The estimated prevalence of PI is 1:10,000. It occurs equally in men and women and can be diagnosed at any age. Less than 30 percent of PI sufferers are diagnosed globally. On average, PI patients experience symptoms for 15 years before being diagnosed. Currently, more than half of PI patients are not diagnosed until age 30 or older.

Therapeutic areas

Oncology

Advancing science

We are pursuing cutting-edge science to deliver innovative therapeutics to oncology patients. In 2017 we plan to reach more cancer patients than ever before, through both international and indication expansion.

Acute Lymphoblastic Leukemia ("ALL")

ALL is a heterogeneous group of lymphoid neoplasms that result from monoclonal proliferation and accumulation of lymphoblasts in the bone marrow, peripheral blood and other organs. It is the most commonly diagnosed cancer in children, representing approximately 25 percent of diagnoses in children younger than 15 years. Symptoms include anemia, fever, weakness and fatigue, bleeding from gums, bone or joint pain, and swollen lymph nodes in the neck, underarm, abdomen or groin.

An estimated 60-70,000 people suffer from ALL worldwide.

Metastatic Adenocarcinoma of the Pancreas

Pancreatic cancer accounts for 3 percent of all cancers worldwide. It is currently the fourth leading cause of cancer death and its incidence is growing. This aggressive form of cancer has non-specific signs and symptoms. As a result, it is rarely detected in early stages. Moreover, it is difficult to treat and existing therapies are modestly effective. The majority of patients diagnosed with metastatic pancreatic cancer do not receive second-line or further treatment.

Total sales

$131m

1% of total product sales

Key products

oncaspar

onivyde

Our focus on Oncology

In Europe, ONCASPAR is a component of antineoplastic combination therapy in ALL in pediatric patients from birth to 18 years, and adult patients. It is the only FDA and EMA approved pegylated L-asparginase. We are continuing to increase the brand awareness and availability of ONCASPAR around the world. In 2016 for example, marketing authorizations were submitted for Brazil, Taiwan and New Zealand.

In 2016, the European Commission ("EC") granted Marketing Authorization of ONIVYDE, for the treatment of metastatic adenocarcinoma of the pancreas, in combination with 5-fluorouracil ("5-FU") and leucovorin ("LV"), in adult patients who have progressed following gemcitabine-based therapy. ONIVYDE is the first and only approved treatment option for this patient population based on pivotal Phase 3 data (NAPOLI-1) showing increased overall survival.

Therapeutic areas

Ophthalmology

Christine Living with Dry Eye Disease

Christine is a registered nurse and writer. She loves going for long country walks with her family and their pet dog. She also loves a good book as well as traveling, concerts and yoga. In 2011 Christine was diagnosed with Sjogren's syndrome, which is a risk factor for Dry Eye Disease.

> My symptoms make vision-related things in life really challenging. Dryness and photophobia (extreme sensitivity to light) make it difficult when I spend time outside doing the things I love to do like gardening and traveling.

Our focus on Ophthalmology

We are leading the way in an important area of ophthalmology: treating the signs and symptoms of Dry Eye Disease ("DED").

XIIDRA, designed to treat both the signs and symptoms of DED, received FDA approval on July 11, 2016. We successfully launched the product in the U.S. on August 29, 2016, generating $54 million in product sales and 19 percent U.S. market share.

Key product

xiidra

Dry Eye Disease ("DED")

DED is a multifactorial disease of the tears and ocular surface. It is associated with inflammation that may eventually lead to damage to the surface of the eye. Patients report symptoms such as eye dryness, overall eye discomfort, stinging, burning, a gritty feeling or fluctuating blurry vision. Eye care professionals can use various tests to determine the presence of DED.

Nearly 30 million U.S. adults report symptoms consistent with DED. An estimated 16 million adults in the U.S. are diagnosed with the disease. Aging and gender are recognized as traditional risk factors of DED while modern risk factors include prolonged digital/ computer screen time, wearing contact lenses and cataract or refractive surgery.

Total sales

$54m

0.5% of total product sales

Championing responsible leadership

We are a responsible leader dedicated to delivering innovative medicines that improve the lives of patients with rare diseases.

As the leading global biotech company in rare diseases, we address significant unmet needs and transform people's lives through the breakthrough medicines we develop. We attract and nurture outstanding talent, encouraging people to contribute in our local and global communities. We take this responsibility very seriously.

Corporate responsibility has long been embedded across our company and runs through every aspect of our business. It is a commitment that is supported by Shire's Board of Directors, championed by the Chief Executive Officer, driven forward by Shire's senior leaders and shared by our approximately 24,000 employees. It is at the heart of how we lead and seek to deliver high patient impact, sustained growth, and societal value.

FTSE4Good

In 2016, Shire remained in the FTSE4Good Index Series, a leading responsibility investment index that recognizes positive environmental, social and governance practices.

Focusing on what matters

As a responsible leader in rare diseases, we focus on what matters for maximum long-term positive impact.

To this end, in 2016, we carried out a Responsibility Materiality Assessment to identify and prioritize the most important Responsibility issues to Shire and our stakeholders.

Going forward, this assessment will guide our Responsibility strategy and help us focus our resources for maximum effect, as well as set ambitious goals. A key principle here is to be most strategic with the issues that are most material to our business and stakeholders.

A comprehensive study

The comprehensive assessment included more than 50 interviews with Shire leaders and external stakeholders, including patient groups, investors, supply chain specialists, media and policy experts, and industry and nonprofit leaders. We also conducted extensive research into industry practices and priorities, and conducted a survey of our approximately 24,000 Shire employees to include their viewpoints in the study.

In determining our priorities, we looked at what is important to Shire's business and what is important to our stakeholders. We assessed both the degree of importance of an issue to Shire's strategic drivers, operations, customers, and manufacturing and sourcing footprint, as well as the extent to which Shire has the ability to directly influence the issue.

Top 20 issues

We started with a list of more than 300 topics relevant to Shire's core operations and broader value chain and narrowed them down to Shire's top 20 Responsibility issues.

Six highest priority issues

We identified six highest priority issues that have relevance to Responsibility:

- Access to medicines
- Innovation and R&D
- Product quality, safety and efficacy
- Talent attraction and development
- Governance, accountability and transparency
- Ethical business conduct

These issues range across our four areas of Responsibility: supporting our patients, our people and culture, sustainable operations, and ethics and transparency. Over the coming months, we will work to understand our key challenges and opportunities in these areas and define a longer-term Responsibility strategy for Shire with clear metrics and goals. We will also continue to monitor other issues that may grow in significance and become increasingly important in terms of Responsibility to our business and key stakeholders.

Additional information on the Responsibility Materiality Assessment can be found in Shire's Annual Responsibility Review.

> "Responsibility is integral to Shire's success. As a Company we will continue to champion what it means to be a leader in responsibility while operating an ethical, responsible, and sustainable business."

Kim Stratton
Head of International Commercial & Executive Sponsor, Responsibility Sponsor Network

Supporting our patients

From championing early diagnosis of rare diseases to investing in the next generation of medical geneticists — we are dedicated to supporting our patients.

Championing early diagnosis

As our 2016 Responsibility Materiality Assessment confirmed, access to medicines remains a top priority for us. One of the key ways we live up to this responsibility is by championing early diagnosis. Working with physicians, patients, their families and caregivers, we raise awareness of the signs of many rare diseases and provide the extra support often required with this type of diagnosis. These efforts include an increasing focus on expanding diagnostic testing.

Exploring new treatments

One of our core responsibilities is to develop therapies that address the unmet needs of patients with rare diseases. In 2016, we have 37 clinical programs in our pipeline — testing innovative treatments for conditions.

Improving access to existing treatments and patient support

We work to improve access to our existing treatments by reducing barriers, such as affordability and access to therapies. We have several programs to assist patients with affordability challenges in the U.S., including OnePath® and Shire Cares™ patient assistance programs. Outside the U.S., we have numerous programs to increase access, while helping build capacity and support patients.

In Brazil for example, we increased the number of patients who have access to recombinant therapy in hemophilia through a public-private partnership with the government.

We have long-running charitable access programs with NGOs Direct Relief and Project HOPE, donating enzyme replacement therapies for patients with lysosomal storage disorders ("LSDs") in 15 countries. Working with these organizations, as well as with patient advocacy organizations and medical experts, we also partner to raise disease awareness and build treatment capabilities in several least developed countries.

Patient Brotherhood

In rural India, where nearly 80 percent of people with hemophilia are undiagnosed, we have a unique program called "Bhaichara," which in Hindi means "Patient Brotherhood." Trained "patient brothers" from local communities go door–to-door in rural areas to identify probable patients for hemophilia and case managers from the community provide support in enabling and facilitating treatment for all patients, ultimately improving the quality of life for those in need. Once diagnosed, patients and their families are educated on treatment options. It is an innovative grassroots way to increase disease awareness and access to treatment in remote areas.

Increasing disease awareness

We aim to share our expertise and provide balanced, reliable and scientifically sound information to help improve understanding and appreciation of rare diseases. This happens across multiple therapeutic areas in a variety of programs developed for patients, caregivers, healthcare providers, and the general public.

We also continue to encourage responsible use of our ADHD products through a coalition of medical, mental health, higher education, students and industry experts.

Investing in the future

Addressing the need for more physicians trained in disciplines associated with the diagnosis and treatment of rare diseases is one of the ways we prepare for the future. In 2016, we announced a partnership with the ACMG Foundation for Genetic and Genomic Medicine to begin a three-year fellowship program supporting the next generation of medical geneticists. The Shire/ACMG Foundation Medical Genetics Training Awards are funding ten much-needed genetic fellowships to support research advances, diagnosis and patient care.

Ensuring clinical trial transparency

Safeguarding the human rights of those taking part in our clinical trials is of paramount importance. We achieve this primarily through informed consent. Shire adheres to the International Conference on Harmonization ("ICH") Good Clinical Practice ("GCP") Guidelines. We recognize the importance of transparency in clinical studies and are committed to sharing clinical data responsibly with patients, physicians and researchers. Through shiretrials.com, we provide a single portal to access easy-to-understand information on our current and past trials.

Our work in this area has been recognized by AllTrials, the global campaign for clinical trial transparency supported by more than 700 organizations including patient groups, pharmaceutical companies and medical associations. As AllTrials noted in November, Shire was the only company to have published results for all its 96 clinical trials completed during the past 10 years.

Valuing our people and culture

We are proud of our people and of the open, entrepreneurial culture at the heart of our company.

Attracting and developing top talent

Our 2016 Responsibility Materiality Assessment highlighted talent attraction and development as a top priority. We focus on recruiting, developing and supporting highly trained, flexible, engaged, high-performing employees who can continuously learn and grow while doing their best work. These are people who thrive in our open, entrepreneurial, patient-focused culture.

Investing in our people

In 2016, we invested a great deal in training in line with our ongoing commitment to help employees perform and progress throughout Shire. Focus areas included professional and leadership development, organizational effectiveness and performance management.

Encouraging diversity

Our success continues to be driven by our diverse employee talent around the world. We value all genders, ages, cultures, experiences and backgrounds as we build and grow our global organization.

The benefit of our diverse workforce comes from respecting, considering and including different views into our work every day. Our growing global reach gives us the opportunity to bring to our business, for the benefit of our patients, greater depth of experiences and capabilities.

Our commitment to diversity and inclusion has been given a major boost by the combination with Baxalta. We now have approximately 24,000 employees across 68 countries around the globe, bringing together a wealth of diverse talent. A great initiative from Baxalta that we are expanding across Shire is our employee-organized Business Resource Groups (BRGs). Each one is focused on a unique community of our employees: B-Equal LGBTQ, Black Leadership Council, Building Asian Leaders, Early Career Professionals, EnAbles Disability, Impacto Latino, VETS veterans, and Women@Shire.

Holding a Global Day of Service

On October 7, 2016, we held our second Global Day of Service. Building on the achievements of the inaugural event, it was an outstanding success. Over 6,500 employees dedicated more than 25,000 hours of their time to community projects across over 150 locations around the world — from New York to Norway, from India to Idaho. Once again, the focus was on helping children, for example by hosting science fairs and renovating school playgrounds. For everyone involved, it was a very satisfying way to give back to local communities by making a lasting and meaningful difference.

Providing equal opportunities

We are an equal opportunity employer that strives to ensure there is no discrimination against anyone applying for a job or employed by us for reasons related to race, religion, national origin, gender, disability or sexual orientation. We are committed to the fair treatment and reasonable accommodation of applicants or employees' disabilities in accordance with all applicable laws in the respective locations of all Shire facilities.

Recognizing and rewarding

Our pay for performance philosophy provides managers with a variety of programs to recognize and reward employee contributions. Our employee share purchase plans enable employees to have a vested interest in Shire's success.

Focusing on communication

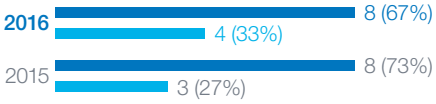
We focus on communicating to drive performance at every level of the business, for example through one-on-one performance discussions between managers and employees and all-employee meetings held at our major sites. We communicate with all employees via periodic all-company meetings, the intranet, all-employee emails from the CEO and other executives, social networking platforms, and leadership briefings and cascades.

Having SeriousFun

Our first year of partnership with SeriousFun Children's Network was incredibly successful. SeriousFun Children's Network is a global community of 30 camps and programs around the world that provide transformative camp experiences to children living with serious illnesses and their families. Shire's $3 million commitment, $1 million annually, enables nearly 1,000 children to attend these life-changing camps. In addition, this year Shire employees dedicated over 5,000 hours of volunteering with SeriousFun. Through our volunteer program, 25 employees volunteered as camp counselors at seven different camps. Additionally, during our Global Day of Service, over 350 employees volunteered across six countries working on camp enhancement. And we were proud to sponsor two family weekends, allowing 44 families to spend quality time together at camp.

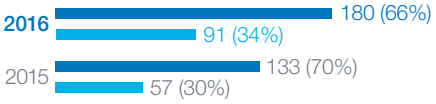
12

Shire plc Directors gender split
as at December 31, 2016



271

Shire senior managers gender split
as at December 31, 2016



23,906

Shire global employees gender split
as at December 31, 2016

Male
Female

Employment by region
as at December 31, 2016

1	North America	58%
2	Europe	35%
3	Latin America	2%
4	Asia	5%

U.S. employee ethnic minorities
as at December 31, 2016

1	Non-minority	67%
2	Minority	32%
3	Unstated	1%

Ensuring sustainable operations

As a responsible leader committed to long-term positive impact, we focus on ensuring sustainable operations throughout our business.

Looking after our planet

We strive to operate a sustainable organization that protects our employees, the environment, our partners and the communities in which we live and work.

We promote the sustainable and efficient use of natural resources, waste minimization, recycling, energy efficiency and responsible product stewardship. We work to minimize adverse environmental impacts and risks that may be associated with our products, facilities and operations. As a world-class organization, we strive for excellent performance to fulfill our aim to be a responsible corporate citizen.

Global approach, local focus

We apply the same approach and policies to all our facilities worldwide. Nearly all of our manufacturing and research and development sites are certified to the ISO 14001 Environmental Management System Standard and the Occupational Health and Safety Assessment Series ("OHSAS") 18001 Standard, with additional sites recommended for certification in 2017. Adhering to these standards helps ensure that effective processes are in place to minimize impact on the environment with priority consideration for the health and safety of employees and contractors.

We have initiatives in place to reduce our environmental impact through activities such as site-specific recycling and energy reduction programs. To reduce greenhouse gas ("GHG") emissions, several sites use green energy purchasing agreements such as our operations in Orth and Vienna, Austria; Neuchatel, Switzerland; and Lessines, Belgium. We have incorporated green building design principles and have achieved U.S. Green Building Council Leadership in Energy and Environmental Design ("LEED") certification within several sites including locations in Lexington, Massachusetts; Los Angeles, California; Vienna, Austria; and Rieti, Italy.

Promoting health and safety

We provide a safe work environment as well as promote healthy lifestyles and behavior. We train, empower and require our employees to take individual responsibility for health and safety. We engage and consult with our employees when developing and improving our processes, and encourage them to integrate health and safety considerations into their everyday activities.

Responsible manufacturing and supplier diversity

As a newly combined company, we are keenly aware of the importance of working closely with our manufacturing and sourcing partners and suppliers to build a responsible supply chain. A core aspect of our approach to responsible supply chain management is supplier diversity. We actively seek and select qualified suppliers from all segments of the business community, in all markets where we operate. In the U.S., we employ our Supplier Diversity Program to ensure that Minority-Owned, Women-Owned, Veteran-Owned, Service-Disabled Veteran-Owned Small Businesses, businesses located in Historically Underutilized Business Zones ("HUBZone") and Small Disadvantaged Businesses are afforded a fair and equal opportunity to participate in the awarding of contracts. In 2016, we met our annual goal of spending 13 percent of our U.S. spend with these small businesses.

Greenest company

We were proud to be ranked as the No.1 greenest company in the world in Newsweek's 2016 Green Rankings based on corporate sustainability and environmental impact. The prior year we were ranked No.2.

Sustainable performance

In 2016 we received a climate score of a B for our 2016 performance in the CDP, above the CDP climate change program average.

Greenhouse Gas Emissions

Assessment parameters

Baseline Year[1]	January 1, 2016 to December 31, 2016 (FY2016)
Consolidation Approach	Operational Control
Boundary Summary	Emissions data includes all Shire plc consolidated entities over which the Company has operational control. All manufacturing and plasma collection facilities included in Scope 1 and 2 reporting of emissions from natural gas, fuel oil, and electricity. Scope 1 emissions from global fleet fuel usage are included. Scope 2 emissions from commercial offices are included and approximated based on occupied square footage when primary consumption data was not available.
Consistency with the Financial Statements	By following the operational control approach, our GHG disclosures include data from leased assets that are not included in the consolidated financial statements.
Assessment Methodology	Greenhouse Gas Protocol (2004)
Intensity Ratio	GHG Emissions per unit revenue (metric tonnes of carbon dioxide equivalents per million U.S. Dollars of revenue)

[1] Due to significant structural changes in Shire's operational boundary as a result of the Baxalta Inc. acquisition in 2016, Shire has reset its baseline year to FY2016 to better reflect the newly combined organization.

	2015[1]		2016	
Greenhouse Gas Emission Source[2]	(tCO_2e)[3]	(tCO_2e/$m)[3]	(tCO_2e)[3]	(tCO_2e/$m)[3]
Scope 1[4]	26,234		**148,000**	
Scope 2				
Location-Based	22,807		**136,000**	
Market-Based			**118,000**[5]	
Total (Scope 1 & 2)	49,041	7.64	**266,000**[6]	**23.3**
Scope 3	34,078		**Not Reported**[7]	
Total Emissions	83,119	12.95	**266,000**	**23.3**

[1] 2015 GHG Emissions Data as reported in Shire's 2015 Annual Report. These figures do not include GHG emissions associated with the Baxalta Inc. acquisition in 2016. See Shire's 2015 Annual Report for additional details on Shire's 2015 GHG emissions data.
[2] Emissions factors were sourced from UK's DEFRA database, the WRI GHG Protocol, and the U.S. EPA.
[3] GHG emissions reported in metric tonnes of carbon dioxide equivalents. GHG intensity emissions reported in metric tonnes of carbon dioxide equivalents per million U.S. Dollars of revenue.
[4] For Scope 1 fleet usage, an annual mileage of 20,000 kilometers was used to approximate fleet emissions for vehicles without annual mileage data.
[5] For Shire occupied commercial office locations where electricity consumption data was not available, electricity consumption was approximated using U.S. Energy Information Administration 2012 intensity factors.
[6] Total Scope 1 and Scope 2 emissions calculated using the market-based Scope 2 total.
[7] While Shire supports the voluntary reporting of Scope 3 emissions, Shire was unable to complete an evaluation of its 2016 Scope 3 emissions due to the changes in Shire's operations as a result of the Baxalta Inc. acquisition in 2016.

Ethics and transparency

We are committed to leading the way in adopting and applying the highest standards of good governance, ethics and transparency in our industry. Ethical business conduct was another top priority identified in our 2016 Responsibility Materiality Assessment.

Organized to lead

Following the acquisition of Baxalta, we formed a new cross-functional, global Responsibility Sponsor Network. Through this network, senior leaders play a fundamental role in reviewing and directing Shire's Responsibility strategies, activities and policies to ensure the company is aligned to maintain high standards and high impact. Members of the network also serve as Responsibility champions throughout the organization and with external stakeholders. They meet as a group at least twice a year to monitor progress and more frequently in smaller working groups. Shire's Responsibility team facilitates the working groups, partners with sponsors, and drives communications and reporting efforts.

Upholding human rights

We support the UN Universal Declaration of Human Rights (http://www.un.org/en/documents/udhr/) and recognize the obligation to promote universal respect for and observance of human rights and fundamental freedoms for all, without distinction to sex, age, race, religion, or other characteristics protected by law.

Employment

We are committed to protecting the human rights of our employees in our offices and manufacturing facilities around the world. We recognize that commercial success depends on the full commitment of all our employees. We commit to respect their human rights, to provide them with safe and favorable working conditions that are free from unnecessary risk, and to maintaining fair and competitive terms and conditions of service at all times.

We seek to comply fully with all relevant laws, rules and regulations governing labor, employment, and the employment relationship in all of the countries where Shire does business.

We commit to the principles articulated in the International Labor Organization's ("ILO") "Declaration on Fundamental Principles and Rights at Work."

We also commit to the protection of human rights of our partners and suppliers, and in turn, expect them to do the same in their operations and to their employees around the world. We do this through our Supply Chain Management policy which explicitly states our expectations of suppliers to uphold the ILO principles. This policy can be found on our website, shire.com.

Shire also supports the UK's Modern Slavery Act which came into effect in October 2015 and believes it is a significant step in helping companies identify and tackle the risks of modern slavery and human trafficking across business operations and supply chains. Shire's Board of Directors has approved a Modern Slavery Transparency Statement in compliance with section 54 of the Act, which can be found on our website. For more information, go to:

https://www.shire.com/who-we-are/how-we-operate/policies-and-positions

Grants and donations

We publish details on our website regularly about our educational grants as well as donations made to patient groups and charitable organizations. In 2016, Shire provided $11 million in educational grants, an increase of $2.4 million from 2015, and made more than $25.9 million in donations to U.S. charitable organizations, an increase of more than $12 million from the year prior.

Looking ahead

Looking ahead, we will draw on our 2016 Responsibility Materiality Assessment to help us focus strategically on what really matters to our stakeholders and our business. We aim to put even more resources, people and investments behind key areas. As a responsible leader in rare diseases, we are focusing with ever-greater intensity on making sure we organize and apply ourselves for maximum long-term positive impact.

Engaging with our stakeholders

We communicate widely and regularly on Responsibility with all our stakeholders, for example through our website. We're always interested to hear feedback and suggestions on how we can be an even more responsible organization.

Find out more

You can find out more about our enduring commitment to responsibility here:

https://www.shire.com/who-we-are/responsibility

Every year we publish a detailed Annual Responsibility Review that captures Shire's approach to responsibility, sets forth goals in key focus areas and provides progress made to date. You can find it here:

https://www.shire.com/who-we-are/responsibility

You can also find copies of our policies and position statements on issues such as human rights, bioethics and animal welfare here:

https://www.shire.com/who-we-are/how-we-operate/policies-and-positions

Review of our business

> Shire delivers record full-year revenue with key growth contributions from all therapeutic areas.

Jeff Poulton
Chief Financial Officer

Overview

The Company has grown both organically and through acquisition, completing a series of major transactions that have brought therapeutic, geographic and pipeline growth and diversification. The Company will continue to conduct its own research and development, focused on rare diseases, as well as evaluate companies, products and pipeline opportunities that offer a strategic fit and have the potential to deliver value to all of the Company's stakeholders: patients, physicians, policy makers, payers, partners, investors and employees.

The Company's purpose is to enable people with life-altering conditions to lead better lives. The Company will execute on its purpose through its strategy and business model. For further details of Shire's strategy and business model, refer to pages 12 and 14.

Through deep understanding of patients' needs, the Company is able to:

- serve patients with high unmet needs in select, commercially attractive specialty therapeutic areas;
- drive optimum performance of its marketed products — to serve patients today; and
- build its pipeline of innovative specialist treatments through both R&D and Corporate Development activities to enable the Company to serve patients in the future.

Shire's in-licensing and acquisition efforts are focused on products in specialist markets with strong intellectual property protection or other forms of market exclusivity and global rights. Shire believes that a carefully selected and balanced portfolio of products with strategically aligned and relatively small-scale sales forces will deliver strong results.

Company revenues, expenditures and net assets are attributable to the R&D, manufacture, sale and distribution of pharmaceutical products within one reportable segment. The Company also earns royalties (where Shire has out-licensed products to third-parties) which are recorded as royalty revenues.

Revenues are derived primarily from two sources — sales of the Company's own products and royalties:

- 95.5 percent (2015: 95.0 percent) of total revenues are derived from Product sales; and
- 4.5 percent (2015: 5.0 percent) of total revenues are derived from royalties.

The markets in which the Company conducts its business are intensely competitive and highly regulated.

The healthcare industry is also experiencing:

- pressure from governments and healthcare providers to keep prices low while increasing access to drugs;
- increased discounts, which reduce revenue, due to the population of "baby boomers" covered under Medicare, specifically those beneficiaries receiving drug cost offset through the Medicare Part D Coverage Gap (the "Donut Hole");
- increasing challenges from third-party payers for products to have demonstrable clinical benefit, with pricing and reimbursement approval becoming increasingly linked to a product's clinical effectiveness and impact on overall costs of patient care;
- increased R&D costs, because development programs are typically larger and take longer to get approval from regulators;
- challenges to existing patents from generic manufacturers;
- governments and healthcare systems favoring earlier entry of low cost generic drugs; and
- higher marketing costs, due to increased competition for market share.

Shire's strategy has been developed to address these industry-wide competitive pressures. This strategy has resulted in a series of initiatives in the following areas:

Markets

Shire's current portfolio of approved products spans seven key therapeutic areas ("TAs"): Hematology, Genetic Diseases (HAE/LSD), Neuroscience, Immunology, Internal Medicine, Oncology and Ophthalmology. In addition, Shire has a number of marketed products for other TAs from which it generates Product sales or royalties. In 2016, the contribution of each TA to overall Product sales was as follows:

	Product sales $'M	Percentage %
Hematology	2,240.8	20.6
Genetic Disease	2,698.0	24.8
Neuroscience	2,490.5	22.9
Immunology	1,516.1	13.9
Internal Medicine	1,755.5	16.1
Oncology	130.5	1.2
Ophthalmology	54.4	0.5
	10,885.8	100.0

Shire has grown in part through acquisition which has brought therapeutic, geographic and pipeline growth and diversification.

The acquisition of Baxalta in 2016 added the Hematology, Immunology and Oncology franchises and enabled Shire to become the global leader in rare diseases and highly specialized conditions.

The acquisition of Dyax in January 2016, with their lead pipeline product, SHP643, and marketed product KALBITOR, expanded and extended Shire's industry-leading HAE portfolio (FIRAZYR and CINRYZE).

In July 2016, Shire licensed the global rights to all indications for SHP647 from Pfizer Inc. SHP647 is an investigational biologic being evaluated for the treatment of moderate-to-severe inflammatory bowel disease.

In 2015, Shire acquired NPS Pharma, Meritage Pharma and Foresight.

The acquisition of NPS Pharma added global rights to an innovative product portfolio with multiple growth catalysts, including GATTEX/REVESTIVE and NATPARA. The acquisition of Meritage Pharma provided global rights to SHP621, a Phase 3 ready asset for the treatment of adolescents and adults with EoE, a rare, chronic inflammatory GI disease. This builds upon the Company's rare disease and GI commercial infrastructure and expertise. With the acquisition of Foresight Shire acquired the global rights to SHP640 (topical ophthalmic drops combining 0.6 percent povidone iodine (PVP-I) and 0.1 percent dexamethasone), a potential therapy in late-stage development for the treatment of infectious conjunctivitis, an ocular surface condition commonly referred to as pink eye. This acquisition has a clear strategic fit with XIIDRA, which is approved in the U.S. for the treatment of the signs and symptoms of dry eye disease, and further demonstrates Shire's commitment to building a leadership position in ophthalmics.

In 2016, Shire derived 32 percent (2015: 27 percent) of Product sales from outside of the U.S. Shire has ongoing commercialization and late-stage development activities, which are expected to further supplement the diversification of revenues in the future, including the following:

- continued launch of INTUNIV, REVESTIVE and ONIVYDE across Europe;
- review of MAAs for NATPAR and ADYNOVI in the EU;
- review of NDA for SHP465 in U.S.;
- submission of CALPEG NDA for ALL in U.S.;
- submission of VONVENDI MAA in Europe;
- headline data from registration studies for SHP643; and
- geographic expansion of XIIDRA with submissions in other key markets.

R&D

Shire's R&D efforts are focused on six therapeutic areas: Neuroscience, Ophthalmology, Hematology, Oncology, Immunology, GI/Metabolic/Endocrinology Diseases. Shire concentrates its resources on obtaining regulatory approval for later stage pipeline products within these therapeutic areas and focuses its early stage research activities in rare diseases.

Evidence of the successful progression of the late stage pipeline can be seen in the granting of approval and associated launches of the Company's products over the last three years. In this time, several products have received regulatory approval including: in the U.S., XIIDRA and CUVITRU in 2016, VONVENDI, ADYNOVATE, NATPARA and VYVANSE for BED in 2015, HYQVIA and OBIZUR in 2014; in the EU, ONIVYDE and CUVITRU in 2016, ELVANSE/TYVENSE for adults, INTUNIV for children and adolescents and OBIZUR in 2015.

Shire's management reviews direct costs for all R&D projects by development phase.

Shire's R&D costs in 2016 and 2015 include expense on programs in all stages of development. The following table provides an analysis of the Company's direct R&D spend categorized by development stage, based upon the development stage of each program as of December 31, 2016 and 2015:

As of December 31	**2016 $'M**	2015 $'M
Early stage programs	**325.7**	177.2
Late stage programs	**291.1**	225.5
Currently marketed products	**238.1**	178.5
Total	**854.9**	581.2

Early stage programs include preclinical and research programs. In addition to the above, the Company recorded R&D employee costs of $431.9 million in 2016 (2015: $302.9 million) and other indirect R&D costs of $153.0 million (2015: $679.9 million), comprising mainly depreciation and milestone expense (2015 comprising mainly depreciation and impairment charges).

For a discussion of the Company's current development projects see pages 20 to 21.

Patents and Market Exclusivity

The loss or expiration of patent protection or regulatory exclusivity with respect to any of the Company's major products could have a material adverse effect on the Company's revenues, financial condition and results of operations, as generic or biosimilar products may enter the market. Companies selling generic products often do not need to complete extensive clinical studies when they seek registration of a generic or biosimilar product and accordingly, are generally able to sell a generic version of the Company's products at a much lower price.

As expected, in 2009, Teva and Impax commenced commercial shipments of their authorized generic versions of ADDERALL XR, which led to lower sales of branded ADDERALL XR compared to the periods prior to the authorized generic launches.

In 2014 and 2015, generic versions of the Company's INTUNIV product was launched, which led to lower sales of INTUNIV product compared to the period before loss of exclusivity.

Shire is engaged in various legal proceedings with generic manufacturers with respect to its VYVANSE and LIALDA patents. For information regarding current patent litigation, see Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements.

Corporate Development

Shire focuses its corporate development activity on the acquisition and in-licensing of businesses, products or compounds which offer a strategic fit and have the potential to deliver demonstrable value to all of the Company's stakeholders.

Recent mergers and acquisitions

2016:

- On January 22, 2016, Shire completed the acquisition of Dyax which expanded and extended Shire's industry-leading HAE portfolio by adding the currently approved product, KALBITOR for the treatment of sudden attacks of HAE in people 12 years of age and older and SHP643, a Phase 3 program for the treatment of HAE.
- On June 3, 2016, Shire acquired all of the outstanding common stock of Baxalta. Baxalta was a global biopharmaceutical company, focused on developing, manufacturing and commercializing therapies for orphan diseases and underserved conditions in hematology, oncology and immunology. Baxalta added a number of commercially approved products and enhanced Shire's existing pipeline with a number of drug candidates in different therapeutic areas under different phases of development. For further details, see pages 20 to 21.

2015:

- On February 21, 2015, Shire acquired NPS Pharma, which added global rights to an innovative product portfolio with multiple growth catalysts, including GATTEX/REVESTIVE for the treatment of adults with SBS, a rare GI condition; and NATPARA/NATPAR, the only bioengineered parathyroid hormone therapy for use in the treatment of HPT, a rare endocrine disease.
- On February 18, 2015, Shire acquired Meritage Pharma, which provided the Company with worldwide rights to SHP621 for the potential treatment of adolescents and adults with EoE, a rare, chronic inflammatory GI disease.
- On July 30, 2015, Shire acquired Foresight, which added global rights to SHP640, a Phase 3 ready potential therapy for the treatment of infectious conjunctivitis, an ocular surface condition commonly referred to as pink eye.

Results of operations for the years ended December 31, 2016 and 2015

Financial highlights for the year ended December 31, 2016 are as follows:

Revenues

- Product sales increased by 78 percent to $10,886 million (2015: $6,100 million). This increase was primarily due to including $3,887 million of Baxalta product sales following the acquisition, and double digit growth of existing franchises, with Genetic Diseases up 12 percent, Neuroscience up 13 percent and Internal Medicine up 17 percent. In addition, the Company launched XIIDRA in August 2016 and the Ophthalmology franchise contributed sales of $54 million.
- Royalties and other revenues increased by 61 percent to $511 million, as the second half of 2016 benefited from additional revenue following the acquisition of Baxalta, primarily related to contract manufacturing activities.

Operating results

- Operating income decreased 32 percent to $963 million (2015: $1,420 million), primarily due to the impact of the acquisition of Baxalta, including higher amortization of inventory fair value adjustments and acquired intangible assets, combined with higher integration and acquisition costs, partially offset by lower impairment charges related to R&D programs.

Earnings per share ("EPS")

- Diluted earnings per ADS decreased 81 percent to $1.27 (2015: $6.59). The decrease was primarily due to lower operating income resulting from the impact of the acquisition of Baxalta and higher integration and acquisition costs, combined with the impact of additional shares issued as consideration for the Baxalta transaction.

Cash flows

- Net cash provided by operating activities increased 14 percent to $2,659 million (2015: $2,337 million), primarily due to strong cash receipts from higher sales, partially offset by higher tax and interest payments, costs related to the Baxalta integration and a payment associated with the termination of a biosimilar collaboration acquired with Baxalta.

Total revenues

The following table provides an analysis of the Company's total revenues by source:

As of December 31	2016 $'M	2015 $'M	Change %
Product sales	10,885.8	6,099.9	78
Royalties and other revenues	510.8	316.8	61
Total	11,396.6	6,416.7	78

Product sales

As of December 31	2016 $'M	2015 $'M	Change %
Product sales:			
HEMOPHILIA	1,789.0	–	N/A
INHIBITOR THERAPIES	451.8	–	N/A
Hematology total	2,240.8	–	N/A
CINRYZE	680.2	617.7	10.1
ELAPRASE	589.0	552.6	6.6
FIRAZYR	578.5	445.0	30.0
REPLAGAL	452.4	441.2	2.5
VPRIV	345.7	342.4	1.0
KALBITOR	52.2	–	N/A
Genetic Diseases total	2,698.0	2,398.9	12.5
VYVANSE	2,013.9	1,722.2	16.9
ADDERALL XR	363.8	362.8	0.3
Other Neuroscience	112.8	115.4	(2.2)
Neuroscience total	2,490.5	2,200.4	13.2
IMMUNOGLOBULIN THERAPIES	1,143.9	–	N/A
BIO THERAPEUTICS	372.2	–	N/A
Immunology total	1,516.1	–	N/A
LIALDA/MEZAVANT	792.1	684.4	15.7
PENTASA	309.4	305.8	1.2
GATTEX/REVESTIVE	219.4	141.7	54.8
NATPARA	85.3	24.4	249.6
Other Internal Medicine	349.3	344.3	1.4
Internal Medicine total	1,755.5	1,500.6	17.0
Oncology total	130.5	–	N/A
Ophthalmology total	54.4	–	N/A
Total Product sales	10,885.8	6,099.9	78.5

Hematology

Hematology, acquired with Baxalta June 2016, includes sales of recombinant and plasma-derived hemophilia products (primarily factor VIII and factor IX) and inhibitor therapies. Product sales of the franchise for the year ended December 31, 2016 were $2,241 million.

Genetic Diseases

Genetic Diseases product sales for the year ended December 31, 2016 increased to $2,698 million or 12 percent from $2,399 million in 2015, primarily driven by increased demand for HAE therapies.

FIRAZYR product sales for the year ended December 31, 2016 increased to $579 million or 30 percent from $445 million in 2015, primarily due to an increase in the number of patients on therapy in both the U.S. and international markets. CINRYZE sales for the year ended December 31, 2016 increased to $680 million or 10 percent from $618 million in 2015, as an increase in the number of patients on therapy was partially offset by reduced utilization as a result of a U.S. supply constraint during the second half of the year. Shire continues to execute on plans to increase CINRYZE production to meet both short-term and long-term patient demand.

Neuroscience

Neuroscience product sales for the year ended December 31, 2016 increased to $2,490 million or 13 percent from $2,200 million in 2015, primarily driven by sales growth of VYVANSE.

VYVANSE sales for the year ended December 31, 2016 increased to $2,014 million or 17 percent from $1,722 million in 2015, due to prescription growth in the U.S. adult market, which includes ADHD and BED, and the benefit of price increases taken since 2015 and growth in the Company's international markets.

Information about litigations related to VYVANSE can be found in Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements.

Immunology

Immunology, acquired with Baxalta in June 2016, reported product sales of $1,516 million. Immunology includes antibody-replacement immunoglobulin and bio therapeutics therapies.

Internal Medicine

Internal Medicine product sales for the year ended December 31, 2016 increased to $1,756 million or 17 percent from $1,501 million in 2015, primarily driven by sales growth from LIALDA/MEZAVANT, GATTEX/REVESTIVE and NATPARA.

LIALDA/MEZAVANT product sales increased to $792 million or 16 percent for the year ended December 31, 2016 from $684 million in 2015, primarily due to an increase in prescription demand, resulting in a U.S. market share of 40 percent at the end of 2016 (compared to 36 percent in 2015).

Information about litigations related to LIALDA can be found in Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements.

GATTEX/REVESTIVE and NATPARA product sales increased to $219 million or 55 percent and $85 million or 250 percent, respectively, for 2016, compared to product sales in 2015 primarily due to an increase in the numbers of patients on therapy.

Oncology

Oncology, acquired with Baxalta in June 2016, reported product sales of $131 million. Oncology includes sales of ONCASPAR and ONIVYDE. ONIVYDE was approved in the EU on October 18, 2016.

Ophthalmology

Ophthalmology product sales relate to XIIDRA, which was made available to patients on August 29, 2016. XIIDRA product sales were $54 million for the year ended December 31, 2016.

Royalties and other revenues

As of December 31	2016 $'M	2015 $'M	Change %
SENSIPAR royalties	151.5	114.5	32
3TC and ZEFFIX royalties	58.9	49.1	20
FOSRENOL royalties	48.2	46.1	5
ADDERALL XR royalties	32.3	26.0	24
Other royalties and revenues	219.9	81.1	171
Total	510.8	316.8	61

Royalties and other revenues increased to $511 million or 61 percent for the year ended December 31, 2016 from $317 million in 2015, primarily due to $99 million of contract manufacturing revenue from the acquisition of Baxalta.

Cost of product sales

Cost of product sales increased by $2,848 million to $3,817 million for the year ended December 31, 2016 (35 percent of Product sales) from $969 million in 2015 (16 percent of Product sales) primarily due to the impact of higher amortization of inventory fair value adjustments in 2016 following the acquisitions of Baxalta and Dyax and, to a lesser extent, the impact of lower margin product franchises acquired with Baxalta. Cost of product sales included $1,118 million and $31 million of amortization of inventory fair value adjustments in 2016 and 2015, respectively.

For the year ended December 31, 2016, Cost of product sales included additional depreciation totaling $161 million (2015: $46 million), primarily due to the acquisition of Baxalta.

R&D

R&D expense decreased by $124 million, or 8 percent, to $1,440 million for the year ended December 31, 2016 (13 percent of Product sales) from $1,564 million in 2015 (26 percent of Product sales), as lower IPR&D impairment charges in 2016 more than offset the increase in costs related to Baxalta and Dyax and costs related to licensing SHP647. R&D expense in 2015 included impairment charges of $467 million related to the SHP625 IPR&D intangible asset, due to a lower probability of regulatory approval following trial results and revised commercial potential, and $177 million related to the SHP608 IPR&D intangible asset, following preclinical toxicity findings. No significant impairment charges occurred in 2016.

R&D expense for the year ended December 31, 2016 included depreciation of $34 million (2015: $22 million).

SG&A

SG&A expense increased by $1,173 million, or 64 percent, to $3,015 million for the year ended December 31, 2016 (28 percent of Product sales) from $1,843 million in 2015 (30 percent of Product sales), primarily due to the inclusion of Baxalta related costs and XIIDRA launch and promotional costs.

For the year ended December 31, 2016, SG&A expense included depreciation of $98 million (2015: $71 million).

Amortization of acquired intangible assets

For the year ended December 31, 2016, Shire recorded Amortization of acquired intangible assets of $1,173 million compared to $499 million in 2015. The increase of $675 million was primarily related to amortization on the intangible assets acquired with the Baxalta and Dyax transactions.

Integration and acquisition costs

For the year ended December 31, 2016, Shire recorded integration and acquisition costs of $884 million, primarily related to the Baxalta and Dyax transactions, which included severance and employee termination benefits and office closure related expenses.

In 2015, Shire recorded net integration and acquisition costs of $40 million, representing acquisition and integration costs of $190 million, primarily related to NPS, ViroPharma, Baxalta and Dyax. These costs were offset by a net credit of $150 million from the change in fair value of contingent consideration, primarily relating to SHP625 and SHP608.

Reorganization costs

For the year ended December 31, 2016, Shire recorded reorganization costs of $121 million primarily related to the planned closure of a facility at the Los Angeles manufacturing site acquired with Baxalta in June 2016.

Reorganization costs of $98 million for the year ended December 31, 2015, primarily related to the relocation of roles from Pennsylvania to Massachusetts.

Interest Expense

Other expense, net increased by $443 million to $477 million for the year ended December 31, 2016 from $34 million in 2015, primarily due to higher interest expense and amortization of one-time borrowing costs, including the write off of certain financing costs related to the bridge facility for the Baxalta transaction. During the third quarter of 2016, the bridge facility was fully repaid with the proceeds from the $12.1 billion public debt offering.

Taxation

The effective tax rate on income from continuing operations for the year ended December 31, 2016 was a benefit of 26 percent (2015: charge of 3 percent). The effective tax rate on income from continuing operations in 2016 was lower primarily due to the combined impact of the relative quantum of the profit before tax for the period by jurisdiction and the reversal of deferred tax liabilities (including in higher tax territories) from the Baxalta acquisition, inventory and intangible asset amortization, as well as acquisition and integration costs.

Discontinued operations

The loss from discontinued operations for the year ended December 31, 2016 was $276 million, net of tax benefit of $99 million, primarily related to legal contingencies for the divested DERMAGRAFT business. The loss from discontinued operations for the year ended December 31, 2015 was $34 million, net of tax, primarily related to a change in estimate for abandoned facilities charges.

Liquidity and Capital Resources

General

The Company's funding requirements depend on a number of factors, including the timing and extent of its development programs; corporate, business and product acquisitions; the level of resources required for the expansion of certain manufacturing and marketing capabilities as the product base expands; increases in accounts receivable and inventory which may arise with any increase in Product sales; competitive and technological developments; the timing and cost of obtaining required regulatory approvals for new products; the timing and quantum of milestone payments on business combinations, in-licenses and collaborative projects; the timing and quantum of tax and dividend payments; the timing and quantum of purchases by the Employee Benefit Trust ("EBT") of Shire shares in the market to satisfy awards granted under Shire's employee share plans; and the amount of cash generated from sales of Shire's products and royalty receipts.

An important part of Shire's business strategy is to protect its products and technologies through the use of patents, proprietary technologies and trademarks, to the extent available. The Company intends to defend its intellectual property and as a result may need cash for funding the cost of litigation.

The Company finances its activities through cash generated from operating activities; credit facilities; private and public offerings of equity and debt securities; and the proceeds of asset or investment disposals.

Shire's Consolidated Balance Sheets included $529 million of Cash and cash equivalents as of December 31, 2016.

Shire has a revolving credit facility ("RCF") of $2,100 million which matures in 2021, $450 million of which was utilized as of December 31, 2016. The RCF incorporates a $250 million U.S. Dollar and Euro swingline facility operating as a sub-limit thereof.

On September 23, 2016, Shire Acquisitions Investments Ireland Designated Activity Company ("SAIIDAC"), a wholly owned subsidiary of the Company, issued senior notes guaranteed by Shire plc with a total aggregate principal amount of $12.1 billion. On December 1, 2016, Baxalta guaranteed the outstanding notes issued by SAIIDAC.

In addition, in connection with the acquisition of Baxalta, on June 3, 2016, Shire plc guaranteed senior notes issued by Baxalta with a total aggregate principal amount of $5 billion and assumed $336 million of capital lease obligations. The details of these senior notes are presented in Note 18, Borrowings and Capital Lease Obligations, to the Consolidated Financial Statements.

Further in connection with the acquisitions of Dyax and Baxalta, respectively, Shire entered into a $5.6 billion amortizing term loan facility in November 2015 and an $18 billion bridge loan in January 2016. The November 2015 term loan facility was fully utilized as of December 31, 2016 in the amount of $5 billion. The bridge loan was fully repaid and canceled subsequent to the issuance of $12.1 billion in senior notes on September 23, 2016. The details of these facility agreements are presented in Note 18, Borrowings and Capital Lease Obligations, to the Consolidated Financial Statements.

In addition, Shire also has access to certain short-term uncommitted lines of credit which are available to utilize from time to time to provide short-term cash management flexibility. As of December 31, 2016, these lines of credit were not utilized.

The Company may also engage in financing activities from time to time, including accessing the debt or equity capital markets.

Senior Notes Issuance

On September 23, 2016, SAIIDAC, issued senior notes with a total aggregate principal value of $12.1 billion ("SAIIDAC Notes"), guaranteed by Shire plc and, as of December 1, 2016, by Baxalta. SAIIDAC used the net proceeds to fully repay amounts outstanding under the January 2016 Facilities Agreement (discussed below), which was used to finance the cash consideration payable related to the Company's acquisition of Baxalta. Below is a summary of the SAIIDAC Notes as of December 31, 2016:

	Aggregate amount $'M	Coupon rate %	Effective interest rate %	Carrying amount $'M
Fixed-rate notes due 2019	3,300.0	1.900	2.05	3,287.5
Fixed-rate notes due 2021	3,300.0	2.400	2.53	3,283.0
Fixed-rate notes due 2023	2,500.0	2.875	2.97	2,487.9
Fixed-rate notes due 2026	3,000.0	3.200	3.30	2,980.8
	12,100.0			12,039.2

The SAIIDAC Notes are senior unsecured obligations and may be redeemed at SAIIDAC's option at the greater of (1) 100 percent of the principal amount plus accrued and unpaid interest or (2) the sum of the present values of the remaining scheduled payments of interest and principal discounted to the date of redemption on a semi-annual basis at the applicable treasury rate (as defined) plus an incremental margin, plus, in either case, accrued and unpaid interest. The SAIIDAC Notes also contain a change of control provision that may require that SAIIDAC to offer to purchase the SAIIDAC Notes at a price equal to 101 percent of the principal amount plus accrued and unpaid interest to the date of purchase under certain circumstances.

The costs and discount associated with this offering of $61 million have been recorded as a reduction to the carrying amount of the debt on the Consolidated Balance Sheets. These costs will be amortized as additional interest expense using the effective interest rate method over the period from issuance through maturity. Interest on the SAIIDAC Notes is payable March 23 and September 23 of each year, beginning on March 23, 2017.

Baxalta Notes

Shire plc guaranteed senior notes issued by Baxalta with a total aggregate principal amount of $5 billion in connection with the Baxalta acquisition ("Baxalta Notes"). Below is a summary of the Baxalta Notes as of December 31, 2016:

	Aggregate principal $'M	Coupon rate %	Effective interest rate %	Carrying amount $'M
		LIBOR plus		
Variable-rate notes due 2018	375.0	0.780	2.20	371.6
Fixed-rate notes due 2018	375.0	2.000	2.00	374.8
Fixed-rate notes due 2020	1,000.0	2.875	2.80	1,004.3
Fixed-rate notes due 2022	500.0	3.600	3.30	508.4
Fixed-rate notes due 2025	1,750.0	4.000	3.90	1,772.8
Fixed-rate notes due 2045	1,000.0	5.250	5.10	1,031.7
Total Baxalta Notes	5,000.0			5,063.6

The effective interest rates above exclude the effect of any related interest rate swaps. The book values above include any premiums and adjustments related to hedging instruments. For further details related to the interest rate derivative contracts, please see Note 16, Financial Instruments, to the Consolidated Financial Statements.

Revolving Credit Facilities Agreement

On December 12, 2014, Shire entered into a $2,100 million revolving credit facilities agreement (the "RCF") with a number of financial institutions. Shire is an original borrower and original guarantor under the RCF. On January 15, 2016, SAIIDAC became additional guarantor to the RCF and on December 1, 2016, Baxalta became additional guarantor to the RCF. Shire has agreed to act as guarantor for any of its subsidiaries that become additional borrowers under the RCF. As of December 31, 2016 the Company utilized $450 million of the RCF.

The RCF, which terminates on December 12, 2021, may be applied towards financing the general corporate purposes of Shire. The RCF incorporates a $250 million U.S. Dollar and Euro swingline facility operating as a sub-limit thereof.

Interest on any loans made under the RCF is payable on the last day of each interest period, which may be one week or one, two, three or six months at the election of Shire, or as otherwise agreed with the lenders. The interest rate for the RCF is: LIBOR (or, in relation to any revolving loan in Euro, EURIBOR); plus 0.30 percent per annum subject to change depending upon (i) the prevailing ratio of Net Debt to EBITDA (each as defined in the RCF) in respect of the most recently completed financial year or financial half year and (ii) the occurrence and continuation of an event of default in respect of the financial covenants or the failure to provide a compliance certificate. Shire shall also pay (i) a commitment fee equal to 35 percent of the applicable margin on available commitments under the RCF for the availability period applicable thereto and (ii) a utilization fee equal to (a) 0.10 percent per year of the aggregate of all outstanding loans up to an aggregate base currency amount equal to $700 million, (b) 0.15 percent per year of the amount by which the aggregate base currency amount of all outstanding loans exceeds $700 million but is equal to or less than $1,400 million and (c) 0.30 percent per year of the amount by which the aggregate base currency amount of all outstanding loans exceeds $1,400 million.

The RCF includes customary representations and warranties, covenants and events of default, including requirements that Shire's (i) ratio of Net Debt to EBITDA in respect of the most recently-ended 12-month relevant period (each as defined in the RCF) must not, at any time, exceed 3.5:1 except that, following an acquisition fulfilling certain criteria, Shire may elect to increase this ratio to (a) 5.5:1 for the relevant period in which the acquisition was completed (b) 5.0:1 in respect of the first relevant period following the relevant period in which the acquisition was completed and (c) 4.5:1 in respect of the second relevant period following the relevant period in which the acquisition was completed and (ii) ratio of EBITDA to Net Interest for the most recently-ended 12-month relevant period (each as defined in the RCF) must not be less than 4.0:1. Shire elected to increase the Net Debt to EBITDA ratio in connection with the period ending June 30, 2016, following the completion of the acquisition of Baxalta during the period. Consequently, the applicable ratio for the period ending December 31, 2016 is 5.0:1.

The RCF restricts, subject to certain exceptions, Shire's ability to incur additional financial indebtedness, grant security over its assets or provide loans/grant credit. Further, any lender may require mandatory prepayment of its participation if there is a change of control of Shire, subject to certain exceptions for schemes of arrangement and analogous schemes.

Events of default under the RCF include, subject to customary grace periods and materiality thresholds: (i) non-payment of any amounts due under the finance documents (as defined in the RCF), (ii) failure to satisfy any financial covenants, (iii) material misrepresentation in any of the finance documents, (iv) failure to pay, or certain other defaults, under other financial indebtedness, (v) certain insolvency events or proceedings, (vi) material adverse changes in the business, operations, assets or financial condition of Shire as a whole, (vii) if it becomes unlawful for Shire (or any successor parent company) or any of their respective subsidiaries that are parties to the RCF to perform their obligations thereunder or (viii) if Shire (or any successor parent company) or any subsidiary thereof which is a party to the RCF repudiates such agreement or other finance document, among others.

Term Loan Facilities Agreement

January 2016 Facilities Agreement

On January 11, 2016, Shire (as original guarantor and original borrower), entered into an $18 billion bridge facilities agreement with various financial institutions (the "January 2016 Facilities Agreement"). The January 2016 Facilities Agreement comprised two credit facilities: (i) a $13 billion term loan facility originally maturing on January 11, 2017 ("January 2016 Facility A") and (ii) a $5 billion revolving loan facility originally maturing on January 11, 2017 ("January 2016 Facility B"). On April 1, 2016 SAIIDAC became additional borrower and additional guarantor to the January 2016 Facilities Agreement.

The January 2016 Facility A was utilized to finance the cash consideration payable in respect of the acquisition of Baxalta on June 3, 2016 in the amount of $12,390 million. The net proceeds from the issuance of the SAIIDAC Notes were used to fully repay the amounts outstanding under the January 2016 Facility A in September 2016. The January 2016 Facility B was canceled effective July 11, 2016, in accordance with its terms.

November 2015 Facilities Agreement

On November 2, 2015, Shire (as original guarantor and original borrower) entered into a $5.6 billion facilities agreement with various financial institutions (the "November 2015 Facilities Agreement"). The November 2015 Facilities Agreement comprises three credit facilities: (i) a $1.0 billion term loan facility of which, following the exercise of the one year extension option in the amount of $400.0 million, $600.0 million matured and was repaid on November 2, 2016 and $400.0 million matures on November 2, 2017 ("November 2015 Facility A"), (ii) a $2.2 billion amortizing term loan facility which matures on November 2, 2017 ("November 2015 Facility B") and (iii) a $2.4 billion amortizing term loan facility which matures on November 2, 2018 ("November 2015 Facility C").

On January 15, 2016, SAIIDAC became additional borrower and additional guarantor to the November 2015 Facilities Agreement and on December 1, 2016, Baxalta became an additional guarantor to the November 2015 Facilities Agreement. As of December 31, 2016, the November 2015 Facilities Agreement was fully utilized by SAIIDAC as borrower in the amount of $5.0 billion to finance the cash consideration payable and certain costs related to the acquisition of Dyax. On January 30, 2017, SAIIDAC made its first repayment installment of $400.0 million of the November 2015 Facility B in accordance with the terms of the agreement.

Interest on any loans made under the November 2015 Facilities Agreement is payable on the last day of each interest period, which may be one week or one, two, three or six months, or as otherwise agreed with the lenders. The interest rate applicable is LIBOR plus, in the case of the November 2015 Facility A, 0.55 percent per annum, in the case of the November 2015 Facility B, 0.65 percent per annum and, in the case of the November 2015 Facility C, 0.75 percent per annum, in each case subject to change depending on (i) the prevailing ratio of Net Debt to EBITDA (each as defined in the November 2015 Facilities Agreement) in respect of the most recently completed financial year or financial half year and (ii) the occurrence and continuation of an event of default in respect of the financial covenants or failure to provide a compliance certificate.

The November 2015 Facilities Agreement includes customary representations and warranties, covenants and events of default, including requirements that Shire's (i) ratio of Net Debt to EBITDA in respect of the most recently ended 12-month relevant period, (each as defined in the November 2015 Facilities Agreement), must not, at any time, exceed 3.5:1, except that following an acquisition fulfilling certain criteria, Shire may elect to increase this ratio to (a) 5.5:1 for the relevant period in which the acquisition was completed, (b) 5.0:1 in respect of the first relevant period following the relevant period in which the acquisition was completed, Shire has elected to increase this ratio in connection with the period ended June 30, 2016, following the completion of the acquisition of Baxalta during the period and (c) 4.5:1 in respect of the second relevant period following the relevant period in which the acquisition was completed, Shire has elected to increase this ratio in connection with the period ending June 30, 2016, following the completion of the acquisition of Baxalta during the period and (ii) ratio of EBITDA to Net Interest in respect of the most recently ended 12-month relevant period, (each as defined in the November 2015 Facilities Agreement), must not be less than 4.0:1.

The November 2015 Facilities Agreement restricts, subject to certain exceptions, Shire's ability to incur additional financial indebtedness, grant security over its assets or provide loans/grant credit. Further, any lender may require mandatory prepayment of its participation if there is a change of control of Shire, subject to certain exceptions for schemes of arrangement and analogous schemes.

Events of default under the November 2015 Facilities Agreement include, subject to customary grace periods and materiality thresholds: (i) non-payment of any amounts due under the finance documents (as defined in the November 2015 Facilities Agreement), (ii) failure to satisfy any financial covenants, (iii) material misrepresentation in any of the finance documents, (iv) failure to pay, or certain other defaults, under other financial indebtedness, (v) certain insolvency events or proceedings, (vi) material adverse changes in the business, operations, assets or financial condition of Shire as a whole, (vii) if it becomes unlawful for Shire (or any successor parent company) or any of their respective subsidiaries that are parties to the November 2015 Facilities Agreement to perform their obligations thereunder or (viii) if Shire (or any successor parent company) or any subsidiary thereof which is a party to the November 2015 Facilities Agreement repudiates the November 2015 Facilities Agreement or any other finance document, among others.

January 2015 Facility Agreement

On January 11, 2015, Shire entered into an $850.0 million term facility agreement with various financial institutions (the "January 2015 Facility Agreement") with an original maturity date of January 10, 2016. The maturity date was subsequently extended to July 11, 2016 in line with the provisions within the January 2015 Facility Agreement allowing the maturity date to be extended twice, at Shire's option, by six months on each occasion.

The January 2015 Facility Agreement was used to finance Shire's acquisition of NPS Pharma (including certain related costs). On September 28, 2015, the Company reduced the January 2015 Facility Agreement by $100.0 million. In January 2016 and at various points thereafter, the Company canceled parts of the January 2015 Facility Agreement. On February 22, 2016, the Company repaid the remaining balance of $100.0 million of the January 2015 Facilities Agreement in full.

Short-term uncommitted lines of credit ("Credit lines")
Shire has access to various Credit lines from a number of banks which are available to be utilized from time to time to provide short-term cash management flexibility. These Credit lines can be withdrawn by the banks at any time. The Credit lines are not relied upon for core liquidity. As of December 31, 2016, these Credit lines were not utilized.

Financing

Shire anticipates that its operating cash flow together with available cash, cash equivalents, and the RCF will be sufficient to meet its anticipated future operating expenses, capital expenditures, tax and interest payments, lease obligations, repayment of the term loans and milestone payments as they become due over the next 12 months.

If the Company decides to acquire other businesses, it expects to fund these acquisitions from cash resources, the RCF and through new borrowings (including issuances of debt securities) or the issuance of new equity, if necessary.

Sources and uses of cash

The following table provides an analysis of the Company's gross and net cash (excluding restricted cash), as of December 31, 2016 and 2015:

As of December 31	2016 $'M	2015 $'M
Cash and cash equivalents	528.8	135.5
Long-term borrowings	(19,552.6)	(69.9)
Short-term borrowings	(3,061.6)	(1,511.5)
Other debt	(353.6)	(13.4)
Total debt	(22,967.8)	(1,594.8)
Net debt	(22,439.0)	(1,459.3)

- Substantially all of the Company's cash and cash equivalents are held by foreign subsidiaries (i.e. those subsidiaries incorporated outside of Jersey, Channel Islands, the jurisdiction of Shire plc's incorporation). The amount of cash and cash equivalents held by foreign subsidiaries has not had, and is not expected to have, a material impact on the Company's liquidity and capital resources.
- Net (debt)/cash is a Non GAAP measure. The Company believes that Net (debt)/cash is a useful measure as it indicates the level of net cash/borrowings after taking account of the Cash and cash equivalents that could be utilized to pay down the outstanding borrowings. See above for reconciliation to cash and cash equivalents.

Cash flow activity

Net cash provided by operating activities for the year ended December 31, 2016 increased 14 percent to $2,658.9 million (2015: $2,337.0 million), primarily due to increased cash receipts from higher sales, partially offset by higher tax and interest payments, costs related to the Baxalta integration and a payment associated with the termination of a biosimilar collaboration acquired with Baxalta.

Net cash provided by operating activities for the year ended December 31, 2015 decreased by 45 percent to $2,337.0 million (2014: $4,228.4 million). Net cash provided by operating activities in 2014 included the receipt of the $1,635 million break fee related to AbbVie's terminated offer for Shire, and the benefit of the $417 million repayment received from the Canadian revenue authorities. The net cash flows from operating activities was also impacted by an increase of $160.6 million as a result of higher cash receipts from gross product sales and royalties, which were partially offset by higher operating expense payments.

Net cash used in investing activities was $18,092.2 million for the year ended December 31, 2016, primarily related to the cash paid for the acquisitions of Baxalta ($12,367 million, less cash acquired of $583 million) and Dyax ($5,934 million, less cash acquired of $241 million). The Company's investing activities also included the purchase of $649 million of PP&E due to the continued investment in manufacturing operations.

Net cash used in investing activities was $5,619.9 million for the year ended December 31, 2015, primarily related to the cash paid for the acquisition of NPS Pharma of $5,220 million (excluding cash acquired with NPS Pharma of $42 million) and for the acquisitions of Foresight ($299 million) and Meritage Pharma ($75 million).

Net cash provided by financing activities was $15,825.8 million for the year ended December 31, 2016, principally due to the issuance of the SAIIDAC Notes in addition to the drawings, net of subsequent repayments, made under various other borrowing facilities to partially fund the acquisitions of Baxalta and Dyax. In addition, the Company made dividend payments of $171.3 million.

Net cash provided by financing activities was $439.0 million for the year ended December 31, 2015, principally due to the drawings, net of subsequent repayments, made under Shire's various borrowing facilities to partially fund the NPS Pharma, Meritage Pharma and Foresight acquisitions. In addition, the Company made dividend payments of $134.4 million.

Outstanding Letters of credit

As of December 31, 2016, the Company had irrevocable standby letters of credit and guarantees with various banks totaling $139.7 million, providing security for the Company's performance of various obligations. These obligations are primarily in respect of the recoverability of insurance claims, lease obligations and supply commitments.

Cash Requirements

As of December 31, 2016, the Company's cash requirements for current and non-current liabilities reflected on the Consolidated Balance Sheets and other contractual obligations were as follows:

	Total $'M	Less than 1 year $'M	1-3 years $'M	3-5 years $'M	More than 5 years $'M
Borrowings and capital lease obligations	27,452.0	3,072.6	6,569.5	4,456.8	13,353.1
Operating leases obligations	985.2	155.5	215.9	171.9	441.9
Purchase obligations	3,488.6	1,092.7	1,398.4	799.0	198.5
Other non-current liabilities	587.9	–	452.7	42.0	93.2
Total	32,513.7	4,320.8	8,636.5	5,469.7	14,086.7

- Borrowings and capital lease obligations include interest payments related to the fixed-rate borrowings.
- The Company leases certain land, facilities, motor vehicles and certain equipment under operating leases expiring through 2021.
- Purchase obligations include agreements to purchase goods, investments or services (including clinical trials, contract manufacturing and capital equipment), and open purchase orders, that are enforceable and legally binding and that specify all significant terms. Shire expects to fund these commitments with cash flows from operating activities.
- Unrecognized tax benefits and associated interest and penalties of $201.1 million are included within payments due in one to three years.

The following items have been excluded from the table above:

- Cash outflows related to the assumed pension and other post-employment benefit plans, in which timing of funding is uncertain and dependent on future movements in interest rates and investment returns, changes in laws and regulations and other variables.
- In connection with the Company's acquisitions, the Company recorded contingent consideration liabilities related to development, regulatory and commercial milestones and royalty payments. These liabilities were recorded at fair value on the respective acquisition dates and revalued each reporting period. The Company may pay up to approximately $2.0 billion, which excludes royalty related payments, upon achieving clinical, regulatory and commercialization milestones. For additional information, see Note 15, Fair Value Measurement.
- Milestone payments to third-parties upon the achievement of development, regulatory and commercial milestones, as well as potential royalty payments, associated with in-licensing and collaboration agreements. Potential future milestone payments associated with collaborations was approximately $1.7 billion, which excludes potential royalty payments.
- Milestone payments related with collaboration agreements that become payable only if the Company chooses to exercise one or more of its options and potential contingent payments associated with R&D costs that may be funded by collaboration partners in the future.
- An unfunded commitment of $76.4 million as a limited partner in multiple investment companies, in which the timing of future payments is uncertain.

Off-balance sheet arrangements

There are no off-balance sheet arrangements, aside from those outlined above, that have, or are reasonably likely to have, a current or future material effect on the Company's financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Foreign currency fluctuations

A number of the Company's subsidiaries have a functional currency other than the U.S. Dollar. As such, the consolidated financial results are subject to fluctuations in exchange rates, particularly in the Euro, Swiss Franc, Japanese Yen and Pound Sterling against the U.S. Dollar.

Accumulated foreign currency translation differences of $1,505.4 million are reported within Accumulated other comprehensive income as of December 31, 2016. Foreign gains for the year ended December 31, 2016 of $17.7 million are reported in the Consolidated Statements of Operations.

As of December 31, 2016, the Company had outstanding foreign exchange swap and forward contracts that manage the currency risk associated with intercompany transactions. As of December 31, 2016 the fair value of these contracts was a net asset of $10.9 million.

Inflation

Although at reduced levels in recent years, inflation continues to apply upward pressure on the cost of goods and services which are used in the business. However, the Company believes that the net effect of inflation on its revenues and operations has been minimal during the past three years.

Treasury policies and organization

The Company's principal treasury operations are coordinated by its corporate treasury function. All treasury operations are conducted within a framework of policies and procedures approved annually by the Board of Directors. As a matter of policy, the Company does not undertake speculative transactions that would increase its credit, currency or interest rate exposure.

Interest rate risk

The Company is exposed to the risk that its earnings and cash flows could be adversely impacted by fluctuations in benchmark interest rates relating to its debt obligations on which interest is set at floating rates. The Company's policy is to manage this risk to an acceptable level. The Company is principally exposed to interest rate risk on any borrowings under the Company's various debt facilities and on part of the senior notes assumed in connection with the acquisition of Baxalta. Interest on each of these debt obligations is set at floating rates, to the extent utilized. Shire's exposure under these facilities is to changes in U.S. Dollar interest rates. For details see Note 16, Financial Instruments, to the Consolidated Financial Statements.

The Company is also exposed to interest rate risk on its restricted cash, cash and cash equivalents and on foreign exchange contracts on which interest is set at floating rates. As the Company maintains all of its cash, liquid investments and foreign exchange contracts on a short-term basis for liquidity purposes, this risk is not actively managed. For the year ended December 31, 2016, the average interest rate received on cash and liquid investments was less than 1 percent per annum. These cash and liquid investments were primarily invested in U.S. Dollar term deposits with banks and money market and liquidity funds or held as cash on account.

As of December 31, 2016, Shire estimates that a hypothetical increase and decrease of 100 basis points in interest rates would increase and decrease net interest costs by approximately $60.0 million and $50.0 million respectively during 2017, and decrease and increase the fair value of long-term interest rate sensitive instruments by approximately $970.0 million and $1,061.0 million, respectively, during the same period.

Foreign exchange risk

The Company operates in numerous countries and as a consequence has foreign exchange exposure. The main operating currencies of the Company are the U.S. Dollar, Pounds Sterling, Swiss Franc, Canadian Dollar, Japanese Yen and the Euro. It is the Company's policy that these exposures are minimized to the extent practicable by denominating transactions in the subsidiary's functional currency.

Where significant exposures remain, the Company uses foreign exchange contracts (spot, forward and swap contracts) to manage the exposure for balance sheet assets and liabilities that are denominated in currencies different to the functional currency of the relevant subsidiary. These assets and liabilities relate predominantly to inter-company financing. The Company has not elected hedge accounting for these transactions. Cash flows from derivative instruments are presented within net cash provided by operating activities in the Consolidated Statements of Cash Flows, unless the derivative instruments are economically hedging specific investing or financing activities.

Translational foreign exchange exposure arises on the translation into U.S. Dollars of the financial statements of non-U.S. Dollar functional subsidiaries. For details see Note 16, Financial Instruments, to the Consolidated Financial Statements.

Foreign exchange risk sensitivity

The following exchange rate sensitivity analysis summarizes the sensitivity of the Company's reported revenues and net income to hypothetical changes in the average annual exchange rates of the Euro, Pound Sterling and Swiss Franc against the U.S. Dollar, (assuming a hypothetical 10 percent strengthening of the U.S. Dollar against each of the aforementioned currencies in the year ended December 31, 2016):

	Reduction in revenues $'M	Reduction in net income $'M
Euro	(153.2)	(64.6)
Pound Sterling	(25.3)	(11.6)
Swiss Franc	(5.8)	(1.4)

A 10 percent weakening of the U.S. Dollar against the aforementioned currencies would have an equal and opposite effect.

As of December 31, 2016 the Company had designated and undesignated foreign exchange forward contracts. For more detail of foreign exchange forward contracts, see Note 16, Financial Instruments, to the Consolidated Financial Statements.

Concentration of credit risk

Financial instruments that potentially expose Shire to concentrations of credit risk consist primarily of short-term cash investments, derivative contracts and trade accounts receivable from Product sales and from third-parties from which the Company receives royalties. Cash is invested in short-term money market instruments, including money market and liquidity funds and bank term deposits or held on account. The money market and liquidity funds where Shire invests are all triple A rated by both Standard and Poor's and by Moody's credit rating agencies.

The Company is exposed to the credit risk of the counterparties with which it enters into bank term deposit arrangements and derivative instruments. The Company limits this exposure through a system of internal credit limits which vary according to ratings assigned to the counterparties by the major rating agencies. The internal credit limits are approved by Shire's Board of Directors and exposure against these limits is monitored by the Company's corporate treasury function. The counterparties to these derivatives contracts are major international financial institutions.

The Company's revenues from Product sales in the U.S. are mainly governed by agreements with major pharmaceutical wholesalers and relationships with other pharmaceutical distributors and retail pharmacy chains. For the year ended December 31, 2016, there were three customers in the U.S. that accounted for 38 percent of the Company's Product sales.

Such customers typically have significant cash resources and as such the risk from concentration of credit is considered acceptable. The Company has taken positive steps to manage any credit risk associated with these transactions and operates clearly defined credit evaluation procedures. However, an inability of one or more of these wholesalers to honor their debts to the Company could have an adverse effect on the Company's financial condition and results of operations.

A substantial portion of the Company's accounts receivable in countries outside of the U.S. is derived from Product sales to government-owned or government-supported healthcare providers. The Company's recovery of these accounts receivable is therefore dependent upon the financial stability and creditworthiness of the relevant governments. In recent years global and national economic conditions have negatively affected the growth, creditworthiness and general economic condition of certain markets in which the Company operates. As a result, in some countries outside of the U.S., specifically, Argentina, Brazil, Greece, Italy, Portugal and Spain, the Company is experiencing delays in the remittance of receivables due from government-owned or government-supported healthcare providers. Of those, the only significant accounts receivable as of December 31, 2016 is $140.2 million from Brazil.

The Company will continue to evaluate all its accounts receivable for potential collection risks and has made provision for amounts where collection is considered to be doubtful. Any such loss could have an adverse effect on the Company's financial condition and results of operations. The Company does not consider it is currently exposed to significant credit risk outside of the countries listed above.

Principal risks and uncertainties

Shire's risk management strategy is to identify, assess and mitigate any significant risks that it faces. Despite this, no risk management strategy can provide absolute assurance against loss.

Board of Directors

Ensures the maintenance of sound risk management and internal control programs. Determines the Company's risk appetite and reviews its principal risks.

Audit, Compliance & Risk Committee

Monitors and reviews the risk management and internal control programs and principal risks to the Group.

ERM Core Team

Facilitates the Enterprise Risk Management program and Enterprise Risk Assessment on a biannual basis.

Chief Compliance and Risk Officer

Responsible for the Global Compliance and Risk Management Department and coordinating risk management and compliance programs.

Internal Audit

Provides independent assurance of controls effectiveness to the Audit, Compliance & Risk Committee.

Executive Committee

Oversees the implementation and operation of the risk management and internal control programs. Monitors and reviews the Company's principal risks.

Global Compliance and Risk Management Department

Supports the development, implementation and maintenance of effective compliance and risk management programs.

Business units and corporate functions

Implement risk management processes, establish internal controls and manage risk remediation and reporting within their respective organizations.

Risk management framework

As a highly regulated biotechnology company focused on serving people with rare diseases, Shire has implemented policies, procedures and processes intended to reduce risk and ensure appropriate and lawful conduct within the increasing number of countries in which the Company operates. Success in these areas is of benefit to shareholders and other stakeholders alike. Shire's risk management strategy is to identify, assess and mitigate any significant risks that it faces. Despite this, it should be noted that no risk management strategy can provide absolute assurance against loss.

Board of Directors

The Board is responsible ensuring the maintenance of sound systems of risk management and internal control and determining the Company's risk appetite. In fulfilling this responsibility, the Board sets Shire's risk culture and ensures it is embedded throughout the organization. The Board interacts with key executive risk and internal controls stakeholders on a periodic and ad-hoc basis, enabling it to monitor and review the Company's principal risks and the effectiveness of its risk management and internal control programs. During the year the Board undertook a robust assessment of the principal risks facing the Company, including those that would threaten its business model, future performance, solvency or liquidity. Stakeholders to the risk management framework, which is overseen by the Board and designed to enable the identification, assessment and mitigation of the Group's risks, are detailed below.

Audit, Compliance & Risk Committee

The Audit, Compliance & Risk Committee supports the Board by monitoring and reviewing risk management and internal control programs, maintaining oversight through its interaction with key stakeholders and its evaluation of periodic updates from management. On a biannual basis the Committee reviews the principal risks faced by the Company, with each risk assessed on likelihood of materialization and potential financial and non-financial impact.

Executive Committee
The Executive Committee ensures the implementation of the Company's risk management and internal control programs, overseeing their effective operation. On a biannual basis the Committee reviews and validates principal risks identified during the Enterprise Risk Assessment before they are presented to the Audit, Compliance & Risk Committee for consideration. Executive Committee members also receive regular updates from functional and business unit stakeholders and, along with the Chief Compliance and Risk Officer and the Head of Internal Audit, are responsible for escalating matters of risk, risk management and internal control to the Audit, Compliance & Risk Committee and/or the Board, as required.

ERM Core Team
The ERM Core Team is led by the Chief Compliance and Risk Officer, includes the Head of Monitoring and Risk Management and the Head of Risk Management and Business Continuity Management and is advised by external consultants as required. The ERM Core Team is charged with implementing and operating the Enterprise Risk Management program. This consists of maintaining the enterprise risk universe and risk assessment methodology, facilitating the biannual Enterprise Risk Assessment, providing risk training and awareness to stakeholders across the Group and providing support to the Executive Committee and Audit, Compliance & Risk Committee. The ERM Core Team also identifies executive and functional risk owners for each key risk and, as part of the biannual Enterprise Risk Assessment process, facilitates the assessment of Shire's enterprise risk universe, conducted in conjunction with individual business units and corporate functions. Following completion of the Enterprise Risk Assessment, a principal risk reporting package is prepared for review and validation by the Executive Committee prior to the Chief Compliance and Risk Officer's presentation to the Audit, Compliance & Risk Committee.

Global Compliance and Risk Management Department
The Department, led by the Chief Compliance and Risk Officer, is made up of compliance, privacy and risk management capability. It is responsible for supporting the development, implementation and maintenance of effective risk management and compliance programs and systems. This is achieved through governance, policy, capability and process development, the implementation of awareness and training programs as well as communications, audits and investigations. Such activity provides for the timely undertaking of mitigation and remediation actions, as well for the escalation of matters to the Executive Committee and Audit, Compliance & Risk Committee as appropriate.

Chief Compliance and Risk Officer
The Chief Compliance and Risk Officer is responsible for the global compliance and risk management programs, providing the Executive Committee and the Audit, Compliance & Risk Committee with biannual updates on risk and risk mitigation, as well as more regular updates on compliance monitoring and investigation.

Internal Audit
The Internal Audit function provides independent assurance to the Audit, Compliance & Risk Committee on the effectiveness and operation of internal controls, risk mitigation and risk management programs.

Business units and corporate functions
The business units and corporate functions participate in the biannual Enterprise Risk Assessment and broader Enterprise Risk Management program and are responsible for implementing relevant risk management processes, including identification, monitoring, escalation and reporting controls, within their respective organizations.

Principal risks and uncertainties
The Company's business and assets are subject to varying degrees of risk and uncertainty. Set out below are the principal risks and uncertainties associated with the business that have been identified through the Company's risk management and internal control programs. The Company believes that these risks and uncertainties apply equally and therefore all should be carefully considered before any investment is made in Shire.

Additional risks and uncertainties not presently known to the Company or that it currently deems immaterial may also adversely affect its business. If any of these events or circumstances occur, the business, financial condition, results of operations, or prospects of the Company could be materially harmed. In such circumstances, the value of the Company's securities could decline and an investor could lose part or all of his or her investment. In addition, forward-looking statements that are contained in this Annual Report or in the Company's other reports, filings or statements may be subject to the principal risks and uncertainties described below as well as other risks and uncertainties.

Risks Related to the Business
The Company's products may not be a commercial success
The commercial success of the Company's marketed products and other new products that the Company may launch in the future, will depend on their approval and acceptance by physicians, patients and other key decision-makers, as well as the receipt of marketing approvals in different countries, the time taken to obtain such approvals, the scope of marketing approvals as reflected in the product labels, approval of reimbursement at commercially sustainable prices in those countries where price and reimbursement is negotiated, and safety, efficacy, convenience and cost-effectiveness of the product as compared to competitive products.

The Company's revenues, financial condition or results of operations may be adversely affected if any or all of the following occur:

- if the Company's products, or competitive products, are genericized;
- if the prices of the Company's products suffer forced reductions or if prices of competitor products are reduced significantly;
- if launches of new products or launch of the Company's products in new markets are not successful;
- if there are unanticipated adverse events experienced with the Company's products or those of a competitor not seen in clinical trials that impact physicians' willingness to prescribe the Company's products;
- if issues arise from clinical trials being conducted for post-marketing purposes or for registration in another country which raise questions or concerns about a product;
- if the regulatory agencies in one country act in a way that raises concerns for regulatory agencies or for prescribers or patients in another country;
- if there is a reduction in the use of the Company's products by patients, payers or physicians due to the development of or preferences for alternative technologies or treatments;
- if the Company's products are subject to more stringent government regulation than competitor products;
- if patent protection or other forms of exclusivity are lost or curtailed, or if competitors are able to successfully challenge or circumvent the Company's patents or other forms of exclusivity (see Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements for details of current litigation);
- if the sizes of the patient populations for the Company's products are less than expected; or
- if there are lawsuits filed or government investigations initiated against Shire, including but not limited to, product liability claims, consumer law claims, payer or reimbursement litigation and prior sales or marketing practices; or
- if there are adverse developments in investigations or government proceedings.

If the Company is unable to commercialize its products successfully, there may be a material adverse effect on the Company's revenues, financial condition or results of operations.

Increased pricing pressures and limits on patient access as a result of governmental regulations and market developments may affect the Company's future revenues, financial condition and results of operations

The Company's product revenues are subject to increasing pressures from governmental initiatives to regulate or influence prices and access to customers. Regulations in the U.S., the European Union and other jurisdictions mandating price controls or imposing constraints on patients' ability to purchase Shire's products significantly impact its business. In the U.S., the new administration has made public and social media statements regarding proposed changes to existing government initiatives, like the Patient Protection and Affordable Care Act ("ACA"), which has created significant uncertainty for the future of federal government policies that regulate or influence prices and access to customers. Any future changes in such laws, regulations, practices or policies may adversely affect the Company's financial condition and results of operations.

Regulatory measures that could have a material adverse effect on the Company include the imposition of government-approved drug pricing schedules, the use of drug formularies, prohibitions on direct-to-consumer advertising or drug marketing practices, new regulations or new interpretations of existing or historical regulations relating to governmental drug discount or rebate programs that increase the Company's drug discount or rebate liability, and caps or limits on the level of reimbursement provided to the Company by governmental reimbursement schemes for its products.

These pressures have also resulted in market developments, such as the consolidation of managed healthcare organizations and private health insurers that have increased the relative bargaining power of institutional drug purchasers and enhanced their ability to negotiate discounts and extract other concessions in exchange for purchasing Shire's products.

Such regulatory and market developments create downward pressures on the prices at which the Company can offer its products and on the level of reimbursement its treatments receive from healthcare providers, private health insurers and other organizations, such as health maintenance organizations and managed care organizations.

Additional factors affecting the Company's ability to obtain and maintain adequate prices and levels of reimbursement for its products include:

- higher levels of controls on the use of the Company's products and/or requirements for further price concessions mandated or negotiated by managed healthcare organizations or government authorities;
- legislative proposals to reform health care and government insurance programs in many of the Company's markets; and
- price controls, unsuccessful government tenders, or non-reimbursement of new medicines or new indications.

Moreover, the cost of treatment for some of the Company's products is high, particularly those which are used for the treatment of rare diseases. The Company may encounter difficulty in obtaining or maintaining satisfactory pricing and reimbursement for such products. The failure to obtain and maintain pricing and reimbursement at satisfactory levels for its products may adversely affect the Company's revenues, financial condition or results of operations.

The Company depends on third-parties to supply certain inputs and services critical to its operations including certain inputs, services and ingredients critical to its manufacturing processes

The Company relies on third-party suppliers, vendors and outsourcing partners to, among other things, research, develop, manufacture and commercialize its products, to provide certain key ingredients and manufacturing inputs and to manage certain sales, distribution, marketing, information technology, accounting, transaction-processing and other business services. While the Company depends on these third-parties for multiple aspects of its product development, manufacturing, commercialization and business activities, it does not control these third-parties directly.

As a result, there is a possibility these third-parties may not complete activities on schedule or in accordance with the Company's expectations, and their failure to meet certain contractual, regulatory or other obligations to Shire, or any disruption of Shire's relationship with these third-parties could delay or prevent the development, approval, manufacture or commercialization of the Company's products, result in non-compliance with applicable laws and regulations, disrupt Shire's operations, or result in reputational or other harm to the Company.

This outsourcing risk is of particular concern with respect to third-party suppliers of key manufacturing inputs of certain of Shire's drug products, including, but not limited to, ADVATE, ADYNOVATE, HYQVIA, ELAPRASE, FIRAZYR, REPLAGAL and GATTEX/REVESTIVE where the Company currently relies on a single active ingredient source for each. Shire also relies on limited third-party sources to provide the donated plasma necessary for the manufacture of CINRYZE. In addition, although the Company dual-sources certain key products and/or active ingredients, the Company currently relies on a single source for production of the final drug product for certain of its products, including, but not limited to, ADDERALL XR, CINRYZE, CUVITRU, FIRAZYR, LIALDA and PENTASA.

For many of those components and materials for which a sole supplier is used, the Company seeks to address potential supply disruption by, among other things, regularly evaluating such risk and, if appropriate, holding strategic inventory in the case of such potential supply disruptions. If such efforts prove unsuccessful, it could have a material adverse effect on the Company's revenues, financial condition or results of operations.

Any failure by a single-source supplier to provide the Company with the required volumes on time or at all, or to provide products that do not meet regulatory requirements, could lead to significant delays in the production of Shire's products, increases in operating costs, lost product sales, an interruption of research activities, or the delay of new product launches, all of which could have a material adverse effect on the Company's revenues, financial condition or results of operations.

Any disruption to the supply chain for any of the Company's products, or any difficulties or delays in the manufacturing, distribution and sale of its products may result in the Company being unable to continue marketing or developing a product, or may result in the Company being unable to do so on a commercially viable basis for some period of time
A disruption, delay or other difficulties in the manufacturing, distribution and sale of Shire's products, or in the supply chain of any of its products, may have a material adverse effect on the Company and its revenues, financial condition and results of operations. Examples of such manufacturing and supply chain difficulties include, but are not limited to:

- regulatory or enforcement actions that result in shut-downs, delays in or withdrawal of regulatory approvals necessary to carry on manufacturing activities, product recalls and penalties or fines resulting in unanticipated costs in production, whether imposed directly on the Company or imposed indirectly through one or more of its third-party suppliers;
- the inability of the Company to increase its production capacity for certain drugs commensurate with market demand;
- the possibility that the supply of incoming materials may be delayed or become unavailable and that the quality of incoming materials may be substandard and not detected;
- the possibility that the Company may fail to maintain appropriate quality standards throughout its internal and third-party supply network, or to comply with current manufacturing best practices, rules or other applicable regulations;
- disruptions to supply chain continuity as a result of natural or man-made disasters at the Company's facilities or at one or more of its third-party suppliers' facilities; and
- failure to maintain the integrity of the Company's supply chains against fraudulent and criminal acts, such as intentional product adulteration, diversion, theft, or counterfeiting activities.

Also, as noted above, the Company has also entered into many agreements with third-parties for the provision of goods and services to enable it to manufacture its products. If these third-parties are unable to manufacture products, or provide these goods and services, in each case in accordance with its respective contractual obligations, the Company's ability to manage its manufacturing processes or to operate its business, including to continue the development or commercialization of its products as planned or on a commercial basis, may be adversely impacted.

The manufacture of the Company's products is subject to extensive oversight by various regulatory agencies. Regulatory approvals or interventions associated with changes to manufacturing sites, ingredients or manufacturing processes could lead to significant delays, an increase in operating costs, lost product sales, an interruption of research activities or the delay of new product launches
Pharmaceutical and device manufacturing sites must be inspected and approved by regulatory agencies such as the FDA and similar agencies in other countries. Active ingredients, excipients and packaging materials used in the manufacturing process must be obtained from sources approved by regulatory agencies.

The development, approval and manufacturing of the Company's products depend on the ability to procure ingredients and packaging materials from approved sources and for the manufacturing process to be conducted at approved sites. Changes of manufacturer or changes of source of ingredients or packaging materials must generally be approved by the regulatory agencies, which will involve testing and additional inspections to ensure compliance with the applicable regulatory agency's regulations and standards. The need to qualify a new manufacturer or source of ingredients or packaging materials can take a significant amount of time. Should it become necessary to change a manufacturer or supplier of ingredients or packaging materials, or to qualify an additional supplier, the Company may not be able do so quickly, or at all, which could delay or disrupt the manufacturing process.

U.S.-based manufacturers must be registered with the DEA and similar regulatory authorities in other countries if they handle controlled substances. Certain of the Company's products, including ADDERALL XR and VYVANSE, contain ingredients which are controlled substances subject to quotas managed by the DEA. As a result, the Company's procurement and production quotas may not be sufficient to meet commercial demand.

Certain of the Company's products, including but not limited to CINRYZE, ELAPRASE, REPLAGAL, FEIBA, HYQVIA and GAMMAGARD LIQUID and VPRIV are manufactured using highly complex biological processes. The complexity of the manufacturing results in a number of risks, including the risk of microbial contamination. Additionally, some of the Company's therapies, including CINRYZE, FEIBA, HYQVIA and GAMMAGARD LIQUID are derived from human plasma, and are therefore subject to the risk of biological contamination inherent in plasma-derived products.

The failure to obtain regulatory approvals promptly or at all and/or regulatory interventions associated with changes to manufacturing sites, ingredients or manufacturing processes could lead to significant delays, an increase in operating costs, lost product sales, an interruption

of research activities, the delay of new product launches or constraints on manufacturing output, all of which could have a material adverse effect on the Company's revenues, financial condition and results of operations.

The nature of producing plasma-based therapies may prevent Shire from timely responding to market forces and effectively managing its production capacity

The production of plasma-based therapies is a lengthy and complex process, and Shire sources its plasma both internally and externally through suppliers. Efforts to increase the collection of plasma or the production of plasma-based therapies may include the construction and regulatory approval of additional plasma collection facilities and plasma fractionation facilities. In connection with the combination with Baxalta, the Company acquired a yet to be completed state-of-the-art manufacturing facility near Covington, Georgia to support growth of its plasma-based treatments. The Company has completed construction of all buildings associated with the Covington facility and is going through a rigorous commissioning and testing process to receive licensing from the FDA and international regulatory agencies. Commercial production at the facility remains scheduled to begin in 2018. The development of such facilities involves a lengthy regulatory process and is highly capital intensive. In addition, access to and transport and use of plasma may be subject to restrictions by governmental agencies both inside and outside the United States. As a result, the Company's ability to match its collection and production of plasma-based therapies to market demand is imprecise and may result in a failure to meet market demand for its plasma-based therapies or, alternatively, an oversupply of inventory. Failure to meet market demand for Shire's plasma-based therapies may result in customers transitioning to available competitive products resulting in a loss of market share or customer confidence. In the event of an oversupply, Shire may be forced to lower the prices it charges for some of its plasma-based therapies, close collection and processing facilities, record asset impairment charges or take other action which could have a material adverse effect on the Company's revenues, financial condition and results of operations.

The Company has a portfolio of products in various stages of research and development. The successful development of these products is highly uncertain and requires significant expenditures and time, and there is no guarantee that these products will receive regulatory approval

Products that initially appear promising in research or development may be delayed or fail to reach later stages of development as:

- preclinical or clinical tests may show the product to lack safety or efficacy;
- delays may be caused by: slow enrollment in clinical studies; regulatory requirements for clinical trial drug supplies; extended length of time to achieve study endpoints; additional time requirements for data analysis or dossier preparation; time required for discussions with regulatory agencies, including regulatory agency requests for additional preclinical or clinical data; regulatory agencies due to staffing or resource limitations; analysis of or changes to study design; unexpected safety, efficacy, or manufacturing issues; shared control with collaborative partners in the planning and execution of the product development, scaling of the manufacturing process, or obtaining approval for manufacturing;
- manufacturing issues, pricing or reimbursement issues, or other factors may render the product economically unviable;
- the proprietary rights of others and their competing products and technologies may prevent the product from being developed or commercialized; or
- submission of an application for regulatory approval of any of the Company's product candidates may be subjected to lengthy review and ultimately rejected.

Success in preclinical and early clinical trials does not ensure that late-stage clinical trials will be successful. Clinical results are frequently susceptible to varying interpretations that may delay, limit, or prevent regulatory approvals. The length of time necessary to complete clinical trials and to submit an application for marketing approval for a final decision by a regulatory authority varies significantly and may be difficult to predict. Moreover, once an application is submitted, additional data may be sought by regulators or an application may be rejected. The Company has a range of programs in its product pipeline that are in registration or entering late-stage clinical development, including, but not limited to SHP643 for the treatment of HAE, which is in Phase 3 clinical trials, SHP465 for the treatment of ADHD, which is currently in registration, SHP621 for the treatment of EOE, which is in Phase 3 clinical trials, and SHP647 for the treatment of IBD, which is in Phase 2. If the Company's large-scale or late-stage clinical trials for a product are not successful, the Company will not recover its substantial investments in that product.

In addition, even if the products receive regulatory approval, they remain subject to ongoing regulatory requirements, including, for example, obligations to conduct additional clinical trials or other non-clinical testing, changes to the product label (which could impact its marketability and prospects for commercial success), new or revised requirements for manufacturing, written notifications to physicians, or product recalls or withdrawals.

The actions of certain customers could affect the Company's ability to sell or market products profitably. Fluctuations in buying or distribution patterns by such customers can adversely affect the Company's revenues, financial conditions or results of operations

A considerable portion of the Company's product sales are made to major pharmaceutical wholesale distributors, as well as to large pharmacies, in both the U.S. and Europe. For the year ended December 31, 2016, 38 percent of the Company's product sales were attributable to three customers in the United States: AmerisourceBergen Drug Corp, McKesson Corp. and Cardinal Health, Inc. In the event of financial failure of any of these customers there could be a material adverse effect on the Company's revenues, financial condition or results of operations. The Company's revenues, financial condition or results of operations may also be affected by fluctuations in customer buying or distribution patterns. These fluctuations may result from seasonality, pricing, wholesaler inventory objectives, or other factors. A significant portion of the Company's revenues for certain products for treatment of rare diseases are also concentrated within a small number of customers. Changes in the buying patterns of those customers may have an adverse effect on the Company's revenues, financial condition or results of operations.

Failure to comply with laws and regulations governing the sales and marketing of its products could materially impact Shire's revenues and profitability

The Company engages in various marketing, promotional and educational activities pertaining to, as well as the sale of, pharmaceutical products and medical devices in a number of jurisdictions around the world. The promotion, marketing and sale of pharmaceutical products and medical devices is highly regulated and the sales and marketing practices of market participants, such as the Company, have been subject to increasing supervision by governmental authorities, and Shire believes that this trend will continue.

In the United States, the Company's sales and marketing activities are monitored by a number of regulatory authorities and law enforcement agencies, including the U.S. Department of HHS, the FDA, the U.S. Department of Justice, the SEC and the DEA. These authorities and agencies and their equivalents in countries outside the United States have broad authority to investigate market participants for potential violations of laws relating to the sale, marketing and promotion of pharmaceutical products and medical devices, including the False Claims Act, the Anti-Kickback Statute, the UK Bribery Act of 2010 and the Foreign Corrupt Practices Act, among others, for alleged improper conduct, including corrupt payments to government officials, improper payments to medical professionals, off-label marketing of pharmaceutical products and medical devices, and the submission of false claims for reimbursement by the federal government. Healthcare companies may also be subject to enforcement actions or prosecution for such improper conduct. Any inquiries or investigations into the operations of, or enforcement or other regulatory action against, the Company by such authorities could result in significant defense costs, fines, penalties and injunctive or administrative remedies, distract management to the detriment of the business, result in the exclusion of certain products, or the Company, from government reimbursement programs or subject the Company to regulatory controls or government monitoring of its activities in the future. The Company is also subject to certain ongoing investigations by governmental agencies. For further information, see Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements.

The Company's products and product candidates face substantial competition in the product markets in which it operates

Shire faces substantial competition throughout its business from international and domestic biopharmaceutical companies of all sizes. Competition is primarily focused on cost-effectiveness, price, service, product effectiveness and quality, patient convenience and technological innovation.

Competition may increase further as existing competitors enhance their offerings or additional companies enter Shire's markets or modify their existing products to compete directly with Shire's products. If Shire's competitors respond more quickly to new or emerging technologies and changes in customer requirements, the Company's products may be rendered obsolete or non-competitive. If Shire's competitors develop more effective or affordable products, or achieve earlier patent protection or product commercialization than the Company does, its operations will likely be negatively affected. If Shire is forced to reduce its prices due to increased competition, Shire's business could become less profitable. The Company's sales could be adversely affected if any of its contracts with customers (including with hospitals, treatment centers and other healthcare providers, distributors, group purchasing organizations and integrated delivery networks) are terminated due to increased competition or otherwise.

The Company's patented products are subject to significant competition from generics

In addition to the competition referred to above, Shire faces significant competition from the manufacturers of generic drug products in all of its major markets and in the future may face competition with respect to its biologic and biosimilar products. The introduction of lower-priced generics by the Company's competitors or their successful efforts in aggressively commercializing and marketing their alternative drug products pose significant challenges to maintaining Shire's market share, revenues and sales growth.

For example, since 2009, generic versions of ADDERALL XR have been marketed and, since 2014, generic versions of INTUNIV have been marketed in the United States. As a result, product sales of ADDERALL XR and INTUNIV declined.

Factors which could cause further or more rapid declines in Shire's product sales include:

- the loss or earlier than expected expiration of intellectual property rights or regulatory exclusivity periods with respect to the Company's branded products;
- generic or authorized generic versions of these products capturing more of Shire's branded market share than expected;
- lower prices and the actual or perceived greater effectiveness or safety of generic drug products relative to Shire's branded products;
- the FDA approving additional ANDAs for these products or additional ANDAs for generic versions of these products which, if launched, would further reduce branded market share or impact the amount of Shire's authorized generic product sales;
- changes in reimbursement policies of third-party payers; or
- changes to the level of sales deductions for branded Shire products for private or public payers.

Should any of the above developments occur, the resulting generic competition could reduce sales and market share of Shire's branded products and have a material adverse effect on the Company's revenues, financial condition or results of operations.

Adverse outcomes in legal matters and other disputes, including the Company's ability to enforce and defend patents and other intellectual property rights required for its business, could have a material adverse effect on the Company's revenues, financial condition or results of operations

During the ordinary course of its business the Company may be involved in claims, disputes and litigation with third-parties, employees, regulatory agencies, governmental authorities and other parties. The range of matters of a legal nature that might arise is extremely broad but could include, without limitation, intellectual property claims and disputes, product liability claims and disputes, regulatory litigation, contract claims and disputes, employment claims and disputes, and tax or other governmental agency audits and disputes.

Any unfavorable outcome in such matters could adversely impact the Company's ability to develop or commercialize its products, adversely affect the product sales and profitability of existing products, subject the Company to significant defense costs, fines, penalties, audit findings and injunctive or administrative remedies, distract management to the detriment of the business, result in the exclusion of certain products, or the Company, from government reimbursement programs or subject the Company to regulatory controls

or government monitoring of its activities in the future. Any such outcomes could have a material adverse effect on the Company's revenue, financial condition or results of operations. For further information, see Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements.

The Company may fail to obtain, maintain, enforce or defend the intellectual property rights required to conduct its business

The Company's success depends upon its ability and the ability of its partners and licensors to protect their intellectual property rights. Where possible, the Company's strategy is to register intellectual property rights, such as patents and trademarks. The Company also relies on various trade secrets, unpatented know-how and technological innovations and contractual arrangements with third-parties to maintain its competitive position. The failure to obtain, maintain, enforce or defend such intellectual property rights, for any reason, could allow third-parties to make competing products or impact the Company's ability to develop, manufacture and market its own products on a commercially viable basis, or at all, which could have a material adverse effect on the Company's revenues, financial condition or results of operations.

The Company intends to enforce its patent rights vigorously and believes that its commercial partners, licensors and third-party manufacturers intend to enforce vigorously those patent rights they have licensed to the Company. However, the Company's patent rights, and patent rights that the Company has licensed, may not provide valid patent protection sufficiently broad to prevent any third-party from developing, using or commercializing products that are similar or functionally equivalent to the Company's products or technologies. These patent rights may be challenged, revoked, invalidated, infringed or circumvented by third-parties. Laws relating to such rights may in the future also be changed or withdrawn.

Additionally, the Company's products, or the technologies or processes used to formulate or manufacture those products may now, or in the future, infringe the patent rights of third-parties. It is also possible that third-parties will obtain patent or other proprietary rights that might be necessary or useful for the development, manufacture or sale of the Company's products. The Company may need to obtain licenses for intellectual property rights from others and may not be able to obtain these licenses on commercially reasonable terms, if at all.

The Company also relies on trade secrets and other unpatented proprietary information, which it generally seeks to protect by confidentiality and nondisclosure agreements with its employees, consultants, advisors and partners. These agreements may not effectively prevent disclosure of confidential information and may not provide the Company with an adequate remedy in the event of unauthorized disclosure. In addition, if the Company's employees, scientific consultants or partners develop inventions or processes that may be applicable to the Company's products under development, such inventions and processes will not necessarily become the Company's property, but may remain the property of those persons or their employers.

The Company has filed applications to register various trademarks for use in connection with its products in various countries and also, with respect to certain products, relies on the trademarks of third-parties. These trademarks may not afford adequate protection or the Company or the third-parties may not have the financial resources to enforce their rights under these trademarks which may enable others to use the trademarks and dilute their value.

In the regular course of business, the Company is party to litigation or other proceedings relating to intellectual property rights. For details of current intellectual property litigation, see Note 26, Legal and Other Proceedings, to the Consolidated Financial Statements.

The Company faces intense competition for highly qualified personnel from other companies and organizations

The Company relies on recruiting and retaining highly skilled employees to meet its strategic objectives. The Company faces intense competition for highly qualified personnel and the supply of people with the requisite skills may be limited, generally or geographically. The range of skills required and the geographies in which they are required by the Company may also change over time as Shire's business evolves. If the Company is unable to retain key personnel or attract new personnel with the requisite skills and experience, it could adversely affect the implementation of the Company's strategic objectives and ultimately adversely impact the Company's revenues, financial condition or results of operations. Recent acquisitions by the Company, including without limitation, the Dyax and Baxalta acquisitions, and the terminated acquisition by AbbVie, Inc. ("AbbVie") as well as internal reorganizations and transitions of our offices in Pennsylvania, the United Kingdom and other locations, may increase the Company's difficulty in recruiting and retaining employees.

Failure to successfully execute or attain strategic objectives from the Company's acquisitions and growth strategy may adversely affect the Company's financial condition and results of operations

The Company's business depends to a significant extent on its ability to improve and expand its product pipeline through strategic acquisitions. Such improvements and expansions, however, are subject to the ability of the Company's management to effectively identify appropriate strategic targets and effectuate the contemplated transactions, the availability and relative cost of acquisition opportunities as well as competition from other pharmaceutical companies seeking similar opportunities.

Moreover, even when such transactions are successfully executed, the Company may face subsequent difficulties in integrating the operations, infrastructure and personnel of acquired businesses and may experience unanticipated risks or liabilities that were not discovered, accurately disclosed or sufficiently assessed during the transactions' due diligence process. Finally, even successfully acquired and integrated businesses may ultimately fail or fall short of achieving the Company's strategic objectives for the transaction over the long term.

Any failures in the execution of a transaction, in the integration of an acquired business or in achieving the Company's strategic objectives, including expected synergies, with respect to such transactions could result in slower growth, higher than expected costs, the recording of asset impairment charges and other actions which could adversely affect the Company's business, financial condition and results of operations.

The Company has recently completed a number of strategic acquisitions, including Dyax in January 2016 and Baxalta in June 2016. Furthermore, the Company is currently exploring, and expects to continue to explore, opportunities for additional strategic acquisitions or combinations in the future. Proposed and completed acquisitions, as well as any future acquisitions, each entail various risks, which include but are not limited to:

- a proposed acquisition may not be consummated due to the occurrence

of an event, change or other circumstances that gives rise to the termination of the applicable agreement;
- a governmental, regulatory, board, shareholder or other approval required for a proposed acquisition may not be obtained, or may be obtained subject to conditions that are not anticipated, or another condition to the closing of a proposed acquisition may not be satisfied, resulting in delays or ultimate failure of consummating a proposed acquisition;
- shareholders may initiate legal action to prevent or delay consummation of a proposed acquisition or to seek judicial reevaluation of a proposed acquisition's consideration;
- a lengthy, uncertain process when pursuing a potential combination could disrupt relationships between Shire and a target company's customers, suppliers and employees, distract Shire's or a target company's management from operating its business, and could lead to additional and unanticipated costs;
- a target company may be unable to retain and hire key personnel and/or maintain its relationships with customers, suppliers and other business partners pending the consummation of the proposed acquisition by Shire;
- after the consummation of an acquisition, the Company may be unable to retain the acquired company's key personnel, existing customers, suppliers and other business partners or attract new customers;
- the businesses of an acquired company may be otherwise disrupted by the acquisition, including increased costs and diversion of its management's time and resources;
- failure to achieve the targeted growth and expected benefits of the acquisition if sales of an acquired company's products are lower than anticipated, or these products cannot be successfully commercialized or cannot obtain necessary regulatory approvals;
- any integration of an acquired company into Shire could be complex and time-consuming, and difficulties in effectuating these integrations may lead to the combined companies not being able to realize the expected operating efficiencies, cost savings, revenue enhancements, synergies or other benefits in the timeframe anticipated, or at all;
- failure to successfully obtain regulatory approval of an acquired company's late-stage pipeline assets in a timely manner or at all, or to successfully commercialize such products after regulatory approval has been obtained;
- undiscovered or unanticipated risks and liabilities, including legal and compliance related liabilities, may emerge in connection with an acquisition, or may be higher than anticipated; and
- even after successfully completing an acquisition and integrating the acquired company's businesses into Shire, the anticipated benefits of the combinations, including expected synergies, may ultimately prove less than anticipated.

Shire's growth strategy depends in part upon its ability to expand its product portfolio through external collaborations, which, if unsuccessful, may adversely affect the development and sale of its products

Shire intends to continue to explore opportunities to enter into collaboration agreements and external alliances with other parties. These third-party collaborators may include other biopharmaceutical companies, academic and research institutions, governments and government agencies and other public and private research organizations.

These third-party collaborators are often directly responsible for clinical development under these types of arrangements, and the Company does not have the same level of decision-making capabilities for the prioritization and management of development-related activities as it does for its internal research and development activities. Failures by these partners to meet their contractual, regulatory, or other obligations to the Company, or any disruption in the relationships between the Company and these partners, could have a material adverse effect on the Company's pipeline and business. In addition, the Company's collaborative relationships for research and development extend for many years and may give rise to disputes regarding the relative rights, obligations and revenues of Shire and its partners, including the ownership of intellectual property and associated rights and obligations. These could result in the loss of intellectual property rights or other intellectual property protections, delay the development and sale of potential pharmaceutical products, and lead to lengthy and expensive litigation or arbitration.

Long-term public-private partnerships with governments and government agencies, including in certain emerging markets, may include technology transfers to support local manufacturing capacity and technical expertise. Shire cannot predict whether these types of transfers and arrangements will become more common in the future. These types of technology transfers and similar arrangements could have a material adverse effect on the Company's results of operations as a result of lost exclusivity with respect to certain manufacturing and technical capabilities, particularly if this model becomes widely used. Public-private partnerships are also subject to risks of doing business with governments and government agencies, including risks related to sovereign immunity, shifts in the political environment, changing economic and legal conditions and social dynamics.

A slowdown of global economic growth, or economic instability of countries in which the Company does business, could have negative consequences for the Company's business and increase the risk of non-payment by the Company's customers

Growth of the global pharmaceutical market has become increasingly tied to global economic growth. Accordingly, a substantial and lasting slowdown of the global economy, or major national economies, could negatively affect growth in the markets in which the Company operates. Such a slowdown, or any resultant austerity measures adopted by governments in response to a slowdown, could result in national governments making significant cuts to their public spending, including national healthcare budgets, or reducing the level of reimbursement they are willing and able to provide to the Company for its products and, as a result, adversely affect the Company's revenues, financial condition or results of operations.

A slowdown of a nation's economy could also lead to financial difficulties for some of the Company's significant customers, including national governments, and result in a greater risk of delayed orders or payments, defaults or non-payments of outstanding payment obligations by the Company's customers in that country, which could adversely affect the Company's revenues, financial condition or results of operations.

Changes in foreign currency exchange rates and interest rates could have a material adverse effect on Shire's operating results and liquidity

Shire reports its financial results in U.S. Dollars, but generates a substantial portion of its revenue (approximately 33 percent of its total revenue in 2016) outside the United States. As a result, Shire's financial results may be adversely affected by fluctuations in foreign currency exchange rates. Shire cannot predict with any certainty changes in foreign currency exchange rates or the

ability of the Company to mitigate these risks. Shire may experience additional volatility as a result of inflationary pressures and other macroeconomic factors in certain emerging market countries. Shire is also exposed to changes in interest rates, and Shire's ability to access the money markets and capital markets could be impeded if adverse liquidity market conditions occur.

For discussion of the financial impact of foreign exchange rate and interest rate fluctuations, and the ways and extent to which Shire attempts to mitigate such impact. For details see note 16, Financial Instruments, to the Consolidated Financial Statements.

The Company is subject to evolving and complex tax laws, which may result in additional liabilities that may adversely affect the Company's financial condition or results of operations

The Company is subject to evolving and complex tax laws in the jurisdictions in which it operates, and routinely obtains advice on matters, including the tax treatment of the break fee received in connection with the terminated offer for Shire by AbbVie in 2014. Significant judgment is required in determining the Company's tax liabilities, and the Company's tax returns are periodically examined by various tax authorities. The Company regularly assesses the likelihood of outcomes resulting from these examinations to determine the adequacy of its accrual for tax contingencies; however, due to the complexity of tax matters, the ultimate resolution of any tax matters may result in payments greater or less than amounts accrued. In addition, the Company may be affected by changes in tax laws, including tax rate changes, new tax laws, and revised tax law interpretations in domestic and foreign jurisdictions and between jurisdictions, including by the EU.

If a marketed product fails to work effectively or causes adverse side effects, this could result in damage to the Company's reputation, the withdrawal of the product and legal action against the Company

Unanticipated side effects or unfavorable publicity from complaints concerning any of the Company's products, or those of its competitors, could have an adverse effect on the Company's ability to obtain or maintain regulatory approvals or successfully market its products. The testing, manufacturing, marketing and sales of pharmaceutical products and medical devices entail a risk of product liability claims, product recalls, litigation and associated adverse publicity. The cost of defending against such claims is expensive even when the claims are not merited. A successful product liability claim against the Company could require the Company to pay a substantial monetary award. The Company does not carry product liability insurance for its products due to the Company's analysis of the risk, frequency and severity of a loss and the cost of insurance for the risk. Accordingly, if the Company does not have sufficient financial resources to satisfy a liability resulting from such a claim or to fund the legal defense of such a claim, it could become insolvent. Moreover, an adverse judgment in a product liability suit could generate substantial negative publicity about the Company's products and business and inhibit or prevent commercialization of other products.

The Company is dependent on information technology and its systems and infrastructure face certain risks, including from service disruptions, the loss of sensitive or confidential information, cyber-attacks and other security breaches or data leakages that could have a material adverse effect on the Company's revenues, financial condition or results of operations

The Company relies to a large extent upon sophisticated information technology systems to operate its businesses. In the ordinary course of business, the Company collects, stores and transmits large amounts of confidential information (including, but not limited to, personal information and intellectual property), and it is critical that the Company does so in a secure manner to maintain the confidentiality and integrity of such confidential information. The size and complexity of the Company's information technology and information security systems, and those of third-party vendors with whom the Company contracts (and the large amounts of confidential information that is stored on them), make such systems potentially vulnerable to service interruptions or to security breaches from inadvertent or intentional actions by the Company's employees or vendors, or from attacks by malicious third-parties.

The Company and its vendors' sophisticated information technology operations are spread across multiple, sometimes inconsistent platforms, which pose difficulties in maintaining data integrity across systems. The ever-increasing use and evolution of technology, including cloud-based computing, creates opportunities for the unintentional dissemination or intentional destruction of confidential information stored in the Company's systems. The Company and its vendors could also be susceptible to third-party attacks on their information security systems, which 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, "hackers" and others. While the Company has taken steps to protect such information and invested heavily in information technology, there can be no assurance that these efforts will prevent service interruptions or security breaches in its systems, the loss of data or other confidential information due to a lack of redundant backup systems, or the unauthorized or inadvertent wrongful use or disclosure of confidential information that could adversely affect the Company's business operations or result in the loss, dissemination, or misuse of critical or sensitive information. A breach of the Company's security measures or the accidental loss, inadvertent disclosure, unapproved dissemination, misappropriation or misuse of trade secrets, proprietary information, or other confidential information, whether as a result of theft, hacking, fraud, trickery or other forms of deception, or for any other cause, could enable others to produce competing products, use the Company's proprietary technology or information, and/or adversely affect the Company's business position. Further, any such interruption, security breach, loss or disclosure of confidential information, could result in financial, legal, business, and reputational harm to the Company and could have a material adverse effect on the Company's revenues, financial condition or results of operations.

In addition, legislators and/or regulators in countries in which the Company operates are increasingly adopting or revising privacy, information security and data protection laws, as well as focusing on increased privacy-related enforcement activity, that potentially could have a significant impact on the Company's current and planned privacy, data protection and information security-related practices, its collection, use, sharing, retention and safeguarding of consumer and/or employee information, and some of its current or planned business activities.

Shire faces risks relating to the expected exit of the United Kingdom from the European Union.
On June 23, 2016, the United Kingdom held a remain-or-leave referendum on the United Kingdom's membership within the European Union, the result of which favored the exit of the United Kingdom from the European Union ("Brexit"). A process of negotiation will likely determine the future terms of the United Kingdom's relationship with the European Union, as well as whether the United Kingdom will be able to continue to benefit from the European Union's free trade and similar agreements. The timing of the Brexit and potential impact of Brexit on Shire's market share, sales, profitability and results of operations is unclear. Depending on the terms of Brexit, economic conditions in the United Kingdom, the European Union and global markets may be adversely affected by reduced growth and volatility. The uncertainty before, during and after the period of negotiation is also expected to have a negative economic impact and increase volatility in the markets, particularly in the eurozone. Such volatility and negative economic impact could, in turn, adversely affect the Company's revenues, financial condition or results of operations.

Risks Related to the Combination with Baxalta Incorporated

The Company may not successfully integrate the businesses of Shire and Baxalta
Achieving the anticipated benefits of the combination of Shire and Baxalta will depend in part upon whether the two companies integrate their businesses in an effective and efficient manner. The Company may not be able to accomplish this integration process successfully or realize the expected synergies as planned. The integration of businesses is complex and time-consuming. The difficulties that could be encountered include the following:

- integrating personnel, operations and systems, while maintaining focus on selling and promoting existing and newly acquired or produced products;
- coordinating geographically dispersed organizations;
- distraction of management and employees from operations;
- changes or conflicts in corporate culture;
- management's inability to manage a substantial increase in the number of employees;
- management's inability to train and integrate personnel, who may have limited experience with the respective companies' business lines and products, and to deliver a consistent message regarding diseases treated by the Company;
- retaining existing customers and attracting new customers;
- retaining existing employees and attracting new employees;
- maintaining business relationships; and
- inefficiencies associated with the integration and management of the operations of the two companies.

In addition, there have been, and will continue to be, integration costs and non-recurring transaction costs (such as fees paid to legal, financial, accounting and other advisors and other fees paid in connection with the combination) associated with the combination, including costs associated with combining operations and achieving the expected synergies as planned, and such costs may be significant.

An inability to realize the full extent of the anticipated benefits of the combination of Shire and Baxalta, including estimated cost synergies, as well as any delays encountered in the integration process and realizing such benefits, could have an adverse effect upon the revenues, level of expenses and operating results of the Company, which may materially adversely affect the value of the Company's Ordinary Shares and American Depository Shares ("ADSs").

Shire has incurred significant additional indebtedness in connection with the acquisition, which has decreased the Company's business flexibility and increased its interest expense. All of the Company's debt obligations have priority over the Company's Ordinary Shares and ADSs with respect to payment in the event of a liquidation, dissolution or winding up
As of December 31, 2016, Shire had gross debt of approximately $23 billion comprising $12.1 billion of Senior Notes issued in September 2016, $5 billion of Baxalta notes acquired with the acquisition of Baxalta, $5 billion outstanding borrowing under the term loan facility, $450 million outstanding borrowing under the $2.1 billion Revolving Credit Facility and certain capital lease and other debt obligations.

The Company's aggregate indebtedness could have the effect, among other things, of reducing the Company's flexibility to respond to changing business and economic conditions. The Company is required to abide by certain covenants within the various financing arrangements, which if not adhered to, would require immediate repayment of the indebtedness. Moreover, the Company may be required to raise additional financing. The Company's ability to arrange additional financing and the costs of that financing will depend on, among other factors, the Company's financial position and performance, as well as prevailing market conditions and other factors beyond Shire's control.

In any liquidation, dissolution or winding up of Shire, the Company's Ordinary Shares and ADSs would rank below all debt claims against Shire or any of its subsidiaries. As a result, holders of the Company's Ordinary Shares and ADSs will not be entitled to receive any payment or other distribution of assets upon any liquidation or dissolution until after Shire's obligations to its debt holders, which rank senior to the Company's Ordinary Shares and ADSs, have been satisfied.

Uncertainties associated with the combination may cause a loss of employees and may otherwise affect the future business and operations of Shire and the combined company
Uncertainty about the effect of the combination on employees and customers may have an adverse effect on the Company following the combination. These consequent uncertainties may impair the Company's ability to retain and motivate key personnel and could also cause customers, suppliers, licensees, partners and other business partners to defer entering into contracts with, making other decisions concerning, or seeking to change existing business relationships with the Company. Because the Company depends on the experience and industry knowledge of their executives and other key personnel to execute their business plans, the Company may be unable to meet its strategic objectives.

Baxalta only operated as an independent company from July 1, 2015 until the consummation of its merger with Shire. on June 3, 2016, and Baxalta's historical financial information is not necessarily representative of the results that Baxalta would have achieved as a separate, publicly traded company, and may not be a reliable indicator of future results of Baxalta. Moreover, any pro forma financial information published by the Company is not necessarily representative of the results that the Company would have achieved, and may not be a reliable indicator of future results.

Any historical financial information about Baxalta prior to July 1, 2015 refers to Baxalta's business as operated by and integrated with Baxter. Baxalta's historical and pro forma financial information for such periods was derived from the Consolidated Financial Statements and accounting records of Baxter. In addition, certain pro forma financial information for the Company has incorporated Baxalta's historical financial information for such periods. Accordingly, such historical and pro forma financial information of Baxalta or the Company does not necessarily reflect the financial condition, results of operations or cash flows that Baxalta would have achieved as a separate, publicly traded company during the periods presented, or those that Shire would have achieved had the combination occurred as assumed for the preparation of the pro forma financial information. As a result, the Company's pro forma financial information is not necessarily representative of the results that the Company will achieve after the merger with Baxalta, and may not be a reliable indicator of future results.

Baxter may not satisfy its obligations under various transaction agreements that have been executed as part of the separation or Shire may fail to have necessary systems and services in place when certain of the transaction agreements expire

In connection with Baxalta's separation from Baxter, the parties entered into various agreements, including a separation and distribution agreement, a transition services agreement, a tax matters agreement, a manufacturing and supply agreement, an employee matters agreement, license agreements and commercial agreements. The separation and distribution agreement, the tax matters agreement and employee matters agreement determined the allocation of assets and liabilities between the companies following the separation for those respective areas and provide for indemnifications related to liabilities and obligations. The transition services agreement sets forth certain services to be performed by each company for the benefit of the other for a period of time after the separation. Baxalta and now Shire will rely on Baxter to satisfy its performance and payment obligations under these agreements. If Baxter does not satisfy its obligations under these agreements, including its indemnification obligations, Shire may not be able to meet its financial reporting requirements and/or could incur operational difficulties or losses as they relate to Baxalta's businesses. If Shire is unable to successfully integrate the Baxalta businesses into Shire's systems and services, or if Shire does not have agreements with other providers of these services once certain transaction agreements expire, Shire may not be able to operate the Baxalta businesses effectively and Shire's profitability may decline.

The acquisition of Baxalta could result in significant liability to the Company if the combination causes the spin-off of Baxalta from Baxter or a Later Distribution, as defined below, to be taxable

In connection with the signing of the merger agreement, Baxter, Shire and Baxalta entered into the Letter Agreement, which, among other things, supplements certain aspects of the tax matters agreement referenced above. Under the Letter Agreement, from and after the closing of the merger, Baxalta agreed to indemnify, and the Company agreed to guarantee such indemnity to, Baxter and each of its affiliates and each of their respective officers, directors and employees against certain tax-related losses attributable to, or resulting from, in whole or in part, the merger. If the contribution of property by Baxter in one or more transfers to Baxalta in exchange for shares of Baxalta common stock, cash, and the assumption of certain liabilities, together with the distribution by Baxter on July 1, 2015 of approximately 80.5 percent of the shares of Baxalta common stock to shareholders of Baxter (the "spin-off"), Baxter's distribution of cash received from Baxalta to its creditors and/or a Later Distribution, collectively, the "Baxter Transactions", are determined to be taxable as a result, in whole or in part, of the merger (for example, if the merger is deemed to be part of a plan, or series of related transactions, that includes the Baxter Transactions), Baxter and its shareholders could incur significant tax liabilities. Under the tax matters agreement, and the Letter Agreement, Baxalta and the Company may be required to indemnify Baxter for any such tax liabilities. Baxter's waiver of the provisions under the tax matters agreement restricting Baxalta's ability to enter into and consummate the merger will not relieve Baxalta or the Company of its obligation to indemnify Baxter if the merger causes any of the Baxter Transactions to be taxable.

In connection with the signing and closing of the merger agreement, the Company received an opinion from Cravath, Swaine & Moore LLP ("Cravath"), tax counsel to the Company, to the effect that the merger will not cause the Baxter Transactions to fail to qualify as tax-free to Baxter and its shareholders under Sections 355, 361 and 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended.

The tax opinions referred to in the immediately preceding paragraph are based upon various factual representations and assumptions, as well as certain undertakings made by the Shire, Baxter and Baxalta. If any of the factual representations or the assumptions in the tax opinions are untrue or incomplete in any material respect, an undertaking is not complied with or the facts upon which the tax opinions are based are materially different from the facts at the time of the merger, the opinions may not be valid. Moreover, opinions of counsel are not binding on the Internal Revenue Service (the "IRS"). As a result, the conclusions expressed in the tax opinions could be challenged by the IRS. None of Shire, Baxalta or Baxter has requested a ruling from the IRS regarding the impact of the merger on the tax treatment of the Baxter Transactions, since such rulings are not made by the IRS. Further, the tax opinions do not address all tax aspects of the spin-off, a Later Distribution and other related transactions and it is possible the Company may be obligated to indemnify Baxter despite the continuing validity of the tax opinions.

The Company's indemnification obligations to Baxter and its affiliates, officers, directors and employees under the tax matters agreement and Letter Agreement are not limited in amount or subject to any cap. If Baxalta or the Company is required to indemnify Baxter and its affiliates and their respective officers, directors and employees under the circumstances set forth in the tax matters agreement, as supplemented by the Letter Agreement, it could have a material adverse effect on the Company.

References to the "Later Distributions" includes the following transactions that were undertaken by Baxter prior to the closing of the merger: (i) two debt-for-equity exchanges (and related underwritten offerings) with respect to Baxalta shares, (ii) an offer to exchange Baxter shares for Baxalta shares, and (iii) a contribution of Baxalta shares to Baxter's U.S. pension fund, which, in each case, were undertaken prior to the earlier of any Baxalta or Company stockholder vote with respect to the merger and that were intended to be part of a plan that includes the spin-off.

In connection with the merger with Baxalta, the separation and the Later Distributions could result in significant liability to the Company due to Baxalta's spin-off from Baxter

The Baxter Transactions are intended to qualify for tax-free treatment to Baxter and its stockholders under Sections 355, 361, and 368(a)(1)(D) of the Code. Completion of the separation was conditioned upon, among other things, the receipt of a private letter ruling from the IRS regarding certain issues relating to the tax-free treatment of the Baxter Transactions. Although the IRS private letter ruling is generally binding on the IRS, the continuing validity of such ruling is subject to the accuracy of factual representations and assumptions made in the ruling. Completion of the initial distribution of Baxalta shares on July 1, 2015 was also conditioned upon Baxter's receipt of a tax opinion from KPMG LLP, or KPMG regarding certain aspects of the separation not covered by the IRS private letter ruling. The opinion was based upon various factual representations and assumptions, as well as certain undertakings made by Baxter and Baxalta. If any of the factual representations or assumptions in the IRS private letter ruling or tax opinion are untrue or incomplete in any material respect, an undertaking is not complied with, or the facts upon which the IRS private letter ruling or tax opinion are based are materially different from the actual facts relating to the Baxter Transactions, the opinion or IRS private letter ruling may not be valid. Moreover, opinions of a tax advisor are not binding on the IRS. As a result, the conclusions expressed in the opinion of a tax advisor could be successfully challenged by the IRS. If any of the factual representations or assumptions in the IRS private letter ruling or tax opinion are untrue or incomplete in any material respect, an undertaking is not complied with, or the facts upon which the IRS private letter ruling or tax opinion are based are materially different from the actual facts relating to the Baxter Transactions, the opinion or IRS private letter ruling may not be valid. Moreover, opinions of a tax advisor are not binding on the IRS. As a result, the conclusions expressed in the opinion of a tax advisor could be successfully challenged by the IRS.

If the Baxter Transactions are determined to be taxable, Baxter and its stockholders could incur significant tax liabilities, and under the tax matters agreement and the letter agreement which were assumed by Shire following the merger, the Company may be required to indemnify Baxter for any liabilities incurred by Baxter if the liabilities are caused by any action or inaction undertaken by Baxalta following the separation (including as a result of the merger).

Certain Baxalta agreements may contain change of control provisions that may have been triggered by the merger that, if acted upon or not waived, could cause the Company to lose the benefit of such agreement and incur liabilities or replacement costs, which could have a material adverse effect on the Company

Prior to and following the merger, Baxalta and its affiliates are each party to various agreements with third-parties, including certain license agreements, business development-related agreements, production and distribution related agreements, bonding/financing facilities, contracts for the performance of services material to the operations of Baxalta and/or its affiliates, IT contracts, technology licenses and employment agreements that may contain change of control provisions that may have been triggered upon the closing of the merger. Agreements with change of control provisions typically provide for or permit the termination of the agreement upon the occurrence of a change of control of one of the parties which can be waived by the relevant counterparties. In the event that there is such a contract or arrangement requiring a consent or waiver in relation to the merger for which such consent or waiver was not obtained, the Company could lose the benefit of the underlying agreement and incur liabilities or replacement costs, which could have an adverse effect on the Company.

New regulations issued by the U.S. Department of Treasury may impact the Company following the merger with Baxalta.

On April 4, 2016, the U.S. Department of Treasury issued new regulations applicable to acquisitions of U.S. companies by non-U.S. companies. These regulations, among other things, change the manner in which thresholds contained within the so-called "anti-inversion" rules that govern how the combined company will be taxed are calculated. These calculations are affected by the merger and could impact any future acquisitions of U.S. companies funded in whole or in part by Shire securities. These calculations are complicated and depend on several factors. Moreover, the U.S. Department of Treasury also introduced proposed "earnings stripping" regulations as revised on October 13, 2016 that may, among other things, cause certain related-party debt instruments issued by a U.S. corporation to be treated as equity, resulting in the loss of deductible interest payments for U.S. federal income tax purposes.

These regulations are newly issued and complex, and as such their application to any particular set of facts is uncertain. Shire believes that the regulations are not likely to affect the expected tax position of the Company following the acquisition of Baxalta, which belief is based on, among other things, facts that may change or judgments that may prove to be incorrect and, if incorrect, could have an adverse impact on the expected tax position of the Company.

Furthermore, the U.S. tax authorities could issue additional guidance as to the application of these regulations or issue new regulations that could have an adverse effect on the expected tax position of the Company.

Strategic Report

The Strategic Report comprises pages 2 to 65 of this Annual Report.

Approved by the Board of Directors and signed on its behalf by:

Bill Mordan
General Counsel and Company Secretary
February 22, 2017

Board of Directors

Susan Kilsby (58)
Chairman
Appointed: September 1, 2011

Susan served as an independent Non-Executive Director prior to her appointment as Chairman on April 29, 2014.

Skills & experience: Susan brings to her role extensive M&A and finance experience having enjoyed a distinguished global career in investment banking. She held senior positions with The First Boston Corporation, Bankers Trust, Barclays de Zoete Wedd and most recently Credit Suisse where she was Chairman of the EMEA Mergers & Acquisitions team until 2009 and a part-time senior advisor until 2014. Susan is also a former Director of Keurig Green Mountain, Inc., L'Occitane International S.A. and Coca-Cola HBC AG. She holds a BA in Economics and a MBA.

Key appointments: BBA Aviation plc (Non-Executive Director), Goldman Sachs International (Non-Executive Director) and Fortune Brands Home & Security, Inc. (Non-Executive Director).

Flemming Ornskov, MD (59)
Chief Executive Officer
Appointed: January 2, 2013

Flemming served as Chief Executive Officer Designate prior to his appointment as Chief Executive Officer on April 30, 2013.

Skills & experience: Flemming brings to his role his operational and medical knowledge and his extensive international, strategic and operational experience in the pharmaceutical sector. He formerly held the position of Non-Executive Chairman of Evotec AG and was Non-Executive Director of PCI Biotech Holding ASA. From 2010 to 2012 he was Chief Marketing Officer and Global Head, Strategic Marketing for General and Speciality Medicine at Bayer. From 2008 to 2010 Flemming served as Global President, Pharmaceuticals and OTC at Bausch & Lomb, Inc. He also served as Chairman, and later as President and Chief Executive Officer, of Life-Cycle Pharma A/S from 2006 to 2008, and as President and Chief Executive Officer of Ikaria, Inc. from 2005 to 2006. Earlier in his pharmaceutical career Flemming held roles of increasing responsibility at Merck & Co., Inc. and Novartis AG, following a distinguished period spent in hospitals and academic medicine. Flemming received his MD from the University of Copenhagen, MBA from INSEAD and Master of Public Health from Harvard University.

Key appointments: Swiss-American Chamber of Commerce (Non-Executive Director).

Jeffrey Poulton (49)
Chief Financial Officer
Appointed: April 29, 2015

Jeffrey "Jeff" served as Interim Chief Financial Officer from January 1, 2015, prior to his appointment as Chief Financial Officer.

Skills & experience: Jeff brings to the Board his financial, commercial and strategic acumen. Since joining Shire in 2003 he has held leadership positions in finance supporting the Neuroscience, Gastrointestinal and Rare Diseases business units as well as the positions of Interim Chief Financial Officer and Head of Investor Relations. In addition, Jeff oversaw the operations of the Rare Diseases business unit in North America, Latin America and Asia Pacific, as well as leading the integration of the legacy-Viropharma rare disease products into the Shire portfolio. Prior to joining Shire, Jeff spent time at Cinergy Corp. and PPG Industries in a variety of corporate finance and business development roles, in addition to serving as a commissioned officer in the U.S. Navy. He received a Bachelor of Arts in Economics from Duke University and a Master of Business Administration in Finance from the Kelly School of Business at Indiana University.

Board committee appointments

- A Audit, Compliance & Risk Committee
- R Remuneration Committee
- N Nomination & Governance Committee
- S Science & Technology Committee
- E Executive Committee

- ● Chairmanship
- ● Membership

William Burns (69)
Senior Independent Director
Appointed: March 15, 2010

Skills & experience: William "Bill" brings to the Board extensive international R&D, commercial, business development and operational experience in the pharmaceutical sector. He worked for Roche from 1986 until 2009; most recently holding the position of CEO of its pharmaceuticals division and serving as a member of the Roche Group Corporate Executive Committee. Bill is a former Non-Executive Director of Roche Holding AG and Chugai Pharmaceutical Co, Ltd, and former Chairman of Biotie Therapies Corp. Bill holds a BA (Hons) in Business Economics from the University of Strathclyde.

Key appointments: Mesoblast Limited (Vice Chairman), Vestergaard Frandsen (Vice Chairman), Wellcome Trust (Governor and Trustee), Institute of Cancer Research (Trustee) and University of Cologne/Bonn Center for Integrated Oncology (Scientific Advisory Board Member).

Dominic Blakemore (47)
Non-Executive Director
Appointed: January 1, 2014

Skills & experience: Dominic brings to the Board his strategic and financial experience. He holds the position of Executive Director and Group Chief Operating Officer, Europe at Compass Group PLC, having previously served as Chief Financial Officer. He has also held the positions of Chief Financial Officer at Iglo Foods Group and European Finance & Strategy Director, Corporate Finance Director, and Group Financial Controller at Cadbury plc. Earlier in his career Dominic worked at PricewaterhouseCoopers where he advised pharmaceutical sector clients.

Key appointments: Compass Group PLC (Executive Director and Group Chief Operating Officer, Europe) and Academic Council of University College London (Member).

Olivier Bohuon (58)
Non-Executive Director
Appointed: July 1, 2015

Skills & experience: Olivier brings to the Board his extensive international business and leadership experience gained through roles held in pharmaceutical and healthcare companies across Europe, the Middle East and the U.S. He currently holds the position of Chief Executive Officer at Smith & Nephew plc, having previously served as Chief Executive Officer and President of Pierre Fabre Group and as President of Abbott Pharmaceuticals; a division of U.S.-based Abbott Laboratories. Olivier also held diverse commercial leadership positions at GlaxoSmithKline and its predecessor companies in France. He has an MBA from HEC Paris School of Management and a doctorate in Pharmacy from the University of Paris.

Key appointments: Smith & Nephew plc (Chief Executive Officer), Biotech Promise (Non-Executive Director) and Virbac SA (Non-Executive Director).

Ian Clark (56)
Non-Executive Director
Appointed: January 3, 2017

Skills & experience: Ian brings to the Board his extensive leadership and biotechnology sector experience. Ian served as Chief Executive Officer and Director of Genentech Inc. (part of the Roche Group) and Head of North American Commercial Operations for Roche until 2016. From 2003 to 2010 he held the positions of Head of Global Product Strategy and Chief Marketing Officer, Executive Vice President — Commercial Operations and Senior Vice President and General Manager — BioOncology at Genentech. Prior to this Ian was appointed President of Novartis Canada, having previously served as Chief Operating Officer for Novartis United Kingdom. He also held various sales and marketing roles at Sanofi and Ivax. Ian holds a Bachelor's degree in Biological Sciences from the University of Southampton.

Key appointments: TerraVia Holdings Inc. (Non-Executive Director), Agios Pharmaceuticals, Inc. (Non-Executive Director), Corvus Pharmaceuticals, Inc. (Non-Executive Director), Kite Pharma, Inc. (Non-Executive Director) and Gladstone Institute (Member).

Gail Fosler (69)
Non-Executive Director
Appointed: June 3, 2016

Skills & experience: Gail brings to the Board her commercial, public policy and economics experience. She is President of The GailFosler Group LLC, a strategic advisory service for global business leaders and public policy makers, which she has led since 2010. Prior to this, Gail spent over 20 years at The Conference Board where she served as President and Trustee, Executive Vice President and Chief Economist. Gail is a former Director of Baxter International, Inc., Baxalta, Inc., Swiss Reinsurance America Corporation and Caterpillar, Inc. She holds a Master of Business Administration degree in Finance from New York University and a Bachelor of Arts Degree in Economics from the University of Southern California.

Key appointments: The GailFosler Group LLC (President) and Deschner Corporation (Non-Executive Director and Chair).

Steven Gillis, PhD (63)
Non-Executive Director
Appointed: October 1, 2012

Skills & experience: Steven brings to the Board his extensive technical and scientific knowledge and commercial experience. He is currently a Managing Director at ARCH Venture Partners; a provider of venture capital for technology firms. Prior to this Steven was a founder and Director of Corixa Corporation, acquired by GlaxoSmithKline in 2005, and before that a founder and Director of Immunex Corporation. An immunologist by training Steven has authored more than 300 peer-reviewed publications in the areas of molecular and tumor immunology. He is credited as being a pioneer in the field of cytokines and cytokine receptors, directing the development of multiple marketed products including Leukine, (GM-CSF), Prokine (IL-2) and Enbrel (soluble TNF receptor-Fc fusion protein) as well as the regulatory approval of Bexxar (radiolabeled anti-CD20) and the novel vaccine adjuvant, MPL. Steven received his BA from Williams College and his PhD from Dartmouth College.

Key appointments: ARCH Venture Partners (Managing Director), Pulmatrix, Inc. (Non-Executive Director), PhaseRx Inc. (Chairman and Non-Executive Director) and VBI Vaccines Inc. (Chairman and Non-Executive Director).

David Ginsburg, MD (64)
Non-Executive Director
Appointed: June 16, 2010

Skills & experience: David brings to the Board his clinical medical experience in internal medicine, hematology-oncology and medical genetics, as well as his extensive basic biomedical laboratory research expertise. David obtained his BA at Yale University, MD at Duke University and completed his medical and research training at Harvard Medical School. David is the recipient of numerous honors and awards, including election to membership at the National Academy of Sciences, the National Academy of Medicine and the American Academy of Arts and Sciences.

Key appointments: University of Michigan (James V. Neel Distinguished University Professor of Internal Medicine, Human Genetics and Pediatrics) and Howard Hughes Medical Institute (Investigator).

Sara Mathew (61)
Non-Executive Director
Appointed: September 1, 2015

Skills & experience: Sara brings to the Board her financial, strategic and technological experience having held various corporate leadership roles. She served as Chairman, President and Chief Executive Officer of Dun & Bradstreet, Inc. until 2013, having spent 12 years at the company. Prior to this, Sara worked for 18 years at Procter & Gamble where she held a variety of global finance and management positions including Vice President, Finance, Australia, Asia and India. She is also a former Non-Executive Director of Avon Products, Inc. Sara received her MBA from Xavier University, her Accounting degree from the Institute of Cost & Works Accountants and her Bachelor's degree in Physics, Mathematics and Chemistry from the University of Madras.

Key appointments: Campbell Soup Company (Non-Executive Director) and Freddie Mac (Non-Executive Director).

Anne Minto OBE (63)
Non-Executive Director
Appointed: June 16, 2010

Skills & experience: Anne brings to the Board her extensive legal, commercial and remuneration experience. She held the position of Group Director, Human Resources at Centrica plc from 2002 to 2011 and was a member of the Centrica Executive Committee. Her extensive business career includes senior management roles at Shell UK, the position of Deputy Director-General of the Engineering Employers' Federation and the position of Group Director Human Resources at Smiths Group plc. She is also a former Director of Northumbrian Water plc and SITA UK. Anne holds a Law degree, a postgraduate diploma in Human Resources and is a qualified lawyer. She is also a Fellow of the Chartered Institute of Personnel & Development, the Royal Society of Arts and the London City and Guilds, and is a member of the Law Society of Scotland.

Key appointments: Tate & Lyle PLC (Non-Executive Director), ExlService Holdings, Inc. (Non-Executive Director), University of Aberdeen Court (Non-Executive Director) and University of Aberdeen Development Trust (Vice Chairman and Trustee).

Albert Stroucken (69)
Non-Executive Director
Appointed: June 3, 2016

Skills & experience: Albert "Al" brings to the Board his manufacturing, commercial and international experience. He served as Executive Chairman of Owens-Illinois, Inc. until 2016, having served as Chairman, President and Chief Executive Officer from 2006 until 2015. From 1998 to 2006 Al held the position of President and Chief Executive Officer of H.B. Fuller Company, adding the role of Chairman in 1999. He served as General Manager of the Inorganics division of Bayer AG from 1997 to 1998, serving as Executive Vice President and President of the Industrial Chemicals division of Bayer Corporation from 1992 to 1997. Al served as a Non-Executive Director of Baxalta Incorporated until 2016.

Key appointments: Baxter International, Inc. (Non-Executive Director).

David Kappler (69)
Former Deputy Chairman and Senior Independent Director
Appointment: April 5, 2004 — April 28, 2016

David was appointed Senior Independent Director in July 2007 and Deputy Chairman in June 2008.

Skills & experience: David brought to the Board his extensive knowledge and experience in financial reporting, risk management and internal financial controls. He served on the Board of InterContinental Hotels Group plc until 2014, was Chairman of Premier Foods plc until 2010 and held directorships at Camelot Group plc and HMV Group plc. David retired from Cadbury Schweppes plc in 2004 after serving as Chief Financial Officer since 1995. He worked for the Cadbury Schweppes Group between 1965 and 1984 and re-joined the company in 1989 following its acquisition of the Trebor Group, where he was Financial Director. David is a Fellow of the Chartered Institute of Management Accountants.

Key appointments: Flybe Group plc (Non-Executive Director).

Executive Committee

Flemming Ornskov, MD (59)
Chief Executive Officer
Appointed: January 2, 2013

For biographical details, see page 66.

Jeffrey Poulton (49)
Chief Financial Officer
Appointed: January 1, 2015

For biographical details, see page 66.

Ginger Gregory, PhD (49)
Chief Human Resources Officer
Appointed: March 1, 2014

Ginger joined Shire in 2014 and serves as Chief Human Resources Officer. She was previously Chief Human Resources Officer at Dunkin' Brands Group, Inc. prior to which she held various roles at Novartis, Novo Nordisk and Bristol-Myers Squibb Company. Ginger holds a PhD in Industrial Organizational Psychology from The George Washington University.

Bill Mordan (47)
General Counsel and Company Secretary
Appointed: October 1, 2015

Bill joined Shire in 2015 and serves as General Counsel and Company Secretary. He previously served as General Counsel and Company Secretary at Reckitt Benckiser Group plc in the UK, prior to which he held various roles at Procter & Gamble in the U.S., Mexico and Brazil. Earlier in his career, Bill served as a clerk in the U.S. Court of Appeals for the Sixth Circuit. He holds a Juris Doctor degree from the University of North Carolina.

Perry Sternberg (48)
Head of U.S. Commercial
Appointed: June 3, 2016

Perry joined Shire in 2013 and is Head of U.S. Commercial. He was previously Vice President & General Manager, U.S. & Canada Pharmaceuticals at Bausch & Lomb. Prior to that, Perry held various roles at Novartis Ophthalmics, Novartis Pharmaceuticals and Merck & Co., Inc. He holds a Bachelor's degree in Animal Bioscience from Pennsylvania State University.

Kim Stratton (54)
Head of International Commercial
Appointed: July 1, 2016

Kim joined Shire in 2013 and is Head of International Commercial. She was previously Global Head of Group Country Management & External Affairs for Novartis. Prior to that, Kim held various roles of increasing responsibility at Novartis, Bristol Myers Squibb and AstraZeneca. She qualified as a State Registered Nurse at the Royal North Shore Hospital.

Philip Vickers, PhD (57)
Head of Research and Development
Appointed: March 1, 2014

Philip joined Shire in 2010 and is Head of Research and Development. He previously led Research and Development for Shire's Rare Diseases Business Unit, prior to which he held various roles at Resolvyx Pharmaceuticals, Boehringer Ingelheim Pharmaceuticals, Pfizer and Merck & Co. He holds a PhD in Biochemistry from the University of Toronto.

Matt Walker, BSCHE (53)
Head of Technical Operations
Appointed: June 3, 2016

Matt joined Shire in 2016 and is Head of Technical Operations. Previously he worked at Pfizer for over 20 years in engineering and operations roles within the supply organization — his last two positions being Operations Lead for Sterile Injectables and Operations Lead for Biologics/Vaccines. Prior to Pfizer, Matt worked as a Project Director for John Brown Engineering and Construction. He holds a Bachelor's degree in Chemical Engineering from Tufts University.

Chairman's governance statement

> Effective corporate governance — enabling Shire to do the right thing, in the right way.

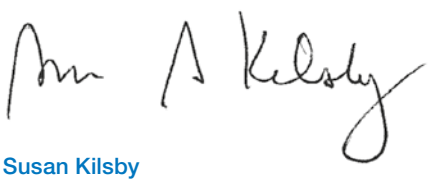
Effective corporate governance is central to Shire's foundation as the leading global biotechnology company focused on rare diseases. It underpins all that we do, from the oversight and guidance provided by the Board, to management's implementation of strategy, to the individual and collective accomplishments of our valued employees worldwide. Effective corporate governance enables us to do the right thing, in the right way.

In a year of transformation for Shire, the maintenance of our high standards of corporate governance has been a priority for the Board. Over the last 12 months, my fellow Directors and I have reviewed and refreshed many of the key policies and frameworks that support the Company's effective operation. In addition, we have overseen management's continued integration of Baxalta, confirming that the combined strategic initiatives of the new, larger company are consistent with Shire's focus on growth, innovation, efficiency and people.

Aligned with these corporate priorities, the Board has sought to ensure it remains an effective steward for a dynamic and high-performing business that operates in a fast-paced and competitive global market. During the past year, the Board conducted an internal evaluation to consider the skills, experience and diversity of its members and the infrastructure of its operation. We assessed the Board's performance supporting the business and refined our succession planning for Directors and management alike. Further details on the Board performance evaluation can be found on pages 73 to 74.

Contributing to the Board's knowledge and experience were the appointments of Gail Fosler and Albert Stroucken as new Non-Executive Directors. Both Gail and Al served as Directors of Baxalta prior to its acquisition by Shire and bring with them a valuable understanding of its operations and governance structure. In addition, we recently appointed Ian Clark as a third new Non-Executive Director. Following his retirement as CEO of Genentech, Ian brings an in-depth knowledge of the biotechnology sector and strong operational experience. Together, these appointments leave the Board well-positioned to guide the Company and support management in the ongoing execution of our strategy.

Looking ahead to 2017, the Board will continue to engage with shareholders and other stakeholders on key corporate priorities. Our focus remains on ensuring that Shire meets its commitment to shareholders: to execute our growth strategy, deliver efficient performance and develop effective therapies for the patients we serve, all while creating shareholder value.



Susan Kilsby
Chairman

Index to the Governance section

This section sets out Shire's governance structure and seeks to demonstrate how the main principles of the UK Corporate Governance Code (the "Governance Code") were applied throughout the financial year ended December 31, 2016. The Board is of the opinion that, during this period, the Company complied with the provisions of the Governance Code. Published by the Financial Reporting Council, the Governance Code is publicly available at www.frc.org.uk. This section is comprised of the following sub-sections:

Board governance

Leadership

Role of the Board

The principal purpose of the Board is to provide leadership to the Company in a manner that promotes its long-term success, creating sustainable value for the benefit of shareholders and other stakeholders. The Board is responsible for determining the Group's strategy as well as overseeing its implementation by management. In doing so, the Board works closely with management to ensure that a culture of integrity, responsibility and patient focus exists throughout the organization. In addition, the Board has oversight of all material matters impacting the Company and its operations including key policies, significant financial matters and M&A activity, risk management and succession planning.

Division of responsibilities

The Board comprises the Chairman, 10 other Non-Executive Directors, the Chief Executive Officer and the Chief Financial Officer. The Chief Executive Officer, together with the Executive Committee, is responsible for business operations. The Non-Executive Directors are charged with exercising independent judgment during Board deliberations and ensuring effective performance and delivery of strategy by management.

The Chairman, Senior Independent Director and Chief Executive Officer have distinctly different roles which are defined in writing and approved by the Board. These are summarized as follows:

Chairman

The Chairman's primary responsibility is to provide leadership to the Board, ensuring its effective operation. This is achieved in part through the promotion of an open and engaged culture that facilitates constructive dialogue both with management and in executive sessions of the Board. The Chairman is also responsible for ensuring effective communications between the Board and shareholders.

Senior Independent Director

The Senior Independent Director is responsible for providing a sounding board for the Chairman and for serving as a trusted intermediary for the other Directors. In addition, the Senior Independent Director is responsible for leading meetings of the Non-Executive Directors in the absence of the Chairman and for consulting with shareholders when communication with the Chairman or Chief Executive Officer would be inappropriate.

Chief Executive Officer

The principal responsibility of the Chief Executive Officer is to manage Shire's day-to-day business. Having regard for the strategy, risk profile, objectives and policies set forth by the Board and its committees, the Chief Executive Officer is accountable to the Board for the development of the Company and its operations.

Full details of these roles and responsibilities can be found on the Company's website.

Key considerations

The principal considerations of the Board during the year were:

Strategy

- Transactional and integration developments relating to the combination with Baxalta, creating the leading global biotechnology company focused on rare diseases
- The Company's strategy and long range plan
- Material M&A and in-licensing transactions, including completion of the Dyax acquisition and related integration activity
- Clinical programs development updates, launch activity for key products (including XIIDRA) and ongoing commercial development
- Litigation updates, including the agreed settlement with the U.S. Department of Justice concerning our former Dermagraft business
- Ongoing group financing arrangements including the refinancing of external debt through the issuance of senior notes
- Developments to the global operating environment including BREXIT, the U.S. presidential election and other macro events

Operations

- Ongoing property portfolio rationalization including focused commercial and manufacturing investment in Ireland, including commitment to a new, state-of-the-art biologics manufacturing facility
- The Company's compassionate use program and related policy development
- Global digital capabilities, systems compatibility and integration
- Ongoing monitoring and review of the Company's principal risks, risk management and internal control systems
- The Company's ongoing performance against budget

Governance

- Ongoing investor feedback, with there being a high level of engagement regarding M&A transactions and executive remuneration
- The Company's full-year and half-year results, quarterly earnings releases, key financial reports and earnings guidance
- Board performance, effectiveness and succession planning including induction and training initiatives
- Senior management succession and talent assessment
- Key policies and frameworks, including the Delegation of Authority matrix, Board Diversity Policy and Code of Ethics

Board operation

During the year the Board met frequently in order to discharge its duties. Six scheduled Board meetings took place during 2016 of which five were held over two-day periods alongside Board committee meetings. In addition, five ad hoc meetings were held principally to consider M&A activity and other strategic matters.

Board member[1]	Date of appointment	Scheduled meeting attendance	Ad hoc meeting attendance[2]
Susan Kilsby[3]	September 1, 2011	6(6)	5(5)
Flemming Ornskov	January 2, 2013	6(6)	5(5)
Jeffrey Poulton	April 29, 2015	6(6)	5(5)
William Burns[4]	March 15, 2010	6(6)	4(5)
Dominic Blakemore	January 1, 2014	6(6)	5(5)
Olivier Bohuon[5]	July 1, 2015	5(6)	4(5)
Gail Fosler	June 3, 2016	4(4)	3(3)
Steven Gillis	October 1, 2012	6(6)	5(5)
David Ginsburg	June 16, 2010	6(6)	5(5)
Sara Mathew	September 1, 2015	6(6)	4(5)
Anne Minto	June 16, 2010	6(6)	4(5)
Albert Stroucken	June 3, 2016	4(4)	3(3)
David Kappler	April 5, 2004 — April 28, 2016	2(2)	2(2)

Note: The number in brackets denotes the number of meetings that Committee members were eligible to attend.

1. Ian Clark was appointed as a member of the Board on January 3, 2017.
2. Ad hoc meetings are those that fell outside of the usual Board calendar and were timed to facilitate maximum possible attendance.
3. Susan Kilsby served as an independent Non-Executive Director prior to her appointment as Chairman on April 29, 2014.
4. William Burns served as a Non-Executive Director prior to his appointment as Senior Independent Director on April 28, 2016.
5. Olivier Bohuon was absent from one scheduled meeting due to illness.

Only members of the Board are entitled to attend Board meetings, however, during the year members from the following internal Group functions attended by invitation:

- Finance
- Legal and Company Secretariat
- Corporate Development
- Human Resources
- Research and Development
- Global Compliance and Risk Management
- Communications and Public Affairs
- Investor Relations
- International Commercial
- U.S. Commercial
- Technical Operations

External professional advisors also attended meetings when necessary. During scheduled Board meetings it is customary for the Non-Executive Directors to meet at least once without Executive Directors or management present, following which a meeting of the Non-Executive Directors led by the Senior Independent Director is held in the absence of the Chairman. Matters considered by the Board are those reserved for its judgment and decision, as defined in the Board Reserve Powers, although wider matters are considered by the Board as circumstances require. The Board Reserve Powers are available on the Company's website.

At the start of the year the Chairman, her fellow Directors and the Company Secretary agree a forward-looking schedule of matters to be considered by the Board and its committees, with specific updates made throughout the year as required. The Chairman is also supported by the Company Secretary and management in ensuring that all necessary information is provided to the Board in a timely manner, and that sufficient time is made available at meetings for the consideration of individual agenda items. Open and balanced discussion is encouraged with a view to achieving resolution by consensus, however, if consensus is not possible then decisions are to be taken by majority vote, with the Chairman having a casting vote in the case of an equality of votes.

Effectiveness

Effective stewardship is integral to the development and promotion of the Company's purpose, culture, values and core behaviors and therefore to the execution of its strategy. The Board is committed to ensuring that the Company operates in accordance with the highest standards of governance in order to promote its success for the benefit of all stakeholders.

Diversity

The Board recognizes the inherent value of diversity at all levels within the Group and strives to foster an inclusive and respectful professional culture. During the year the Board reviewed its Diversity Policy and considered many of the related published reports and recommendations. Moreover, as part of the wider integration effort relating to the Baxalta acquisition, the Board and members of management took the opportunity to reinforce Shire's commitment to people of all backgrounds, irrespective of race, gender or sexual orientation. It is a core belief of Shire's leadership that an inclusive workforce brings a wealth of ideas, innovation and drive that in turn contributes to the Company's ability to anticipate, and adapt to, ongoing changes in its operating environment.

Shire's Board Diversity Policy acknowledges that the Company, its shareholders and other stakeholders are best served by a Board diverse in skill, experience, background, gender and ethnicity. The principles of the policy are taken into account by both the Board and the Nomination & Governance Committee in their consideration of potential Board members, consistent with the Group's focus on diversity. Additional disclosure relating to diversity within Shire is made on pages 38 to 39.

Independence

The Board has reviewed the independence of the Non-Executive Directors, other than the Chairman, in accordance with the factors set forth for consideration in the Governance Code and determined that everyone seeking election or re-election continues to be independent in character and judgment. In addition, the Board regards each of its members as possessing the skills, knowledge and experience necessary for it to function effectively. Board members' biographical information can be found on pages 66 to 68.

Appointments

The Board may appoint any individual as a Director either to fill a vacancy or as an additional member of the Board. The process for new appointments is led by the Nomination & Governance Committee

(procedural details are available on page 80) which ultimately makes a recommendation to the Board.

Appointments may be made by the Board at any time subject to subsequent election and annual re-election by the Company's shareholders. All Directors are seeking election or re-election at the Annual General Meeting to be held on April 25, 2017. At this meeting Non-Executive Director terms of appointment and Executive Director service contracts will be made available for inspection by shareholders.

Commitment
Prior to appointment, Non-Executive Directors are required to disclose to the Board their other significant commitments. This enables an assessment of their capacity to commit sufficient time to effectively discharge their anticipated duties and responsibilities. Each Non-Executive Director keeps the Board informed of any changes to their other significant commitments. As part of the 2016 Board performance evaluation, it was determined that each of the Directors demonstrated continued effective performance and commitment to their role.

Conflicts of interest
Directors are required to notify the Board before accepting any appointment, or taking any action, which may give rise to a conflict of interest or a potential conflict of interest (together a "conflict"), or on becoming aware of a conflict. Upon notification, the Board will consider whether to authorize a given conflict and, if so, set any terms and conditions to which the authorization shall be subject. These may include the relevant Director being requested to abstain from the related decision and/or discussion. In the event of a material change to the facts and/or circumstances relating to an authorized conflict, the Director concerned is required to notify the Nomination & Governance Committee. Authorized conflicts are reviewed annually, and at such other times as is necessary, by the Nomination & Governance Committee which then reports on its findings to the Board. Details on Directors' interests in transactions can be found on page 115.

Induction and development
Upon appointment to the Board all Directors undergo a formal induction program tailored to their individual skills, knowledge and experience. The purpose of such a program is to facilitate each Director's familiarization with the Company's business, strategy and governance structure, as well as their own duties and responsibilities. Induction activities undertaken during the year are as follows:

Non-Executive Directors
As newly appointed Board members, Gail Fosler and Albert Stroucken have each undertaken induction meetings with members of Shire's Executive Committee and other members of management. Both Directors participated in an orientation visit to Shire's International Headquarters in Zug, focusing on the Group's international commercial operations and global product strategy. In addition, Ms. Fosler and Mr. Stroucken received briefings on Shire's research and development activities, tax strategy and U.S. commercial operations, as well as on the duties and responsibilities associated with being a director of a global, listed company. Further induction activities will be made available to both Directors.

In addition to undergoing an initial induction, on an annual basis each Director discusses with the Chairman their individual development requirements with a view to ensuring their skills, knowledge and experience are regularly refreshed, and that their familiarity with the Company's business is maintained. A standing schedule of training topics enables Directors to undertake, as required, detailed development initiatives focused on matters specific to the Company and its operating environment.

Information and support
The Chairman, in collaboration with the Company Secretary and management, is responsible for ensuring that Board members are provided at all times with the information necessary for them to effectively discharge their duties and responsibilities. Before decisions are taken at Board meetings, consideration is had as to the adequacy of the information available to the Board, enabling the deferral of decision making if necessary. Directors may seek clarification, additional information or professional advice necessary to the fulfillment of their duties and responsibilities from across the business, from the Company Secretary or from independent sources at the Company's expense.

In addition, the Chairman, supported by the Company Secretary, ensures that effective channels of communication exist between the Board, its committees and the Company's management.

Board performance evaluation
Progress against points of focus from 2015
During 2015, the Board undertook an externally facilitated performance evaluation. In considering the results of that evaluation and how effectiveness might be improved, the Board agreed that, during 2016, greater focus would be placed on:

- improving the structure and content of Board papers and presentations
- developing the Board's agendas, objectives and priorities
- enhancing induction and development programs for Directors

To this end, during the year the Board, in conjunction with members of management, sought to refine the underlying Board support infrastructure, as well as enhance efficiency and streamline processes that underpin the Board's operation. A common standard for Board papers and presentations was introduced to help ensure the Board receives clear and balanced information that is sufficient in detail to enable it to make informed decisions. Moreover, greater emphasis was placed on time management during meetings to maximize productivity. The Chairman, committee chairmen and members of management routinely set aside time to undertake forward-looking reviews of Shire's operating environment with a view to ensuring that matters put forward for the Board's consideration were timely and those most deserving of its attention. In addition, efforts were made to enhance the training materials available to new and existing Directors with focus placed on areas of operational and strategic importance to Shire as well as on the duties and responsibilities that accompany being a Director of a public company.

2016 procedure, conclusions and points of focus
The 2016 Board performance evaluation was undertaken internally, led by the Chairman with the support of the Company Secretary, and covered the performance of the Board, its committees and members. The evaluation was conducted in accordance with the principles of the Governance Code and comprised:

- Directors each completing a performance and effectiveness questionnaire with responses aggregated on a non-attributable basis and shared with the Board
- the Chairman meeting with each Non-Executive Director to discuss individual performance, training needs and overall Board effectiveness

- the Chairman leading a performance evaluation and effectiveness review with the Board based on the aggregated questionnaire responses and individual Director feedback
- the Chairman of each Board committee holding similar performance and effectiveness discussions with each of their committee members
- the Senior Independent Director soliciting the views of fellow Directors with respect to the performance of the Chairman and providing her with feedback regarding the same

The review included consideration of the time and information made available to the Board in its assessment of strategy, risk management and internal control, governance and the integrity of the financial statements. The review also included succession planning at the Board and management level as well as the collective skill and experience of the Board that together contribute to the effective discharge of its responsibilities.

The overall conclusion drawn from the evaluation is that the Board performs to a high standard, demonstrating strength in sector-related knowledge and understanding. The skills and experience of individual directors are such that the Board is well-equipped to manage the complexities associated with leading a global, specialized organization in a fast-paced and ever-changing competitive market-environment. Furthermore, the Board's culture is one of positive engagement that supports open and constructive discussion and that has contributed to the establishment of strong links among the Directors and with management. The Chairman and committee chairmen are considered effective leaders, with individual Directors demonstrating commitment and preparedness as well as a willingness to understand the views of shareholders and other stakeholders. In pursuit of optimal effectiveness, the following areas were recommended for Board focus during the forthcoming year:

- the approach taken to reviewing corporate strategy and how this might be enhanced
- a continued focus on succession planning for both management and Non-Executive Directors

Accountability

Risk management and internal control

The Board is responsible for Shire's risk management and internal control systems which include the processes for identifying, evaluating and managing the principal risks faced by the Company. These systems are developed alongside the Company's strategy and in accordance with applicable regulatory guidelines including the Internal Control — Integrated Framework 2013, issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO Framework"), and the Financial Reporting Council's Guidance on Risk Management, Internal Control and Related Financial and Business Reporting. Shire's risk management and internal control framework has been in place for the duration of the financial year covered by, and to the date of the approval of, this Annual Report.

Risk management and internal controls relating to financial reporting

The Group's internal control program related to financial reporting ("ICPFR") is aligned with the COSO Framework. It comprises a combination of manual, automated, preventative and detective controls, as well as underlying IT controls for key financial systems, which are documented, tested and reported on throughout the year. The ICPFR takes into account key policies such as the Financial Controller's Manual and the Delegation of Authority matrix, as well as pervasive entity level controls including those relating to integrity and ethical values, adherence to codes of conduct and the Board's oversight of internal control and organizational structure. In addition, on an annual basis the Internal Audit function develops and executes a risk-based audit plan covering areas of financial, compliance and operational risk across the various Group functions and geographic locations. Results of these audits, together with results of ICPFR testing, are regularly reviewed by the Audit, Compliance & Risk ("ACR") Committee which, along with management, assesses the ongoing effectiveness of the ICPFR against the COSO Framework. Furthermore, an established process of escalation enables the ACR Committee and the Board to review material matters on a timely basis as they arise. As part of the integration efforts relating to the acquisition of Baxalta, management has commenced the harmonization of risk management and internal control systems across the enlarged Group. These efforts will continue into 2017.

Monitoring and review

The Board, supported by the ACR Committee, is responsible for the ongoing monitoring and review of the Company's risk management and internal control systems. At the start of the year the Board determines how this will be achieved, including agreeing a scheduled monitoring program and identifying those aspects that will be overseen, on its behalf, by the ACR Committee. In addition, the Board ensures that considerations of risk feature within its wider discussions including those concerning the Company's business model and strategy. Together, this allows for reflection on the determination, identification, assessment and mitigation of the Company's principal risks, enabling the Board to continually evaluate whether the risk management and internal control systems remain appropriate. In anticipation of completion of the Baxalta acquisition, the Board took into consideration risk management and internal controls implementation, effectiveness and integration as part of its wider pre-transaction due diligence. In addition, following completion of the acquisition on June 3, 2016, specific audit and assurance activities were undertaken with respect to the legacy-Baxalta organization, with its principal business risks and risk management systems factored into Shire's biannual Enterprise Risk Management program and Enterprise Risk Assessment.

In addition to its ongoing appraisal, the Board is responsible for undertaking an annual review of the effectiveness of the Company's risk management and internal control systems. This is achieved through dedicated discussion during which key factors related to the Company's risk management and internal control regime are considered. Typically, these include its operation and integration, management's oversight and related reporting, risk appetite and culture as well as any other aspects pertinent to the affairs of the Company. Moreover, drawing on its more-regular discussions and feedback from the ACR Committee, the Board reflects on key matters that have arisen during the year and the Company's ability to respond appropriately to internal and external developments as they arise. Together, this enables the Board to evaluate the principal features of the risk management and internal control systems, consider their composition relative to Shire's strategic direction and draw conclusions as to their overall effectiveness. Following its review in respect of the 2016 financial year and the period up to the approval of this Annual Report, the Board neither identified, nor

was advised of, any deficiencies within the Company's risk management and internal control systems that were considered material to the Group as a whole. Further details on Shire's risk management framework can be found on pages 54 to 55.

Going concern
The Directors' Report (covering pages 2 to 118) includes the following information relating to the Group:

- financial position including cash flows, liquidity position and borrowing facilities
- business activities together with factors likely to affect future development, performance and financial position
- objectives, policies and processes for managing capital
- financial risk management objectives
- details of hedging activity and exposures to credit and liquidity risk

Details of the Group's financial instruments are disclosed in Note 16 to the consolidated financial statements. The Directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future. Thus, they consider it appropriate to adopt the going concern basis of accounting in preparing the annual financial statements.

Ongoing viability
On an annual basis the Company undertakes a long-range planning exercise (the "LRP") as part of its strategic review. The LRP includes the evaluation of key sensitivities and scenarios that relate to certain of the Company's principal risks and uncertainties (as outlined on pages 54 to 65) with a view to determining their potential impact on the Company's financial position, ability to deliver on strategy and, ultimately, its viability. The scenarios considered during the year included increased pricing pressure, lower market share for key products, generic competition and the failure of key pipeline programs. The LRP also considers the Company's future cash flows and funding requirements, including the ability to repay outstanding debt obligations and maintaining compliance with ongoing loan covenants. Analysis of the LRP in conjunction with the Board's robust assessment of principal risks, including the realistic availability and likely effectiveness of mitigating actions, underpins the Group's planning processes and contributes to the determination and implementation of the Company's strategy.

For the purpose of assessing ongoing viability the Board considered the Company's prospects over a four-year period, consistent with the relative focus within the LRP as well as brand and business planning horizons. The Board also keeps the Company's solvency and liquidity under review through regular reporting from the ACR Committee, management and from the Group's external auditor. The Board continually evaluates the assurance it receives and considers the impact of significant projects, strategic developments and other significant commitments on the Company's risk profile and ultimately its ongoing viability. Having regard to the strategic review (including the LRP) and the Company's principal risks and uncertainties, the Board has a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the four-year period of its assessment.

Relations with shareholders

The Board is committed to maintaining open and constructive dialog with shareholders, helping to ensure a common understanding of strategic objectives, matters of governance and of the Company's performance. The principal points of contact for major shareholders are the Chairman, Chief Executive Officer, Chief Financial Officer and the Company's Investor Relations team, with the views of investors communicated to the Board as a whole. During the year the Group engaged with shareholders through the media below:

Relations with shareholders

Meetings with shareholders	The Chairman, Chief Executive Officer, Chief Financial Officer and members of management engaged with many of Shire's major shareholders to receive views on matters material to the Company and its operations. Such matters included the combination with Baxalta, the Company's strategy, financial targets and executive remuneration.
Healthcare conferences	Representatives of the Company engaged with shareholders and potential investors at many conferences held throughout the year at which presentations and other reference materials were made available.
Investor day	Shire hosted an investor day in New York on November 10, 2016, at which its commercial portfolio and innovative R&D pipeline, including late-stage clinical portfolio highlights, were showcased, supporting Shire's long-term growth aspirations.
Results announcements and presentations	The Company communicated its performance to shareholders and analysts through quarterly financial results announcements, each accompanied by an explanatory webcast and Q&A session provided by the Chief Executive Officer and the Chief Financial Officer.
Financial reporting	The Company published half and full-year reports and filed quarterly Form 10-Qs and an annual Form 10-K in accordance with obligations arising from its listing on the London Stock Exchange, New York Stock Exchange and the NASDAQ Global Select Market.
Annual General Meeting and General Meeting	The Company's Annual General Meeting was held in Dublin on April 28, 2016. Shareholders were invited to attend and vote on resolutions and also to meet with members of the Board. In addition, on May 27, 2016, the Company held a General Meeting at which shareholders were able to cast their votes in respect of the then-proposed combination with Baxalta, and other related matters.
Website	The Company's website (www.shire.com) provides information about the Group and is regularly updated with corporate and regulatory news, IR events, broker forecasts and other information related to the Company's operations.
Investor relations	The Group's Investor Relations department regularly responds to shareholder communications through its dedicated inbox: InvestorRelations@shire.com
Corporate responsibility reports and engagement	The Company's website has a dedicated "Responsibility" section where Shire's Annual Responsibility Review is posted along with regular updates on programs, policies and activities.
Digital application	Shire's IR Briefcase application is regularly updated with news and presentations and provides access to the Company's latest Annual Report.

Board committees

To ensure effective oversight and control over the Group's operations, the Board has constituted the Audit, Compliance & Risk Committee, the Remuneration Committee, the Nomination & Governance Committee, the Science & Technology Committee and the Executive Committee, each of which has been delegated specific authorities. The Board committees' terms of reference, which are subject to annual review and approval by the Board, are available on the Company's website, with further detail as to their operation and activities presented in the following reports.

Audit, Compliance & Risk Committee

Dominic Blakemore
Committee Chairman

Membership and meetings

As at the year end the Audit, Compliance & Risk Committee comprised five independent Non-Executive Directors, each chosen for their knowledge and experience of financial matters, financial reporting, risk management and internal control. The Board is satisfied that at least one member of the Committee has recent and relevant financial experience in accordance with the requirements of the Governance Code.

Committee member	Date of appointment	Meeting attendance
Dominic Blakemore[1]	Jan 1, 2014	5(5)
Gail Fosler	Jun 7, 2016	3(3)
Steven Gillis[2]	Dec 3, 2014	5(5)
Sara Mathew	Sept 1, 2015	5(5)
Albert Stroucken	Jun 7, 2016	3(3)
David Kappler	Apr 5, 2004 — Apr 28, 2016	2(2)

Note: The number in brackets denotes the number of meetings that Committee members were eligible to attend.

1. Dominic Blakemore served as a member of the Committee prior to his appointment as Committee Chairman on April 29, 2014.
2. Steven Gillis served as an interim member of the Committee prior to his appointment on December 3, 2015.

Committee meetings held during the year typically coincided with key dates in the Group's financial reporting cycle. At the invitation of the Committee Chairman, regular additional meeting attendees included the Chairman of the Board and other Non-Executive Directors, the Chief Executive Officer, Chief Financial Officer, external audit partner and members from the following internal Group functions:

- Finance
- Global Compliance and Risk Management
- Legal and Company Secretariat

To facilitate open and unreserved discussion, it is the Committee's practice to set aside time for its private deliberation, with time also reserved for private discussion with each of the Group's external audit partner, Head of Internal Audit and Chief Compliance and Risk Officer.

Role of the Committee

The purpose of the Committee is to oversee Shire's accounting and financial reporting processes, the audits of its financial statements and the effectiveness of the Company's risk management and internal control framework. In doing so, the Committee's principal duties are to:

- monitor the integrity of the financial reports and statements of the Group and, where requested by the Board, advise on whether, taken as a whole, the Annual Report and Accounts is fair, balanced and understandable
- make recommendations to the Board on matters relating to the appointment of the external auditor, to determine and agree the scope of the external audit engagement and to consider findings and recommendations arising from the external audit process
- monitor and review the integrity and effectiveness of the Group's internal financial controls and internal control and risk management systems
- review the Group's strategy for the management of key corporate and financial risks
- review the status of the Group's compliance program to ensure adherence to applicable legal and regulatory standards and to the Group's internal policies

In addition, the Committee is authorized to investigate any activity included within its terms of reference and is responsible for the resolution of any disagreement between management and the Group's external auditor regarding financial reporting matters. The Committee is also permitted to seek any information it requires from any employee of the Group, and any external professional advice at the Company's expense, necessary to the fulfillment of its duties.

Key considerations related to the financial statements

The preparation of financial statements requires management to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities and equity at the date of the financial

statements, and reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Committee reviews and critiques the critical accounting estimates, judgments and methodologies applied by management. The Committee's review considers reports and discussions with management and Deloitte LLP, the Company's external auditor, with the objective of confirming that the estimates, judgments and assumptions of management were reasonable and appropriately applied.

The significant issues considered by the Committee during the year in relation to the financial statements were:

Purchase accounting related to the acquisition of Baxalta and Dyax
- the valuation of acquired intangible assets
- the valuation of acquired inventory and the alignment of inventory accounting policies between Shire and Baxalta
- accounting for the termination of collaboration agreements
- recoverability of the accounts receivable, and alignment of Baxalta's accounting practice for sales deductions and rebates to Shire's practice
- the valuation of the assumed Baxalta pension obligations
- the valuation of the assumed Baxalta senior notes
- the subsequent adjustments to preliminary acquisition fair values

Further information is available in Note 4 to the consolidated financial statements.

Revenue recognition
- the amount of sales deductions and rebates recorded as liabilities on the balance sheet
- the assumptions related to the return rates for new product launches, most notably those related to XIIDRA

Further information is available in Note 3 to the consolidated financial statements.

Legal contingencies
- the amount and timing of legal reserves, most notably the settlement with the U.S. Department of Justice regarding our former Dermagraft business
- the nature, timing and content of the information disclosed in the Company's notes to its financial statements

Further information is available in Note 26 to the consolidated financial statements.

Tax-related matters
- the amount and timing of tax provisions related to ongoing operations
- the amount and timing of deferred tax accounting matters related to the purchase accounting for Baxalta
- the nature of tax exposures related to the Baxalta acquisition

Further information is available in Notes 3, 22 and 24 to the consolidated financial statements.

After due challenge and debate the Committee concluded that, in all of the aforementioned areas, the estimates, judgments and assumptions of management were reasonable and appropriately applied. Furthermore, as each of the areas was a prime source of audit focus, Deloitte LLP provided related detailed reporting to the Committee.

In addition to assessing the critical accounting estimates and key judgments applied by management, the Committee reviewed and supported the disclosures within the Group's 2015 full-year and 2016 quarterly results announcements and related financial reports.

Committee activities

In addition to the key considerations outlined above, the Committee's activities during the year included:

Financial reporting
- reviewing the Company's full-year and half-year results, quarterly earnings releases, key financial reports and earnings guidance
- reviewing the Group's updated Non GAAP policy, which incorporated guidance issued by the European Securities and Markets Authority, and the application of the policy including with respect to integration and acquisition costs
- reviewing tax matters impacting the Group

External audit
- reviewing quarterly updates provided by the external auditor encompassing key areas of judgment and risk, audit planning, governance updates and other business-related matters
- reviewing the 2015 audit and the initial review of the external auditor's performance and effectiveness during the 2016 financial year, including a review of management's assessment of the performance and effectiveness of the external auditor
- reviewing and approving the 2016 Audit Plan and audit fee
- assessing the objectivity and independence of the external auditor

Additional matters
- assessing the impact of the integration of the legacy Baxalta business on management's ability to undertake ongoing duties in a timely and effective manner
- reviewing compliance and audit updates from the Chief Compliance and Risk Officer and the Head of Internal Audit
- considering the renewal terms of the Group's insurance program
- reviewing the Group's treasury policies and ongoing treasury activities
- assessing the Group's financing arrangements including the issuance of senior notes
- assessing the Group's foreign exchange exposure and hedging strategy
- maintaining oversight of the Group's internal audit program
- assessing the Group's principal risks and the associated mitigation strategy

External audit

Independence and objectivity

The Committee recognizes both the need for an objective and independent external auditor and how such objectivity and independence might be, or appear, compromised through the provision of non-audit services. Accordingly, the Committee oversees an established policy on the provision of non-audit services by the external auditor with a view to safeguarding these core attributes. The policy, which was updated during the year to reflect guidance published by the Financial Reporting Council, provides that, amongst other things, the auditor must not provide a service which:

- creates a mutuality of interest
- places the auditor in a position where they would audit their own work
- results in the auditor acting as a manager or employee of the Company
- positions the auditor in the role of advocate for the Company

In addition, the policy prescribes services which the external auditor is explicitly prohibited from providing, and those the provision of which has been pre-approved by the Committee subject to individual and aggregate monetary limits. All proposed services falling outside of the scope of the policy, or the monetary limits contained therein, must receive pre-approval from the Committee or from its Chairman subject to Committee approval at its next scheduled meeting.

Fees relating to non-audit services provided by the external auditor to the Company in 2016 totaled $20.2 million (2015: $4.4 million). Nearly all of these fees ($19.8 million) relate to the continuation of projects already underway at Baxalta prior to its combination with the Company, and the reporting accountant's services provided to the Company in connection with the combination with Baxalta. Fees incurred in 2015 principally related to the reporting accountant's services provided in connection with the combination with Baxalta. Further details on the breakdown of non-audit fees paid or due to the external auditor as a result of services provided during 2016 can be found in Note 30 to the consolidated financial statements.

The Committee was satisfied throughout the year that the objectivity and independence of Deloitte LLP was not impaired. In forming this view, the Committee considered the non-audit services provided by Deloitte LLP that increased in 2016 as a result of the acquisition of Baxalta. In particular, the Committee noted that:

- the acquisition of Baxalta was a Class 1 transaction pursuant to the Listing Rules of the UK Listing Authority. To support the transaction and facilitate regulatory reporting, the Committee approved the provision of certain services by Deloitte LLP that would ordinarily be provided by the external auditor in its capacity as reporting accountant; and
- as part of its own independent process prior to its acquisition by Shire, Baxalta had selected Deloitte LLP to provide consulting services related to certain strategic projects. In order to manage transition risk, the Committee approved the continuation of certain of these pre-existing services. All necessary adjustments to the services to ensure auditor independence were made in advance of the acquisition closing. The Committee and Deloitte LLP considered the need for additional safeguards and, once these had been identified, the Committee was satisfied that they were appropriately implemented. As approved by the Committee, a certain level of permitted consulting and advisory services relating to one of these strategic projects will continue to be provided by Deloitte LLP during 2017. It is intended that these services will substantially cease by the end of that year.

Further factors identified as contributing to Deloitte LLP's objectivity and independence as external auditor include its impartial and questioning approach, particularly with respect to issues of heightened sensitivity, the firm's prudent attitude to the consideration and undertaking of non-audit services and Shire's own policy of not recruiting staff directly from the external audit engagement team.

During the year the Committee met with the external auditor to consider independence and objectivity, ensuring that the relationship between the external auditor and members of management had not resulted, or appeared to result, in a lack of independence or objectivity. The Committee considers that, during 2016, the external auditor was sufficiently robust in dealings with members of management and that, in their absence, the external auditor was transparent and decisive in dealings with the Committee.

Effectiveness

The Committee recognizes the importance of having a high-caliber audit and, as such, undertakes an annual assessment of the effectiveness of the external audit process. As part of its evaluation, the Committee drew upon a survey of members of financial management which measured the external auditor's performance against predetermined "critical success factors" which were designed to facilitate continuing and measurable improvement in the effectiveness of the external audit process. The Committee concluded that the "critical success factors" had been substantially met and that there existed a constructive working relationship between the external auditor and members of management. Moreover, the Committee determined that the audit process was sufficiently robust, with the external auditor demonstrating continued commitment to the performance of high-quality audit work. Areas of development were identified and communicated to the external audit firm which in turn has committed to working with management and the Committee in addressing these in 2017.

Appointment and tendering

Deloitte LLP has served as Shire's external auditor since 2002, with the current audit partner commencing his appointment in 2016. Following the review of Deloitte's continued objectivity, independence and performance relating to the 2016 financial year, and having received an expression of willingness to continue in office as external auditor, the Committee recommended to the Board the re-appointment of Deloitte LLP as the Company's external auditor for the 2017 financial year. There existed no contractual obligations that inhibited or influenced the Committee's recommendation.

In accordance with European and national regulation, and the UK corporate governance regime, it is the Company's policy that the external audit contract be put to tender at least once in every ten-year period, with the external audit partner rotating on a five-yearly basis. Notwithstanding such policy, having regard to transitional arrangements regarding external audit tendering and rotation provided by the relevant regulatory authorities, it is the Committee's intention, subject to then-prevailing circumstances, to put the external audit contract out to tender at a time that would see the process complete in 2020. This would result with the preferred external audit firm being appointed for the 2021 financial year. The Committee believes that the proposed timing of audit tender is in the best interests of shareholders as it stands to afford the Company continuity during the forthcoming years, particularly given the ongoing integration of the legacy Baxalta business. It should be noted that, despite the Committee's intention regarding the timing of tender, the external auditor is subject to ongoing effectiveness review, including with respect to the level of the annual audit fees, and that the Committee may choose to put the external audit contract out to tender at any time it considers appropriate. In accordance with best practice, the Committee confirms voluntary compliance with the provisions of the Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014, as published by the UK Competition and Markets Authority.

Audit quality review

During the year the Financial Reporting Council's Audit Quality Review team reviewed Deloitte LLP's audit of Shire's 2015 financial statements as part of their annual inspection of audit firms. The focus of the review and their reporting was on identifying areas where improvements are required rather than highlighting areas performed at or above the expected level. The Chairman of the Committee received a full copy of the findings of the Audit Quality Review team and has discussed these with Deloitte LLP. The Committee confirms that there were no significant areas for improvement identified within the report. The Committee is also satisfied that there is nothing within the report that has a bearing on the appointment of the external auditor.

Additional matters

Internal audit

Internal audit effectiveness is monitored and reviewed on an ongoing basis by the Committee. The Internal Audit Plan is approved annually by the Committee, progression against which is reviewed quarterly. In addition, periodically the Company's internal audit procedures and capabilities undergo an independent external assessment against global standards, with the ensuing report reviewed by the Committee Chairman.

Whistleblowing

Shire's compliance effort is focused on the prevention and detection of misconduct through policy development, training, monitoring and audit. As part of this effort, Shire employees are encouraged to report suspected cases of misconduct, confidentially and without fear of retaliation, through management or through Shire's Global Compliance Helpline. The helpline, the operation of which is overseen by the Chief Compliance and Risk Officer, is managed by an independent third-party so as to preserve anonymity as appropriate. Concerns and allegations are thoroughly investigated with disciplinary action taken where necessary. Periodically, the Chief Compliance and Risk Officer provides the Committee with a summary of matters raised through management and the helpline as well as details of any resultant investigations.

Nomination & Governance Committee

Susan Kilsby
Committee Chairman

Membership and meetings

As at the year end the Nomination & Governance Committee comprised three independent Non-Executive Directors and the Chairman of the Board.

Committee member[1]	Date of appointment	Meeting attendance
Susan Kilsby[2]	Feb 1, 2014	5(5)
William Burns	Jun 27, 2011	5(5)
David Ginsburg	Dec 3, 2015	5(5)
Anne Minto	Feb 8, 2012	5(5)
David Kappler	Apr 26, 2006 — Apr 28, 2016	2(2)

Note: The number in brackets denotes the number of meetings that Committee members were eligible to attend.

1. Olivier Bohuon and Sara Mathew were appointed as members of the Committee on February 15, 2017.
2. Susan Kilsby served as a member of the Committee prior to her appointment as Committee Chairman on April 28, 2016.

Committee meetings are typically held before scheduled meetings of the Board, with additional meetings convened as required. At the invitation of the Committee Chairman, regular additional meeting attendees included the Chief Executive Officer and members from the Company's Legal and Company Secretariat functions.

Role of the Committee

The Committee's responsibilities include:

- reviewing the size and composition of the Board and its committees and making recommendations to the Board with respect to any changes
- identifying, and nominating for the approval of the Board, candidates for new Board appointments and making recommendations with respect to the re-election and reappointment of existing Directors
- reviewing succession planning for Executive and Non-Executive Directors with a view to ensuring the long-term success of the Group
- making recommendations to the Board on matters of governance, reputation and political activity affecting the Company
- maintaining the policy concerning Directors' conflicts of interest and monitoring adherence to that policy

Key considerations and activities

During the year and up to the date of this report, the Committee's principal considerations and activities were:

Baxalta appointments

In anticipation of the Company's combination with Baxalta, early in the year the Committee reviewed the professional profiles of Baxalta's Board members with a view to identifying those individuals whose skills and experience would be of most benefit to the Shire Board. A shortlist was prepared and selected candidates spoke with members of the Committee. Following careful consideration, a recommendation was made to, and subsequently approved by, the Board for Gail Fosler and Albert Stroucken to be appointed Non-Executive Directors with effect from completion of the Company's acquisition of Baxalta. The appointment of serving Baxalta Directors to the Shire Board was a condition of the merger agreement between the two companies. Accordingly, neither an external search consultancy nor open advertising were used in identifying the prospective Board members.

New Non-Executive Director

In alignment with Shire's strategy to become a leading global biotechnology company, and in pursuit of enhancing relevant expertise on the Shire Board, during the year the Committee commenced a search for a new Non-Executive Director that would add experience in this area. Russell Reynolds Associates, which has no other connection with the Company, was retained to lead the search. Following an extensive review, Ian Clark was appointed to the Board on January 3, 2017.

Expansion of Committee responsibilities

During the year the Committee considered its remit in light of developments to the Company's structure and operating environment. Following a review of the stewardship requirements of the business, the Committee recommended to the Board that its responsibilities be expanded to encompass matters of a governance and reputational nature affecting the Company. The Committee's Terms of Reference were subsequently updated to reflect the change, which included the responsibility

for retaining oversight of the conflicts of interest policy applicable to Directors.

Board Diversity Policy
Committee members participated in the wider Board review of Shire's Board Diversity Policy in light of the evolving diversity environment and developments in practice. Further details on the review, including a description of the policy, can be found on page 72. In undertaking the review, the Committee and the Board reaffirmed their commitment to the promotion of diversity both in executive and non-executive appointments and in recruitment practice throughout the Group. Further details on diversity within Shire can be found on pages 38 to 39.

Board appointments procedure
Board composition is central to the effective leadership of the Group and therefore, prior to commencing any search for prospective Board members, the Committee reflects on the Board's balance of skills and experiences and those that would be conducive to the delivery of the Company's strategy. A recommendation is then made to the Board in respect of the core attributes desired, following which an appropriately qualified search firm is engaged and informed, amongst other things, of the experience, technical skills and other capabilities sought, of the time commitment required of any appointee and of Shire's Board Diversity Policy. Short-listed candidates are interviewed by as many of the Committee members as is feasible, following which any preferred candidate meets with other Directors prior to a decision being made by the Board.

Science & Technology Committee

Dr. David Ginsburg
Committee Chairman

Membership and meetings
As at the year end the Science & Technology Committee comprised four independent Non-Executive Directors. In accordance with the Committee's terms of reference, the Board is satisfied that at least one Committee member has scientific expertise relevant to pharmaceutical research and development.

Committee member[1]	Date of appointment	Meeting attendance
David Ginsburg	Jun 16, 2010	5(5)
Olivier Bohuon[2]	Jul 1, 2015	4(5)
William Burns	Feb 8, 2012	5(5)
Steven Gillis	Oct 1, 2012	5(5)

Note: The number in brackets denotes the number of meetings that Committee members were eligible to attend.

1. Ian Clark was appointed as a member of the Committee on February 15, 2017.
2. Olivier Bohuon was absent from one meeting due to illness. In addition, Mr. Bohuon stood down as a member of the Committee on February 15, 2017.

The Committee typically meets before scheduled meetings of the Board. At the invitation of the Committee Chairman, regular additional meeting attendees during the year included the Chairman of the Board and other Non-Executive Directors, the Chief Executive Officer and members of the following internal Group functions:

- Research and Development
- Corporate Development
- Legal and Company Secretariat

Role of the Committee
The Committee's principal responsibilities are to periodically review and advise the Board on the Company's investment in research, development and technology, the quality of the R&D pipeline and the quality of R&D talent within the Group. In doing so, the Committee assesses, and advises the Board in respect of:

- the Company's R&D strategy relating to strategically important therapeutic areas
- emerging science and technology issues, trends and academic partnerships
- the overall quality and expertise of medical and scientific talent within the R&D organization
- the quality and competitiveness of the Company's R&D programs and technology initiatives from a scientific perspective, including the associated risk profile
- the scientific, technical and medical merits of any potential significant R&D investments

Key considerations
The Committee's principal areas of review during the year included:

- the clinical development pipeline and the research and non-clinical portfolio, including key program updates
- the R&D budget and productivity of the portfolio
- the relevant clinical or material pre-clinical data identified during due diligence relating to material business development transactions
- key clinical trial/study data including BAX930, SHP607 and SHP465
- integration activities concerning Dyax and Baxalta
- the Company's compassionate use program and related policy development
- ongoing strategy relating to Oncology

Executive Committee

Dr. Flemming Ornskov
Committee Chairman

Membership and meetings

Chaired by the Chief Executive Officer, the Executive Committee's membership is drawn from Shire's Executive Directors and management. As at the year end the Committee comprised the Chief Executive Officer, Chief Financial Officer, General Counsel and Company Secretary, Head of U.S. Commercial, Head of International Commercial, Head of Technical Operations, Chief Human Resources Officer and the Head of Research and Development.

The Committee typically meets on a monthly basis to deliberate significant items of business, scheduling additional meetings as required. During the year there were 11 meetings of the Committee, each of which was attended by the Chief Executive Officer and the Chief Financial Officer. In addition to its members, other members of management attended Committee meetings at the invitation of the Committee Chairman.

Committee member	Position	Date of appointment
Flemming Ornskov	Chief Executive Officer	Jan 2, 2013
Jeffrey Poulton[1]	Chief Financial Officer	Jan 1, 2015
Ginger Gregory	Chief Human Resources Officer	Mar 1, 2014
Bill Mordan	General Counsel and Company Secretary	Oct 1, 2015
Perry Sternberg	Head of U.S. Commercial	Jun 3, 2016
Kim Stratton	Head of International Commercial	Jul 1, 2016
Philip Vickers	Head of Research and Development	Mar 1, 2014
Matt Walker	Head of Technical Operations	Jun 3, 2016

1. Jeffrey Poulton served as Interim Chief Financial Officer and as a member of the Executive Committee prior to his appointment as Chief Financial Officer on April 29, 2015.

Role of the Committee

The Committee is charged with managing Shire's business including:

- ensuring that the Group is run within the governance framework agreed by the Board
- making strategic recommendations to the Board and implementing the strategy approved by the Board
- considering matters referred from management committees that are material from a risk, financial, reputational or strategic perspective, referring decisions to the Board as appropriate
- supervising the preparation of financial plans and budgets to be recommended to the Board and monitoring the performance of the Group's In-line products and Pipeline projects against budget
- managing internal talent and senior leadership succession planning and directing the Group's human resources approach within parameters agreed with the Remuneration Committee, including the reward framework

Key considerations

The Committee's principal considerations during the year included:

- financial and operational matters, including budget tracking and product performance reviews
- matters of corporate strategy
- business development opportunities
- the integration of Baxalta and recognition of synergies
- compliance updates from across the Group
- the Company's risks and associated mitigation activities and initiatives
- updates on material litigation and investigations
- objectives and proposed budget for 2017
- human resource matters including talent assessment, talent management principles, remuneration policy and employee survey results

Directors' remuneration report

Part 1: Annual statement Chairman's letter

> It has been a remarkable year for Shire. The combination with Baxalta, which was finalized on June 3, 2016, has created the world's leading global rare disease-focused biotechnology company.

Anne Minto OBE
Chairman of the Remuneration Committee

Dear shareholder,

I am pleased to present the Directors' Remuneration Report ("DRR") for the financial year ending December 31, 2016 — a year of extraordinary change for Shire. With the acquisition of Baxalta, Shire is now the world's leading global biotech company focused on rare diseases. While this acquisition marks an inflection point in our Company's evolution, our journey continues. This letter and the subsequent content of the Directors' Remuneration Report have been set out to help shareholders understand our remuneration structure and how it supports Shire's strategy and performance.

During 2016, I have personally spent a great deal of time with our largest shareholders to encourage a deeper dialogue and understanding of their perspective. Following the disappointing vote on our Remuneration Report at the 2016 Annual General Meeting ("AGM"), it was extremely important to both me and the Remuneration Committee (the "Committee") that we understood the concerns of those that voted against the report last year as we have always enjoyed strong support from our shareholders. We have consulted fully with shareholders on the proposed changes to the incentive targets for our in-flight (outstanding) awards as a result of the Baxalta acquisition. Further details of the decisions taken by the Committee in 2016 following these shareholder consultations are summarized later in this letter. The Committee and I found the high level of shareholder engagement and insight from these conversations extremely helpful as we deliberated on key remuneration decisions in 2016. We look forward to continuing these important conversations during the course of 2017 as we enter discussions into the triennial renewal of our Remuneration Policy.

Within this letter I have set out information on our Remuneration Policy and key decisions made during the year. This is followed by the Annual Report on Remuneration on pages 90 to 107, which gives full details of how the approved Policy was implemented in 2016 and will be applied in 2017. For completeness, the key parts of our approved Remuneration Policy are provided as an appendix to this report.

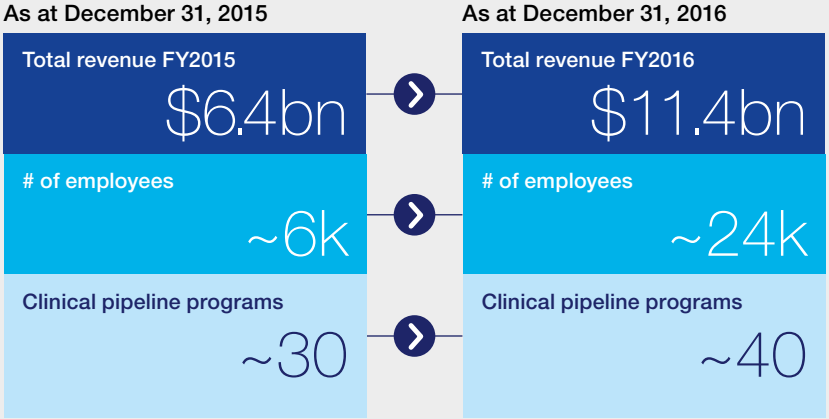
A game-changing year

For Shire, 2016 was a truly remarkable year. On June 3, 2016, we completed the acquisition of Baxalta, creating the world's leading global biotech company focused on serving patients with rare diseases. Throughout this year of change, our U.S. and Swiss-based executive team provided exceptional business leadership. As a result of their vision, commitment and dedication, the combined business has continued to deliver value to shareholders during 2016.

The acquisition of Baxalta has transformed the scale and reach of Shire's business. We have established the strongest innovative clinical pipeline in Shire's 30-year history. We now have roughly 40 programs in the clinic, with a significant focus on areas of high unmet medical need and rare disease patient populations. About 20 of these programs are in the later stages of development. Given the robustness of our pipeline, we expect it will continue to deliver value to our business and importantly to our shareholders over the longer term.

Overview of Shire post-Baxalta transaction

> The combination with Baxalta has transformed the scale and reach of Shire's business.



~40 Clinical programs in the pipeline

Phase 1	Phase 2	Phase 3	Registration	Recent approvals
6	10	17	4	3

Beyond our pipeline, we have multiple, durable, best-in-class products and have enhanced our diversification with Shire medicines available in more than 100 countries around the world. Shire now holds the number one position (by sales) in each of Hemophilia, Attention Deficit Hyperactivity Disorder (ADHD) and Hereditary Angioedema (HAE). With the successful launch of XIIDRA in 2016, we have the fastest-growing product in the dry eye disease market, setting the framework for future leadership in ophthalmology.

Industry leadership across seven core therapeutic areas

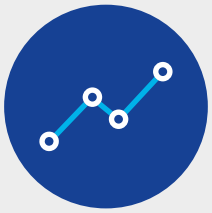
#1 in **Hemophilia**	#1 in **ADHD**	#1 in HAE	#1 portfolio in **UC — mesalamine** products	#3 company in diseases treated with **immunoglobulin therapy**	Leading portfolio in select **rare diseases:** (Hunter, Fabry, Gaucher, SBS and others)	Fastest-growing in **dry eye disease**
>$3.5bn in annual sales, broadest portfolio of therapies	**>$2bn** annual sales	>$1bn in annual sales, leading brands in acute and prophylaxis	**~$1bn** annual sales	**>$1.5bn** in annual sales with most differentiated subcutaneous portfolio	**>$1.5bn** annual sales	**>200K** RXs written and **~20%** market share in first 4 months post U.S. launch

This period of great organizational change has not been without its challenges. We have effectively integrated 17,000 new colleagues to create an organization of approximately 24,000 employees across 68 countries in record time due to the exceptional leadership of our executive team. We remain on track to achieve our increased guidance of at least $700 million in cost synergies by year three post-close.

Highlights of integration with Baxalta

Key staff and talent **successfully** retained

Employee workforce is **highly engaged**



On track to achieve at least $700 million cost synergies post-close in year three

One-off integration costs **in line** with expectations

Integration teams continue **achievement** of major milestones

Consolidation of key sites

Alongside the Baxalta acquisition, the continued integration of other recent acquisitions such as ViroPharma, NPS and Dyax has been delivered on time and ahead of expectations. The success of these deals has helped create a strong foundation of core integration skills, which we have successfully applied to the Baxalta transaction. This builds on our ability to deliver cost and revenue synergies.

We also had the honor of being awarded the Pharma Company of the Year at the 2016 Scrip Awards.

Additional 2016 achievements during this intense period of integration and organizational change are outlined below.

Major approvals and launches

FDA Approval and U.S. launch of XIIDRA (Lifitegrast) for Dry Eye Disease	**Approval and U.S. launch of CUVITRU** for Primary Immune Deficiency in Europe and the U.S.	**EMA Approval and launch of ONIYDE** for second-line Metastic Pancreatic Cancer	Approval of Vyvanse in Canada for Binge Eating Disorder (BED) in adults	Approval of Lialda in adults in Japan for Ulcerative Colitis (UC)	Launch of VONVENDI in adults in the U.S. for von Willebrand disease (VWD)	**2 new indications for ADYNOVATE in U.S.;** Pediatric and surgery indications

Development progress and other events

Resubmission for FDA approval for SHP465 for ADHD	**2 Breakthrough Therapy FDA Designations** – SHP621 for eosinophilic esophagitis (EOE) – SHP625 for progressive familial intrahepatic cholestasis type 2 (PFIC2)	**1 Fast Track FDA Designation** – SHP626 for non-alcoholic steatohepatitis (NASH)	**Completed Enrollment for Phase 3 Studies** – SHP609: Hunter Syndrome (IT Program) – SHP643: HAE	**Completion of Phase 2 study** – SHP607: complications of prematurity	**License** – SHP647 integrin antagonist for Crohn's Disease (CD) and UC	**Announcement of future innovation Hub** – Expansion of Cambridge, MA operations for rare diseases innovation Hub

Shareholder engagement during 2016

- The Remuneration Committee undertook two significant rounds of consultation with shareholders during 2016. The first, in the lead up to the 2016 AGM, focused on the salary increase awarded to the CEO during 2015. The purpose of this consultation was to explain the rationale for the increase and why we, as a Committee, had been unable to approach shareholders at an earlier point due to the communication and legal restrictions placed on us as a result of the ongoing negotiations with Baxalta. During these discussions no price-sensitive information was discussed with shareholders.
- The second round of shareholder consultation was then conducted over the six months following the 2016 AGM to a) understand shareholder views where they had voted against the Remuneration Report at the 2016 AGM and b) discuss the proposed revised targets for our in-flight incentive awards to reflect the change in Shire's business following the Baxalta transaction. In particular, a working group was formed with a number of shareholders to discuss the impact on Return on Invested Capital ("ROIC") post-acquisition.
- I found these engagements incredibly helpful to understand our shareholders' points of view and I would like to thank our shareholders who invested their time during these consultation exercises. These conversations helped the Committee understand the views of our shareholders and also enabled us to put in place a set of revised Long-Term Incentive Plan ("LTIP") targets to ensure that the in-flight incentives remain relevant to participants and appropriately stretching given the scale of the new business.

Revised targets post Baxalta

Following the 2016 AGM, I wrote to our largest shareholders to discuss our proposed approach to revising our incentive targets to reflect the impact of the Baxalta acquisition on the Shire business and to ensure that the targets in place were suitably stretching for the business going forward. In determining the revised 2015 and 2016 LTIP targets, the Committee carefully weighed the following elements:

- **Shareholder feedback** — Based on the initial shareholder feedback received after the AGM, the Committee met multiple times to discuss the revisions to the target ranges for the 2015 and 2016 in-flight long-term performance award cycles. I then wrote to shareholders in early August with the proposed target ranges. In late August and throughout September I had meetings with over 20 of our top shareholders, as well as the Investment Association and ISS, to discuss the revised target ranges and any other issues shareholders wished to raise. Based on this feedback, we circulated the revised ranges in September, which were aligned with the Board's view of the future of the business.
- **Consensus forecasts** — The Committee also reviewed the amended 2015 and 2016 LTIP performance ranges against consensus forecasts available at the time. Based on those consensus estimates, we are confident that the revised ranges are both stretching in the context of our anticipated business performance and analyst expectations. The top end of the revised ranges requires double-digit growth for Product Sales and EBITDA over the remaining period. The Committee considers this level of performance stretching in both the context of the business and the wider sector in which we operate.
- **Performance expected from the NPS and Dyax acquisitions** — For the 2015 LTIP awards, the revised targets were also adjusted to include the performance expected from the NPS and Dyax acquisitions (these were not included in the original 2015 assessment as the acquisitions occurred after the original targets were set). This approach ensures that the revised 2015 targets reflect the expected future performance for Shire's entire combined business.

While the adjustments to both the Product Sales and Non GAAP EBITDA targets as a result of the transaction have materially increased the ranges for both awards, the Non GAAP ROIC underpin for the 2015 and 2016 awards has been reduced to 7.75 percent. This reflects the short to medium downward impact on ROIC as a result of the considerable increase in our invested capital following the Baxalta deal, combined with the recent NPS and Dyax acquisitions. This logic and the detailed analysis behind it was discussed in many of the meetings with our shareholders, who recognized the need to adjust the underpin for these two in-flight awards as a result of the short-term disconnect between the immediate level of capital being invested by the business and the delay in the increased returns that this investment will generate over time.

For the 2017 LTIP, we understand that shareholders expect that the ROIC underpin will increase going forward to hold management accountable to the anticipated improvement in returns as a result of our acquisitions. Calibrating the level of the ROIC underpin is of pivotal importance as the underpin hurdle must be achieved in order for any award earned under the 2017 LTIP to vest. (The award earned under the 2017 LTIP is dependent on the Product Sales and EBITDA performance against the ranges set out below and then vests based on the ROIC underpin.)

With this in mind, the ROIC underpin for the 2017 LTIP award has been set such that the business must achieve an average ROIC of 8.5 percent over the three-year performance cycle before 100 percent of the award earned under the plan will vest. Given the level of stretch performance that an average three-year 8.5 percent ROIC underpin will require over the performance period, the Committee also want to ensure that the plan continues to incentivize management. To this end, we have introduced a sliding scale ROIC underpin for the three-year performance period. The threshold of the sliding scale ROIC underpin has been set at 7.5 percent with an associated 25 percent payout of the funded award earned based on the achievement of the Product Sales and EBITDA performance metrics. The maximum of the sliding scale ROIC underpin is 8.5 percent which results in 100 percent payout of the funded award based on the achievement of the Product Sales and EBITDA performance metrics. The vesting level of payout levels between the minimum and maximum levels of ROIC underpin will be calculated based on a straight-line interpolation. The Committee believes a sliding scale of this nature will ensure a material increase in the level of the underpin must be achieved for 100 percent of the earned award to vest which is aligned with shareholder expectations while remaining motivational to management during the three-year performance period. It should be further noted that the threshold level of ROIC performance at 7.5 percent equates to the same level of earnings performance as was previously incorporated in the 7.75 percent underpin for the 2015 and 2016 LTIP awards after the adjustments for changes in foreign exchange rates and purchase accounting related to the Baxalta acquisition.

The revised targets for the 2015 and 2016 LTIP awards and the new targets for the 2017 LTIP awards are summarized in the table below:

	Threshold to maximum performance range		
	2015 LTIP awards (adjusted in-flight)	2016 LTIP awards (adjusted in-flight)	2017 LTIP awards (new grant)
Product Sales	$13,953m – $15,389m	$15,000m – $17,000m	$16,000m – $18,000m
Non GAAP EBITDA	$6,414m – $7,143m	$6,645m – $7,940m	$7,510m – $8,750m
Non GAAP ROIC underpin	7.75%[1]	7.75%[1]	7.5% (25%) – 8.5% (100%)[2]

[1] The underpin must be achieved before any vesting of the award can occur.
[2] The underpin is set as a sliding scale such that a maximum of 25 percent of the total award would be able to vest for average ROIC performance over the period of 7.5 percent rising on a straight-line basis to 100 percent of the award being available for vesting for average ROIC performance over the period of 8.5 percent.

Details of the revisions made to the 2016 Annual Bonus awards are set out in Part 2(b) of this report.

Remuneration Policy renewal

Through the course of our discussions with shareholders in 2016, some asked if Shire would be renewing our Remuneration Policy in 2017 — a year ahead of schedule — given the outcome of the 2016 AGM vote. The views of our shareholders are extremely important to us and we take the 2016 AGM voting outcome very seriously. Bearing these views in mind, the Committee deliberated the timing of the Policy renewal at length. After careful consideration, we concluded that it would be in the interests of all concerned to renew the policy at the 2018 AGM as planned for the following reasons:

- **The existing Remuneration Policy has the flexibility to address the issue of quantum.** Many shareholders who suggested that we should bring our policy back for a new vote were primarily focused on the increase in quantum which occurred as a result of the salary increase awarded to our CEO in 2015. The Committee believes that we already have sufficient flexibility to react to this feedback under our existing Remuneration Policy in 2017. As such, we have materially reduced the LTIP grant to both of our Executive Directors to 575 percent of salary for 2017. For the CEO, this is 20 percent less than the level of award made last year and more than 30 percent less than the maximum award level permissible under the Policy. The 2017 grant level of 575 percent provides a significantly lower opportunity level for our CEO when compared to the maximum opportunity of 840 percent under his previous base salary. While we believe this significant reduction in the LTIP quantum demonstrates that we have taken material action as a result of last year's vote, the Committee feels it is important to confirm that we fully support the CEO and that we are of the view that he has performed exceptionally well over the year, as evidenced by the EAI (short-term incentive) outcomes (see below for further details). Further, we recognize the long-term value that has been created by the CEO since joining the organization in 2013 and in particular the transformational impact that the acquisition of Baxalta has had on the Company, which is reflected in the significant increase in the size, scale and complexity of the combined organization.
- **The business is going through a period of extraordinary change.** While the initial integration was completed within the first six months, the organizational structure, cultural expectations and overall business operations under the newly combined entity are very new. We believe that the Remuneration Policy is a critical part of our employee value proposition as many of the design elements will cascade throughout the organization and impact employees below Executive Director level. To this end, we plan to take the time needed in 2017 to review our pay structure carefully to ensure that it is effective and we will fully engage with our shareholders during that process.
- **The existing Remuneration Policy already includes key best practice provisions.** Shire was a frontrunner in implementing strong governance provisions, including malus and clawback clauses as well as a post-vest holding period on the LTIP resulting in a five-year period from grant to final release of Performance Share Units ("PSUs") and Stock Appreciation Rights ("SARs").
- **The future Remuneration Policy must appropriately balance pay practice for our U.S.-based Executive Committee and recognition of our UK listing.** Both our CEO and CFO, and all but one of our Executive Committee members, are based in the U.S. The remaining Executive Committee member is based in Switzerland. Further, 68 percent of our revenues and 58 percent of our workforce are also U.S.-based. As such, any revisions to our Remuneration Policy will need to be fully informed by biotech sector practice in the U.S. as well as FTSE 100 practice in the UK. For this reason, the Committee believes that it is vital to take sufficient time to ensure our approach to remuneration appropriately balances the proportion of the business in the U.S., while recognizing our UK listing and global footprint.

Given all these factors, we will come back to shareholders with a realigned Remuneration Policy for the new combined entity in the autumn of 2017 for approval at the 2018 AGM.

Engaging with proxy advisors during 2016

- As a result of mutual reaching out in 2016, we had constructive discussions with ISS and Glass Lewis on both our broader policy design and disclosures. We found these talks extremely informative and helpful.
- We specifically engaged with ISS to understand the pay for performance methodology they use within the reports they prepare for investors. We raised concerns regarding the selection of a purely European peer group for comparison with Shire, given our significant employee base and operational presence in the U.S., as well as having significant business and revenue generation outside the European market.
- ISS confirmed that their methodology precludes them from comparing Shire to any U.S.-based peer company unless we lose our Foreign Private Issuer status.
- While we understand the methodology used by ISS for peer group benchmarking cannot currently be changed, we appreciated their willingness to talk with us about their approach.
- Separately we were approached by Glass Lewis to discuss a number of items, including our approach to our 2015 DRR disclosure. They iterated the benefits of clearly tying our remuneration decisions to our business strategy as well as general transparency on our approach to making remunerations decisions. We have worked to incorporate that feedback into this disclosure as well as through other opportunities to engage with shareholders.

Remuneration outcomes for the year

2016 single total figure of remuneration for Executive Directors

				Short-term incentives				
Executive Director	Base salary	Retirement benefits	Other benefits	Cash	Shares	Long-term incentives	2016 Total	2015 Total[1]
F. Ornskov ($000)	1,688	506	582	1,994	665	4,891	10,326	16,939
J. Poulton ($000)	587	147	55	622	207	133	1,751	921

Note: all figures have been rounded to the nearest thousand.

[1] In the 2015 DRR, the vesting value of Dr. Ornskov's long-term incentives was calculated using the average share price over the last quarter of 2015 of $207.85 per the relevant UK regulations. This figure has been restated to reflect the actual share prices at the vesting dates of these awards on February 28, 2016 and May 2, 2016 per the relevant UK regulations. The result is that the previously disclosed figure of $16,814,360 has been restated to $12,171,565. Dr. Ornskov's total single figure of remuneration has therefore also been restated from $21,579,864 to $16,937,070 (and subsequently rounded).

Short-term incentives (Executive Annual Incentive ("EAI")):

2016 was another year of strong, profitable growth and excellent achievement against non-financial metrics, including the approval and launch of XIIDRA, the successful integration of Baxalta and Dyax, the advancement of our rare disease-focused R&D pipeline and significant improvements in the strength of our technical operations capabilities. This strong performance resulted in a corporate funding level of 127.21 percent for the bonus pool. The bonus works such that a particular funding level under the Corporate Scorecard results in a potential range of annual incentive payouts for an individual depending on their formal individual performance rating. Shire has four individual performance ratings under this assessment: Does Not Meet expectations, Meets Sometimes, Consistently Meets expectations and Consistently Exceed expectations. The Committee determined that both the CEO and CFO have delivered extraordinary leadership of the business and performed extremely well against the objectives set for each of them in 2016. As such they were rated Consistently Exceeds which, given the 127.21 percent funding level under the Scorecard, generated a potential annual incentive payout range for 2016 of 150 percent to 200 percent of target bonus. The Committee therefore determined it was appropriate to award the midpoint of the potential range and both individuals will therefore receive a bonus of 175 percent of target, which is equal to 158 percent of salary for the CEO and 140 percent for the CFO.

Long-term incentives:

The final outcome under the 2014 Portfolio Share Plan[1] ("PSP") resulted in a vesting level of 100 percent of maximum, reflecting solid financial performance over the past three years against the Non GAAP EBITDA and Non GAAP Adjusted ROIC measures within the 2014 PSP performance matrix.

Given that more than 80 percent of the performance period for this award (originally granted in 2014) had already passed at the time the acquisition of Baxalta was completed, no revisions were made to the performance measure targets set for the 2014 PSP award. The original targets remained in place as disclosed in the 2014 DRR (and are provided for reference on page 97 of this report). The combined business results at the end of FY2016 were adjusted to remove the impact of Baxalta in assessing performance to determine the appropriate level of vesting that should occur. Baxalta was therefore treated as a Significant Adjusting Event ("SAE") for the purposes of performance assessment for the 2014 PSP award (see page 98 of the report for further details).

I discussed this approach with shareholders as part of the 2016 consultation process and all indicated their support. Further, the NPS and Dyax acquisitions have been treated as SAEs in determining the vesting of the 2014 PSP award. We are very conscious that, as a result of three major acquisitions over the performance period of this award, there are significant adjustments to the reported numbers to determine the appropriate vesting level. We have therefore provided the unadjusted results under the 2014 performance matrix for comparison and to provide greater transparency to shareholders on page 99 of the report.

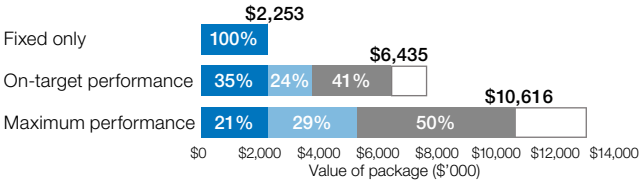
[1] Legacy Shire Portfolio Share Plan, which was replaced by the Shire Long-Term Incentive Plan approved by shareholders in 2015.

Summary of Remuneration Policy (to apply up to the 2018 AGM) and Implementation in 2017

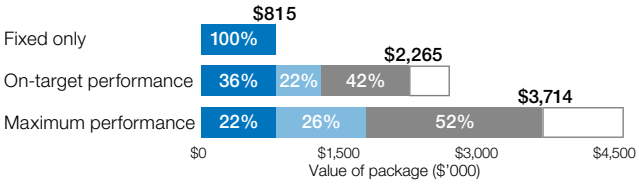
	Implementation in 2017	
	CEO	CFO
Base salary – 2017 annualized base salary (effective April 1, 2017 for the CFO).	$1,688,000 0% increase (salary freeze)	$609,760 3% increase
Retirement benefits and other benefits – Retirement benefits include the cash value of the total Company contributions to the Company plans. – Other benefits represent the value of annualized benefits included in the summary of 2016 remuneration table in Part 2(b) of this report (excluding any one-off items).	30% of base salary (retirement benefits)	25% of base salary (retirement benefits)
Executive Annual Incentive ("EAI")	On-target = 90% of salary Maximum = 180% of salary	On-target = 80% of salary Maximum = 160% of salary
Long-Term Incentive Plan ("LTIP")[1] – Represents the 2017 LTIP award to be granted to the CEO and CFO. The maximum grant under the Remuneration Policy is 840% of salary which is indicated by the gray outline on the charts.	575% of base salary (2017 LTIP award) On-target = 50% vesting	575% of base salary (2017 LTIP award) On-target = 50% vesting

[1] In accordance with the Schedule 8 Regulations, no allowance has been made for share price appreciation. SAR awards are valued with the same Black-Scholes model that is used to determine the share-based compensation cost included in the Company's consolidated statements of income. Per standard practice, any dividend shares receivable have not been included.

CEO (Flemming Ornskov)

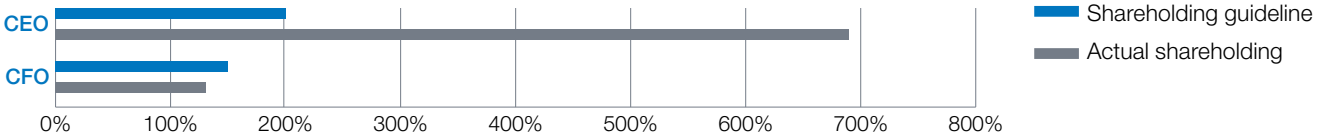


CFO (Jeff Poulton)



Fixed elements — base salary, retirement and other benefits | Short-term incentives — Executive Annual Incentive | Long-term incentives — LTIP

Executive Directors' actual shareholdings and shareholding guidelines as at December 31, 2016



Executive Directors are required to meet their shareholding guideline within a five-year period following their appointment. The Committee believes that share ownership is an important means to support long-term commitment to the Company and the alignment of executives' interests with those of our shareholders.

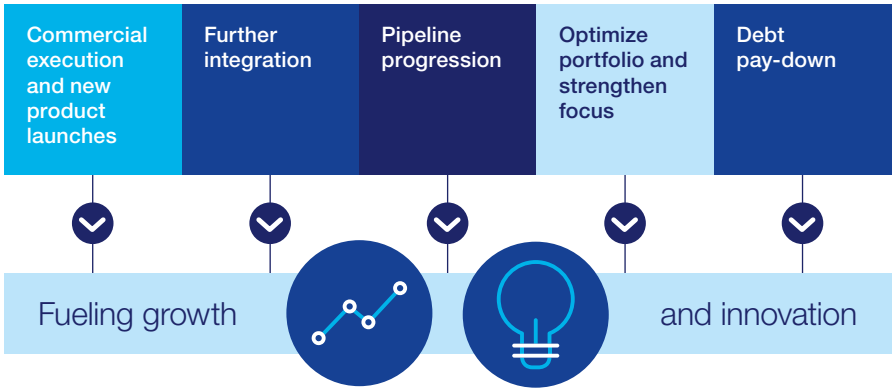
2017 LTIP award

During my conversations with shareholders, a number noted that the combination of both the salary increase awarded to the CEO in 2015 and the maximum LTIP opportunity of 840 percent of base salary could result in significant levels of remuneration. Although the CEO's 2016 LTIP award was equal to 725 percent of salary and therefore not at the maximum level possible under the Policy, the Committee nonetheless takes the issue of the quantum of the CEO's pay very seriously. On a total compensation basis, our CEO's pay is below the lower quartile of both the Global Biotech and U.S. BioPharma peer groups. However, the Committee is conscious that external benchmarking is only one reference point when setting pay levels. For 2017, the Committee has decided to make an LTIP grant of 575 percent of salary to both the CEO and CFO. As set out above, the CEO's award is 20 percent less than the level of award made last year and more than 30 percent less than the maximum award level permissible under the Policy. This therefore results in a significantly lower opportunity for our CEO than would have been the case under his previous salary at either the maximum award level or last year's grant level. We hope that this significant reduction in the LTIP quantum demonstrates that we have listened to shareholders as a result of last year's vote and have taken material action as a result. Within this context, and as outlined above, it is important to confirm that the Committee fully supports the CEO and that we are of the view that they he has performed exceptionally well over the year, as evidenced by the EAI outcomes.

Looking ahead to 2017 and 2018

- The Committee will be conducting a full Policy review during 2017 in the lead up to the binding shareholder vote on a revised Remuneration Policy at the 2018 AGM.
- The purpose of the review will be to ensure the remuneration structure that we have for the coming years is fit for purpose and aligned with the strategy of the new business following the acquisition of Baxalta.
- The discussions with our shareholders during 2016 have already identified some specific areas that we want to review as part of the Policy renewal process, including but not limited to the appropriate balance of pay practices for our U.S.-based executives, the selection and balance of performance measures across our incentives, and the shareholding requirements for our executives in order to ensure further alignment with the interests of our shareholders over the longer term.
- I will be in contact again with our shareholders during 2017 to seek their views on how we pay our executives at Shire.

Key priorities for 2017



Concluding remarks

Finally I would like to thank my fellow members of the Remuneration Committee for their total commitment and engagement in what has been an intensive year for the business, necessitating many additional meetings. I would also like to welcome Albert Stroucken, who was appointed to the Committee following the acquisition of Baxalta. Al's experience on the Board of Baxalta is already proving highly valuable in our deliberations. 2017 will be a critical year for Shire as we continue to integrate the legacy Baxalta organization. I also would like to thank both the Shire and PwC teams for their tremendous support throughout a very challenging and demanding year.

I remain passionately committed to overseeing a Directors' Remuneration Policy that works for Shire's business and our shareholders. Over the coming year I intend to continue our level of engagement with shareholders, which I know the Committee will find invaluable as it reviews the current Policy.

Anne Minto OBE
Chairman of the Remuneration Committee

Index to the Directors' remuneration report

This report has been prepared in compliance with Schedule 8 of the Large and Medium sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended by the 2013 Regulations) (the "Schedule 8 Regulations"), as well as the Companies Act 2006 and other related regulations. This report is set out in the following key sections:

The Annual Report on remuneration (Part 2) will be put to an advisory shareholder vote at the 2017 AGM. The Directors' Remuneration Policy (the "Policy") was approved by shareholders at the 2015 AGM (April 28, 2015) and is intended to be effective until the 2018 AGM. The key parts of the Directors' Remuneration Policy are provided as an Appendix for completeness. The complete Policy as approved by shareholders can be found within the 2014 DRR available on the Company's website.

Part 2: Annual report on remuneration

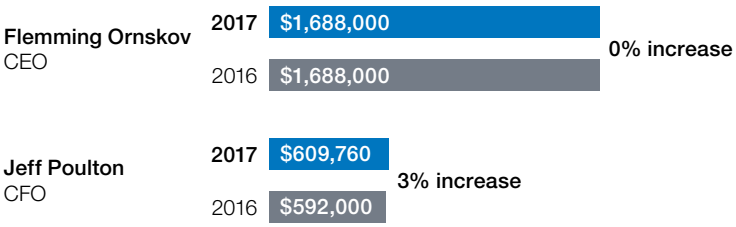
a) Implementation of Directors' Remuneration Policy in 2017

In 2017, the Executive Director and Non-Executive Director Remuneration Policies will be implemented as follows:

Executive Director Remuneration Policy

Fixed elements — Base salary

2017 Base Salary



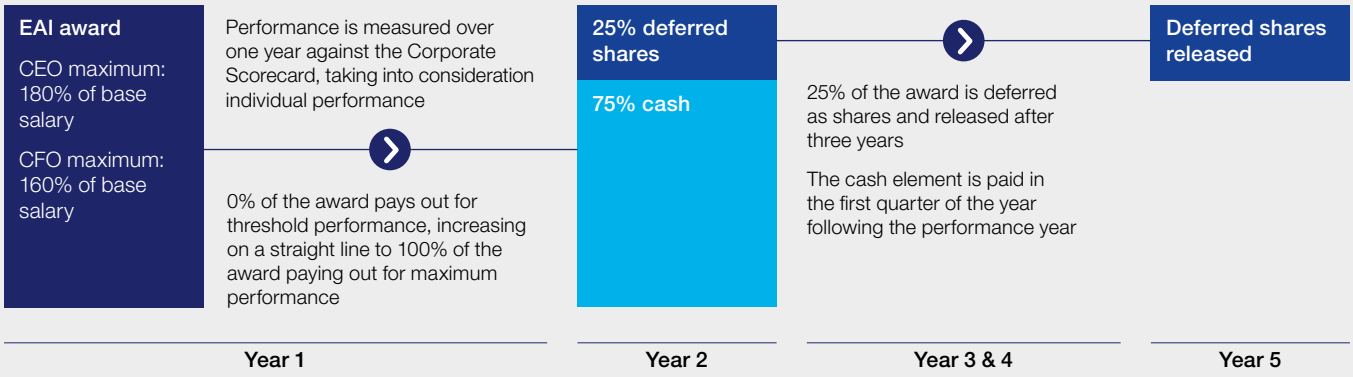
CEO: Following the 25 percent salary increase awarded to Dr. Ornskov during 2015, the Committee has committed to freezing his salary at this level for the next three years.

CFO: Following the year-end review, the Committee made the decision to award Jeff Poulton a base salary increase of 3 percent, to give him an annual base salary of $609,760 effective April 1, 2017 (in line with the salary increase effective date for all other employees). This reflects his continued strong corporate performance and leadership, and is in line with the average salary increase awarded across the broader organization.

Fixed elements — Retirement and other benefits

The implementation of policy in relation to retirement and other benefits is unchanged and in line with the disclosed policy in the Appendix of this report.

Summary of 2017 EAI



Short-term incentives — Executive Annual Incentive (EAI)

	2017 EAI opportunity
CEO	180% of base salary (no change from prior year)
CFO	160% of base salary (no change from prior year)

A scorecard approach will continue to be used for the 2017 EAI and this will be comprised of 75 percent financial and 25 percent non-financial performance measures. This weighting recognizes the critical importance of financial results to our shareholders and bonus affordability as well as the important role that non-financial performance plays in the success and growth of the Company. These measures are aligned with and support our four key strategic drivers for 2017 of Growth, Innovation, Efficiency and People.

The targets themselves are considered to be commercially sensitive on the grounds that disclosure could damage the Company's commercial interests. However, retrospective disclosure of the targets and performance against them will be provided in next year's Annual Report on Remuneration to the extent that they do not remain commercially sensitive at that time. Financial and non-financial targets are set at the start of the performance year and are approved by the Committee. The Committee believes the 2017 targets are suitably challenging, relevant and measurable.

The 2017 Corporate Scorecard is set out below:

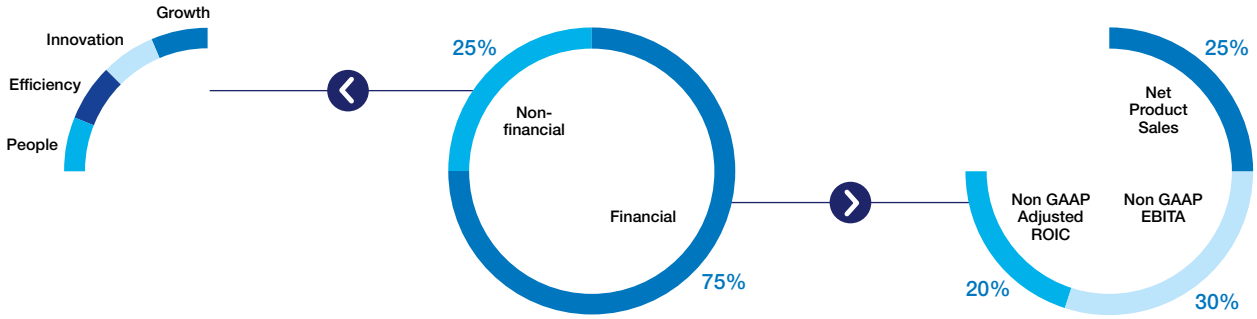
Growth
Drive performance from our currently marketed products to optimize revenue growth and cash generation.

Innovation
Build our future assets through both R&D and business development to deliver innovation and value for the future.

Efficiency
Operate a lean and agile organization and reinvest for growth.

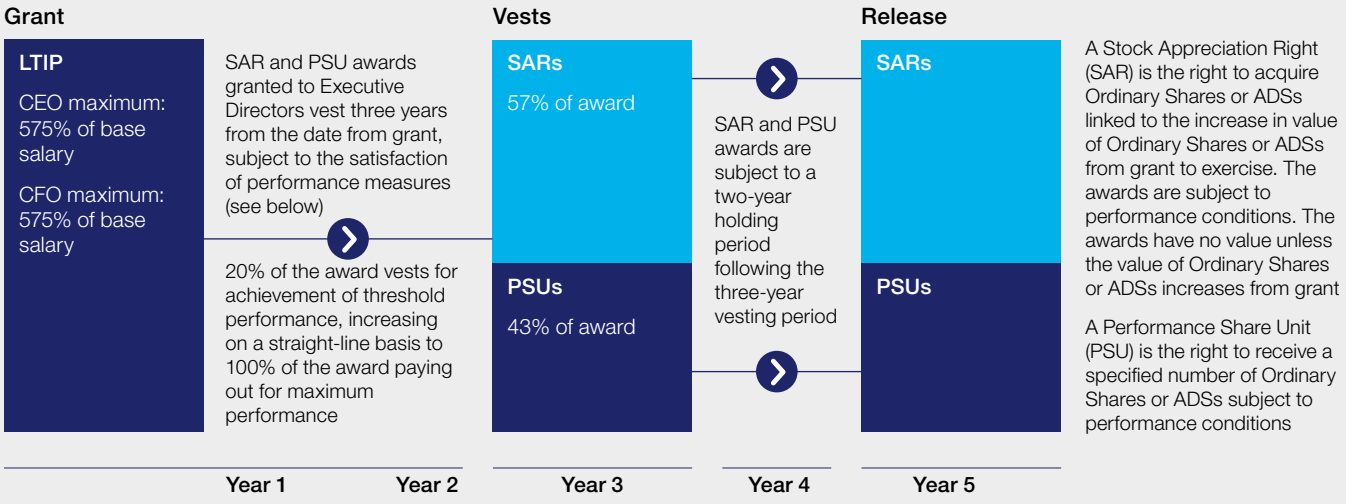
People
Foster a high-performance, patient-focused culture where we attract, retain and promote the best talent.

2017 Corporate Scorecard



Long-term incentives — LTIP

Summary of 2017 long-term incentives



	2017 LTIP award
CEO	575% of base salary (2016: 725%)
CFO	575% of base salary (2016: 672%)

2017 LTIP award	Award type	Face value of threshold vesting (% of 2017 salary[1])	Face value of maximum vesting (% of 2017 salary[1])	Face value of maximum vesting (000's)
Flemming Ornskov	SAR	66%	329%	$5,546
	PSU	49%	246%	$4,160
Jeff Poulton	SAR	66%	329%	$1,945
	PSU	49%	246%	$1,459

The face value allocation between SARs and PSUs is estimated as it is determined on an expected value basis upon grant.
[1] As at January 1, 2017.

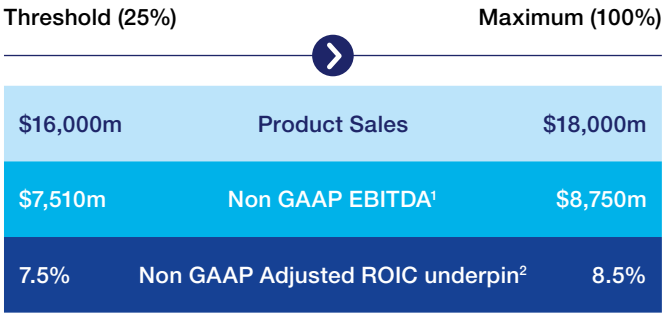
In all cases, awards will only vest if the Committee determines that the underlying performance of the Company is sufficient to justify the vesting of the award.

The 2017 LTIP awards will continue to be tested against two independent measures at the end of a three-year performance period: 50 percent Product Sales targets and 50 percent Non GAAP EBITDA targets. The Committee will also use a Non GAAP Adjusted ROIC underpin at the end of the performance period to ensure vesting levels reflect the sustainability of revenue and profit growth. The performance period for the 2017 LTIP awards will span January 1, 2017 to December 31, 2019.

The 2017 LTIP targets for Product sales and Non GAAP EBITDA are based off the Company's Long-Range Plan and are considered appropriately challenging by the Committee. In setting the level of the ROIC underpin, the Remuneration Committee has taken on board views expressed by shareholders as part of the 2016 consultation and the projected financial performance of the business. The ROIC underpin has therefore been set as a sliding scale. The threshold of the sliding scale ROIC underpin has been set at 7.5 percent with an associated 25 percent payout of the funded award earned based on the achievement of the Product Sales and EBITDA performance metrics. The maximum of the sliding scale ROIC underpin is 8.5 percent which results in 100 percent payout of the funded award base on the achievement of the Product Sales and EBITDA performance metrics. The vesting level of payout levels between the minimum and maximum levels of ROIC underpin will be calculated based on a straight-line interpolation.

The performance targets and ROIC underpin range for the 2017 LTIP award are set out below.

Performance targets for 2017 LTIP



[1] For a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP, see pages 185 to 187.
[2] Any outcome of the Product Sales and Non GAAP EBITDA measure may only pay out to the extent that the Non GAAP Adjusted ROIC sliding scale underpin is achieved.

Clawback and malus arrangements are in place for awards to cover situations where results are materially misstated or in the event of serious misconduct.

Chairman and Non-Executive Director Remuneration Policy

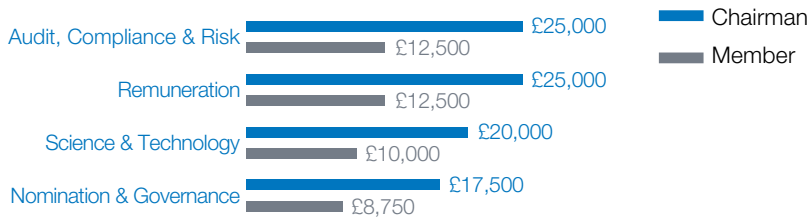
2017 fee levels for the Chairman and Non-Executive Directors remain unchanged for the third year since 2015.

Basic fees (effective January 1, 2017)	2017
Chairman (inclusive of all committee appointments)	£450,000
Senior Independent Director	£98,000
Non-Executive Director	£93,000

The Chairman and Non-Executive Directors will continue to receive 25 percent of their total fees in the form of shares.

In addition to the basic fee, a committee fee will be paid to the members and Chairman of the Audit, Compliance & Risk, Remuneration, Science & Technology and Nomination & Governance Committees.

Committee fees (effective January 1, 2017)



Non-Executive Directors (excluding the Chairman) will also receive the following additional fees for attending Board and Committee meetings in addition to those scheduled as part of the normal course of business:

- Board meeting — additional £2,000 per meeting
- Committee meeting — additional £1,000 per meeting

The Chairman and the Non-Executive Directors will continue to receive an additional fee of £5,000 where transatlantic travel is required to attend Board meetings.

b) 2016 single total figure of remuneration for Executive Directors (subject to audit)

	2016 Single Total Figure of Remuneration ($'000)
CEO	$10,326 (2015: $16,939)
CFO	$1,751 (2015: $921)

- The CEO's single total figure of remuneration for 2016 reflects a blend of strong corporate performance over the EAI and LTIP performance periods. The 2016 value is significantly lower than the 2015 value in part because the 2015 value reflects the vesting of a number of share awards that were granted to him upon appointment. Additionally, the vesting value of Dr. Ornskov's 2015 long-term incentives has been restated to reflect the actual share prices at the vesting dates of these awards. The result is that the previously disclosed figure of $16,814,360 has been restated to $12,171,565. Dr. Ornskov's 2015 total single figure of remuneration has therefore also been restated from $21,579,864 to $16,937,070 (and subsequently rounded).
- The CFO received a notable increase in his single total figure of remuneration from 2015 to 2016 because 2016 reflects his first full year as CFO.

The summary table of 2016 remuneration for the Executive Directors comprises a number of key components which are set out in further detail in the relevant sections that follow.

		Fixed elements				Variable elements				
						Short-term incentives — EAI				
		Base salary $'000	Retirement benefits $'000	Other benefits $'000	Total fixed pay $'000	Cash element $'000	Deferred share element $'000	Long-term incentives[1] $'000	Total variable pay $'000	Total $'000
Flemming Ornskov	2016	1,688	506	582	2,776	1,994	665	4,891	7,550	10,326
	2015	1,521	456	55	2,032	2,051	684	12,172	14,097	16,939
Jeff Poulton[2]	2016	587	147	55	789	622	207	133	962	1,751
	2015	388	82	42	512	307	102	0	409	921

Note: Flemming Ornskov's and Jeff Poulton's remuneration, which is paid through the U.S. payroll, is reported in U.S. Dollars. All figures have been rounded to the nearest thousand.

[1] In the 2015 DRR, the vesting value of Dr. Ornkov's long-term incentives was calculated using the average share price over the last quarter of 2015 of $207.85 per the relevant UK regulations. This figure has been restated to reflect the actual share prices at the vesting dates of these awards on February 28, 2016 and May 2, 2016 per the relevant UK regulations. The result is that the previously disclosed figure of $16,814,360 has been restated to $12,171,565. Dr. Ornskov's total single figure of remuneration has therefore also been restated from $21,579,864 to $16,937,070 (and subsequently rounded).

[2] Jeff Poulton was appointed to the Board of Shire on April 29, 2015. His 2015 remuneration represents the remuneration he received following his appointment.

Base salary

- Dr. Ornskov's base salary of $1,688,000 remains unchanged from 2015, following the Committee's decision to freeze his salary for a period of three years effective July 1, 2015.
- Mr. Poulton's base salary was increased by 3 percent from $575,000 to $592,000 effective April 1, 2016.

Retirement benefits

- Dr. Ornskov received a contribution at a rate of 30 percent of his base salary through a combination of contributions to the Company's 401(k) Plan and credits to his SERP account.
- Mr. Poulton received a contribution at a rate of 25 percent of his base salary through a combination of contributions to the Company's 401(k) Plan and credits to his SERP account.

Other benefits

- The 2016 figures for Dr. Ornskov and Mr. Poulton principally include car allowance, financial and tax advisory support, long-term disability and life insurance and private medical, dental and vision cover.
- In addition, the 2016 figure for Dr. Ornskov includes costs of $521,464 associated with the relocation of Dr. Ornskov's family to join him in Boston following his permanent move to the U.S. in his capacity as CEO. The amount includes the grossed-up cost of tax paid by the Company on behalf of the CEO.

Short-term incentives

	2016 EAI outcome
CEO	88% of maximum opportunity (2015: 100%)
CFO	88% of maximum opportunity (2015: 66%)

- In determining EAI awards for the Executive Directors, the Committee considers performance against each of the financial and non-financial performance measures within Shire's Corporate Scorecard, as well as individual performance during the year.
- The 2016 EAI outcome of 88% of the maximum opportunity for both the CEO and CFO reflects the strong performance of the business over the year and excellent personal contribution to the delivery key strategic goals, both before and after the transaction with Baxalta.

The Corporate Scorecard outcome is calculated by way of a weighted average of the outcomes of the financial and non-financial performance measures. For each performance measure, outperformance or underperformance is measured as a percentage achievement against the target. Performance at target results in 100 percent of the target bonus with up to a maximum of 200 percent of the target bonus for maximum performance. Maximum performance is set at 20 percent above target and so the Committee considers the target ranges to be very challenging. Achievement of threshold performance results in 25 percent of target performance. The Corporate Scorecard outcome determines the bonus funding for all individuals within the plan.

In addition to the Corporate Scorecard, the Committee takes into consideration the individual performance of the Executive Directors in determining their final EAI payout. Shire has four individual performance ratings: Does Not Meet expectations, Meets Sometimes, Consistently Meets expectations and Consistently Exceed expectations. The Committee determined both the CEO and CFO have delivered extraordinary leadership of the business and performed extremely well against the objectives set for each of them in 2016 and were accordingly rated Consistently Exceeds. Given the 127.21 percent corporate funding level under the Scorecard, any annual incentive

plan eligible employee at Shire rated Consistently Exceeds would be awarded a potential annual incentives award for 2016 within the range 150 percent to 200 percent of target bonus. The Committee determined that since the Executive Directors were both rated Consistently Exceeds, it was appropriate to award the midpoint of the potential range and, as such, both Executive Directors received an EAI award of 175 percent of target, which is equal to 158 percent of salary for the CEO and 140 percent for the CFO.

Approach to EAI assessment following Baxalta transaction

The Committee met in May 2016 to discuss the approach to performance assessment given the acquisition of Baxalta which was finalized during the performance year. The transformational nature of the acquisition meant that the performance targets set at the start of the year would no longer be appropriate following the acquisition. It was agreed that, for financial metrics, separate performance targets would be assessed for the six-month periods pre- and post- the acquisition. An average of the outcome under the two sets of performance targets would then be taken as the overall outcome under the financial metrics portion of the 2016 Corporate Scorecard. The performance metrics themselves (Net Product Sales, Non GAAP EBITA and Non GAAP Adjusted ROIC) were unchanged over the two periods of assessment.

The non-financial elements of the Corporate Scorecard were considered to remain appropriate following the acquisition of Baxalta and so were unchanged following the acquisition. The outcomes against these at the end of the 2016 year have therefore been considered across the full 12 months by the Committee.

Corporate Scorecard outcome

The table below sets out the achievement against the targets in the Corporate Scorecard (the outcomes for the period pre- and post-acquisition of Baxalta are shown separately, as is the overall combined outcome). The weighted average outcome of the Corporate Scorecard is 127.21 percent of the target bonus.

Pre-acquisition financials	Weighting (First half of financial year)	Threshold (25% of target)	Actual outcome (% of target achieved)	Maximum (200% of target)	Weighted average bonus funding score	Corporate Scorecard funding level
Net Product Sales	12.5%	$2,767m	$3,390m 120.7%	$3,907m		
EBITA[1]	15%	$1,202m	$1,581m 158.8%	$1,697m	130.4%	
ROIC[1]	10%	6.0%	7.0% 100.0%	8.4%		

Post-acquisition financials	Weighting (Second half of financial year)	Threshold (25% of target)	Actual outcome (% of target achieved)	Maximum (200% of target)	Weighted average bonus funding score	
Net Product Sales	12.5%	$5,808m	$6,936m 107.6%	$8,199m		
EBITA	15%	$2,397m	$2,694m 77.6%	$3,384m	94.3%	127.21%
ROIC	10%	6.0%	7.04% 102.9%	8.4%		

Non-financial	Weighting	Threshold (25% of target)	Actual outcome (% of target achieved)	Maximum (200% of target)	Weighted average bonus funding score
Pipeline and pre-commercial	15%	25%	114.2%	200%	
Organizational effectiveness	10%	25%	114.6%	200%	171.7%

[1] For the purposes of the Corporate Scorecard multiplier calculation, Non GAAP EBITA and Non GAAP Adjusted ROIC have been adjusted to exclude the cost of the annual bonus corporate multiplier on the full-year results.

Additional details of the non-financial performance outcomes are set out in the table below.

Non-financial performance measures	Strategic driver	Key achievements
Pipeline and pre-commercial	 Growth	• XIIDRA was launched on August 29, 2016 (taking 49 days from approval to launch) • Executed 2 transactions in line with Shire strategy • A) Successfully acquired Baxalta, Shire's largest acquisition in our history, valued at more than $32 billion. Integration well on-track and synergies above target • B) Licensed SHP 647 (a MAdCAM antibody) with potential to manage Ulcerative Colitis and/or Crohns disease from Pfizer • Initiated 5 Phase 3 programs in CINRYZE (AMR), SHP621 (EOE), SHP643 (HAE), CINRYZE SC and SHP620 (CMV in transplant patients)
	 Innovation	• Initiated 4 IND enabling studies vs. target of 2, and substrate to support 1 IND nomination from the pipeline • Increased number of programs in the clinic/registration from 28 to 41 while maintaining rare disease focus • Achieved 3 product approvals (XIIDRA; CUVITRU; Onivyde-EU), 2 breakthrough (SHP621; SHP625) and 1 fast track (SHP626 therapy designations) • Number of key late stage milestones achieved ahead of time (e.g. XIIDRA, SHP643, SHP465)
Organizational effectiveness	 Efficiency	• Completed Ireland site selection, acquired the land, and submitted planning permission for the Dublin Biologics Site. Plans are ahead of schedule and on budget • Dyax integration successful and fully executed personnel retention and asset transfer per plan. Phase 3 enrollment ahead of plan • Post-Baxalta acquisition, organization is fully designed and announced in all geographies and integration budgets and synergy targets are locked. Talent retention tracking remains below historic levels from both legacy firms. Year 2 milestone planning completed by all functions
	 People	• Retained 96.97 percent of 2015 identified key talent and 96.3 percent of 2015 CEs at Legacy Shire (Voluntary retention of Legacy Baxalta employees rated "Far exceeds" and "Exceeds" in 2015 year-end is 96.3 percent and 93.4 percent respectively) • On average 97 percent of Legacy Shire employees have completed Shire Core training (Legacy Baxalta average is also 97 percent)

Individual performance assessment

In assessing the individual performance of the CEO and CFO over the year, the Committee determined that both had performed exceptionally in role during a period of great change for the Company, demonstrating extraordinary leadership and performing extremely well against their objectives. In addition, it was noted that both Executive Directors had achieved significant accomplishments beyond their objectives (details of which are set out below). As such, they were rated Consistently Exceeds which, given the Corporate Scorecard outcome of 127.21 percent, generated a potential payout range of 150 percent to 200 percent of target bonus. Based on the Executives' performance over the year, the Committee therefore determined it appropriate to award the midpoint of the potential range and both individuals will therefore receive a bonus 175 percent of target.

	Summary of individual performance against pre-determined objectives
CEO	In addition to strong corporate performance against individual objectives, the following additional accomplishments were achieved: • Closed and began the integration of Baxalta, the largest transaction in Shire's history, while maintaining business and supply continuity, delivering on our 2016 Corporate Scorecard and 2016 year-end guidance. • Closed and integrated Dyax, resolved supply chain challenges, and completed SHP643 Phase 3 trial enrollment at record pace to maximize the asset's value. • Launched XIIDRA in the U.S. ahead of expectations with flawless organizational execution and top performing branded and disease state awareness campaigns. • Grew Vyvanse by 17 percent year over year into Shire's first $2 billion+ product and fifth most prescribed branded drug in the U.S. • Developed an industry-leading international commercial presence with offices in 68 countries, supported by dozens of regulatory submissions, key filings, and country product launches. • Among many awards received in 2016, the Company was ranked #1 "Green" company in the world based on corporate sustainability and environmental impact (Newsweek 2016). • Shire awarded "Pharma Company of the Year" at the 12th Annual Scrip Awards.
CFO	In addition to strong corporate performance against individual objectives, the following additional accomplishments were achieved: • Completed $12 billion bond financing. As a result, the Company was awarded "Deal of the Year" for bonds above £500 million and "UK Deal of the Year" for the 2016 $18 billion Baxalta bond financing (Association of Corporate Treasurers 2017, Global Capital 2017). • Top 15 Company on FTSE100 and added to NASDAQ100 index, October 2016. • Achieved Baxalta synergy targets in 2016 and on track to deliver synergy targets in 2017. • Leadership as Chair of the Corporate Committee, as member of the Baxalta Integration Steering Committee and of the finance leadership team. • Finance organization structure and governance established post Baxalta integration in record time.

	Target bonus	2016 EAI outcome (as a % of target)	2016 EAI outcome		
			Total	Cash element	Deferred shares[1]
CEO	$1,519,200 (90% of salary)	175%	$2,658,600 (158% of salary)	$1,993,950	$664,650
CFO	$473,600 (80% of salary)	175%	$828,800 (140% of salary)	$621,600	$207,200

[1] 25 percent of the EAI outcome is deferred into shares for three years

Long-term incentives

Vesting of 2014 PSP awards

2014 PSP outcome	
Flemming Ornskov	100% of maximum opportunity (2013 award: 100%)
Jeff Poulton	100% of maximum opportunity (2013 award: n/a[1])

[1] The CFO had no 2013 award which vested subject to the achievement of performance conditions

The table below sets out a summary of the number of shares vesting and the resulting gross estimated vesting value for the 2014 PSP awards for Dr. Ornskov and Mr. Poulton. This estimate is on the basis of an average share price over the final quarter of 2016 of $177.25, given that the 2014 PSP awards vest following the date of this report.

Name	Award	Date of grant	Number of shares under original award[1]	% of total award vesting[2]	Number of shares vesting[1]	Number of dividend shares[3]	Total number of shares vesting	Share Price at vesting[4]	Value at vesting[4]
Flemming Ornskov	PSU	February 28, 2014	25,631	100%	25,631	284	25,915	$177.25	$4,593,434
	SAR		34,174	100%	34,174	0	34,174	$177.25	$297,656
Jeff Poulton[5]	PSU		742	100%	742	8	750	$177.25	$132,938

[1] Awards were granted on February 28, 2014 and will vest on February 28, 2017 over American Depositary Shares (ADSs).
[2] The figures represent the number of shares vesting taking into account performance against applicable performance conditions (see performance outcome below).
[3] The vesting of the PSU element includes dividend shares representing any accrued dividends, in accordance with the relevant plan rules.
[4] Based on the average share price over the last quarter of 2016 of $177.25.
[5] Jeff Poulton's SAR element was not subject to performance conditions (as it was granted prior to his appointment as CFO) and is therefore not reportable.

2014 Performance Matrix — performance period ended on December 31, 2016

The 2014 PSP awards were assessed against a performance matrix that measured Non GAAP Adjusted ROIC performance and Non GAAP EBITDA growth over the three-year performance period. For Non GAAP EBITDA growth, the Non GAAP EBITDA in the final performance year (2016) was compared to the Non GAAP EBITDA in the reference year (2013). A compound annual growth rate of Non GAAP EBITDA was then calculated. For Non GAAP Adjusted ROIC, the Non GAAP Adjusted ROIC in the final performance year (2016) was compared to the Non GAAP Adjusted ROIC in the reference year (2013). The change in these two numbers was then divided by three and expressed in basis points (one hundredth of a percentage point) to give an average per annum change in Non GAAP Adjusted ROIC basis points.

The Committee considered the impact of Baxalta on the 2014 PSP award and determined for this award that it was appropriate to exclude the impact of Baxalta from the final performance outcome on the basis the award only had six-months left following the transaction until the end of the performance period. Therefore the PSP has been assessed against the original targets excluding the impact of Baxalta (as well as other acquisitions that occurred during the period, details of which are set out below).

Non GAAP EBITDA of 15.9 percent CAGR and a 54 bp p.a. increase in Non GAAP Adjusted ROIC between 2013 and 2016 was achieved. In determining the vesting multiplier under the matrix, the Committee rounds to the closest point on the matrix. This results in a vesting multiplier of 4.0x, meaning that 100 percent of the total award made will vest.

Adjusted ROIC	EBITDA growth (CAGR 2013-2016)				
Change in bp p.a.	9%	10%	11%	12%	**13%**
-100	1.0x	1.3x	1.7x	2.1x	2.5x
-80	1.3x	1.6x	2.0x	2.4x	2.8x
-60	1.6x	1.9x	2.4x	2.7x	3.1x
-40	1.9x	2.3x	2.6x	3.1x	3.5x
-20	2.2x	2.6x	3.1x	3.6x	4.0x
0	2.5x	3.0x	3.5x	4.0x	**4.0x**

Significant Adjusting Events

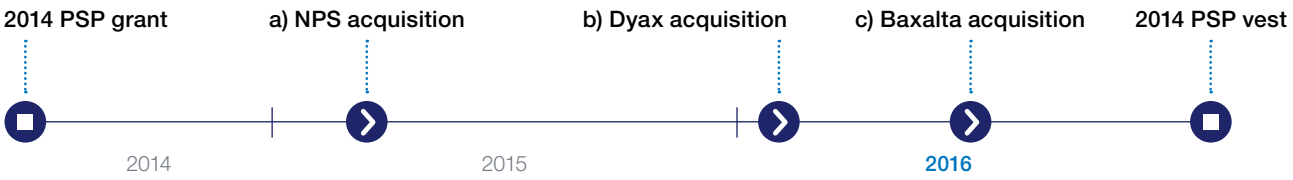
Under our approved Remuneration Policy, the Committee reserves the right to make adjustments to the performance conditions to reflect significant one-off items which occur during the performance period. In respect of the 2014 PSP awards, the Committee carried out a comprehensive review of potential Significant Adjusting Events (SAEs) against pre-existing guidelines and determined that the following SAEs should be taken into account in the overall assessment of performance over the performance period (also shown in the accompanying timeline) given that they were not anticipated when the original 2014 PSP targets were set:

a) NPS acquisition — to exclude the impact of the acquisition of NPS which had a short-term negative impact on Non GAAP Adjusted ROIC performance in 2015 and 2016. This acquisition was completed in February 2015 and was not considered in the 2014 performance matrix. Under the acquisition, Shire acquired two commercial assets. One asset (GATTEX) which was launched at the end of 2013 and another (Natpara) that was launched Q2 2015. Both assets are early in their lifecycle and thus have much room for growth. Given the early commercial stage of both assets, the ROIC on this transaction will reduce Shire's overall ROIC in the near term but we expect it will enhance Shire's overall ROIC over the coming years as we continue to drive the successful commercialization of both Gattex and Natpara over the longer term.

b) Dyax acquisition — to exclude the impact of the acquisition of Dyax which had a short-term negative impact on Non GAAP adjusted ROIC performance in 2016. This acquisition was completed in January 2016 and was not considered in the 2014 performance matrix. The key asset acquired in this deal was SHP643 (formerly DX-2930) which is a Phase 3 potential best in class prophylaxis HAE product that could secure Shire's leadership position in HAE to 2030 and beyond. Given that Shire will be investing in this Phase 3 program asset over the next several years and does not anticipate an approval/launch of this product until 2018, subject to regulatory approval, the transaction will reduce Shire's overall ROIC in the near term until post launch of SHP643. The Phase 3 program for SHP643 is progressing as planned per our deal model assumptions.

c) Baxalta acquisition — the approach for Baxalta for this award formed part of a comprehensive consultation exercise with shareholders who were all supportive of adjusting the 2014 outcome to exclude Baxalta from the performance assessment given that 80 percent of the performance period for this award had already passed at the time the acquisition of Baxalta was completed. The 2015 and 2016 LTIP awards have been adjusted to include Baxalta's performance (given the much more significant amount of the performance period which remained at the time the acquisition was completed). Full details on these revised targets are set out on pages 85 and 86.

Timeline for 2014 PSP award and agreed SAEs



a) Deal completed: February 21, 2015
b) Deal completed: January 22, 2016
c) Deal completed: June 03, 2016

The below table shows the final adjusted results under the 2014 performance matrix (excluding the acquisitions of NPS, Dyax and Baxalta as a result of the SAEs approved by the Committee) and the unadjusted results (showing the impact on vesting levels of not making any adjustments for SAEs).

Adjusted results (excluding NPS, Dyax and Baxalta)

	2013	2014	2015	2016	Outcome	Vesting multiplier
Non GAAP Adjusted ROIC %	15.6%	14.7%	14.8%	17.2%	54 bp change p.a.	4.0x multiplier (100% vesting)
Non GAAP EBITDA $'M	1,987	2,756	2,799	3,096	15.9% CAGR 2013 - 2016	

Unadjusted results

	2013	2014	2015	2016	Outcome	Vesting multiplier
Non GAAP Adjusted ROIC %	15.6%	14.7%	10.3%	7.0%	-284 bp change p.a.	0.0x multiplier (0% vesting)
Non GAAP EBITDA $'M	1,987	2,756	2,924	4,710	33.2% CAGR 2013 - 2016	

Context of Dyax acquisition

- It is important to note that the Dyax acquisition had the most significant impact on ROIC of all the three acquisitions during the period.
- This is because the key asset of Dyax (SHP 643, formerly DX-2930) was not generating revenue at the point of acquisition. However, if the drug is approved and is successful it has the potential to provide significant benefits to patients and secure Shire's leadership in HAE drugs until 2030.
- Therefore the acquisition was made with a long-term revenue generation view.
- The business anticipates an upward ROIC trajectory over the coming years as the benefits from the Dyax acquisition (and the NPS and Baxalta acquisitions) are realized with ROIC.

c) Other audited disclosures

Scheme interests awarded during 2016 (subject to audit)

2016 LTIP awards

The following tables set out details of the SAR and PSU awards granted to the Executive Directors under the LTIP during 2016.

Vesting of the 2016 LTIP awards will be determined by the Committee taking into account performance over the performance period (January 1, 2016 to December 31, 2018). In addition, any Significant Adjusting Events that are relevant will be taken into consideration, as well as an overall assessment of the underlying performance of the Company.

	Award type (ADS)	Number of ADSs awarded	Share price on grant/ Exercise price	% of award vesting for threshold performance	% of award vesting for maximum performance	Face value of base award/ threshold vesting (% of 2016 salary)	Face value of total award/ maximum vesting (% of 2016 salary)	Face value of total award/ maximum vesting ($'000)
Flemming Ornskov	SAR	43,329	$161.42	20%	100%	83%	414%	$6,994
	PSU	32,497				62%	311%	$5,246
Jeff Poulton	SAR	13,681				77%	384%	$2,208
	PSU	10,261				58%	288%	$1,656

The maximum SAR and PSU awards are granted and, subject to the achievement of performance conditions, are adjusted at the date of vesting.
The number of SARs and PSUs as well as the exercise price for SAR awards is calculated using an approach based on the average three-day closing mid-market share price at the date of grant of February 26, 2016.

Revised performance targets for in-flight LTIP awards

In light of the acquisition of Baxalta, and following further consultation with our largest shareholders, the Committee revised the performance targets for LTIP awards made in 2015 and 2016. In determining the revised targets for the Product Sales and Non GAAP EBITDA measures for the 2015 and 2016 LTIP awards, the Committee took into account both the original targets set at the start of the performance period (and disclosed within the 2014 and 2015 Remuneration Reports) and the Long-Range Plan, which builds on the most up-to-date performance expectations for the combined business, including Baxalta.

In order to determine that the revised targets remained equally stretching to achieve as the original targets, the Committee reviewed the amended performance ranges against current consensus forecasts available at the time. The 2015 targets were also updated to include the performance expected from the NPS and Dyax acquisitions (these were not included in the original 2015 target setting as the acquisitions occurred after the original targets were set).

The need to reduce the ROIC underpin for the 2015 and 2016 awards to 7.75 percent was accepted by the majority of shareholders since a short to medium downward impact on ROIC was inevitable in light of the increase in our invested capital following the recent Baxalta, NPS and Dyax acquisitions.

The original and revised performance targets for the 2015 and 2016 awards are set out in the table below.

Original and revised performance targets for the 2015 LTIP award

	Threshold	Maximum
Product Sales	$6,800m → **$13,953m**	$7,500m → **$15,389m**
Non GAAP EBITDA	$3,300m → **$6,414m**	$3,675m → **$7,143m**
Non GAAP Adjusted ROIC	11%	→ **7.75%**

Original and revised performance targets for the 2016 LTIP award

	Threshold	Maximum
Product Sales	$8,184m → **$15,000m**	$9,480m → **$17,000m**
Non GAAP EBITDA	$3,928m → **$6,645m**	$4,696m → **$7,940m**
Non GAAP Adjusted ROIC	10.625%	→ **7.75%**

Pre-Baxalta figures Post-Baxalta figures

20 percent of each award will be payable for threshold performance. There is no vesting below this performance level. 100 percent of the award will be payable for maximum performance, which would result in the total award vesting, with straight-line vesting within this performance range. In all cases, awards will only vest if the Committee determines that the underlying performance of the Company is sufficient to justify the vesting of the award.

EAI deferred shares granted in 2016 (in respect of 2015 EAI outcome)

25 percent of any outcome under the EAI is deferred into shares. To satisfy these, awards of Restricted Stock Units and Restricted Shares were granted in March 2016 under the Deferred Bonus Plan ("DBP") (a sub plan of the LTIP) as follows to Executive Directors as part of their 2015 EAI award and will vest three years from the point of deferral subject to the terms of the plan rules.

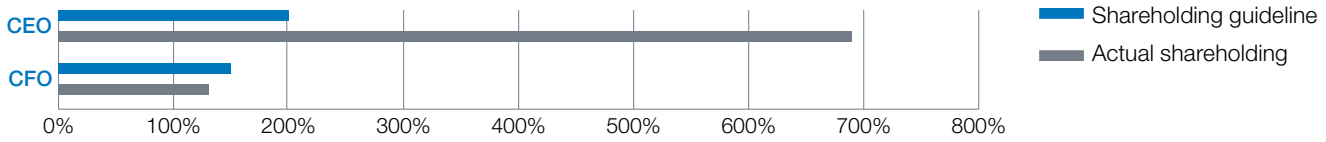
	Award type	Number of ADSs awarded	Share price at grant[1]	Face value of award[2]
Flemming Ornskov	Restricted Stock Units ("RSUs")	4,245	$160.99	$683,403
Jeff Poulton	Restricted Shares ("RS")	560	$163.02	$91,293

[1] The share price for Dr. Ornskov is based on the average three-day closing mid-market share price up to and including the date of grant. The share price for Mr. Poulton is based on the average acquisition price at purchase as his award took the form of Restricted Shares.
[2] Based on the share prices on the date of grant of March 11, 2016.

Directors' shareholdings and scheme interests (subject to audit)

The CEO, CFO and other members of the Executive Committee are required to own shares in the Company equivalent to 200 percent, 150 percent and 100 percent of base salary, respectively, within a five-year period following their appointment. All shares beneficially owned by an executive or deferred under the EAI count towards achieving these guidelines. The Committee reviews share ownership levels annually for this group. Current shareholding levels for Directors are set out in the table below and show that the shareholding guideline for the CEO has been significantly exceeded, thus demonstrating his alignment with shareholder interests. The CFO is relatively new in role and so has not yet met the requirement but has a three further years in which to do so.

Executive Directors' shareholdings relative to guidelines



Summary of Executive Directors' shareholdings and scheme interests

			Scheme interests as at Dec 31, 2016[2]					
				Subject to the achievement of performance conditions[4]:				
	Security type[1]	Shareholding as at Dec 31, 2016 or date of resignation[2]	Total RS/RSUs awarded under the EAI[3]	Total PSUs/RSUs unvested	Total SARs unvested	Total SARs vested but unexercised[5]	Total interests	Total shares held which count towards the shareholding guidelines (as a % of salary as at Dec 31, 2016)
Flemming Ornskov	ADS	42,502	9,449	77,927	103,901	64,585	298,364	
	Ord Shares	37,500	–	–	–	–	37,500	690%
Jeff Poulton[6]	ADS	3,746	560	18,318	23,816	13,773	60,213	131%

1 One ADS is equal to three Ordinary Shares.
2 No changes in Directors' interests have occurred during the period December 31, 2016 to February 22, 2017.
3 This represents unvested RS and RSUs awarded under the EAI which are not subject to performance conditions and which are forfeited in the case of termination for cause.
4 All unvested awards are subject to the achievement of performance conditions, adjusted at the date of vesting, with the exception of (i) RS and RSUs awarded under the EAI and (ii) 669 RSUs and 1,273 SARs awarded to Mr. Poulton prior to his appointment as Chief Financial Officer.
5 Vested but unexercised SARs are no longer subject to the achievement of performance conditions.
6 Mr. Poulton's shareholding has been rounded up to the nearest whole ADS, with his precise shareholding including a fractional entitlement to an ADS resultant of the operation of a dividend reinvestment plan.

Awards under the Company's long-term incentive plans and broad-based share plans are satisfied either by market purchased shares which are held in an employee benefit trust or the issue of new shares within the limits agreed by shareholders when the plans were approved. These limits comply with the Investment Association's guidelines which require that no more than 10 percent of a company's issued share capital be issued in accordance with all employee share plans in any 10-year period, with no more than 5 percent issued in accordance with discretionary employee share plans.

Executive Directors' scheme interests

Award type[1]	Date of award	As at Jan 1, 2016	Shares awarded	Dividend shares[2]	Lapsed	Exercised/ released	As at Dec 31, 2016	Exercise price	Share price on exercise/ release	Normal exercise period/vesting date
Flemming Ornskov										
SAR[3]	Feb 28, 2013	45,601					45,601	$95.04		Feb 28, 2016 to Feb 28, 2020
PSU[3]	Feb 28, 2013	34,201		425		34,626			$157.84	Feb 28, 2016
SAR[3]	May 2, 2013	18,984					18,984	$91.59		May 2, 2016 to May 2, 2020
PSU[3]	May 2, 2013	10,821		121		10,942			$186.50	May 2, 2016
SAR[3]	Feb 28, 2014	34,174					34,174	$168.54		Feb 28, 2017 to Feb 28, 2021
PSU[3]	Feb 28, 2014	25,631					25,631			Feb 28, 2017
RS (EAI)[4]	Mar 31, 2014	2,703					2,703			Mar 31, 2017
RS (EAI)[4]	Feb 13, 2015	2,501					2,501			Feb 13, 2018
SAR[3,5]	Apr 30, 2015	26,398					26,398	$245.48		Apr 30, 2018 to Apr 30, 2022
PSU[3,5]	Apr 30, 2015	19,799					19,799			Apr 30, 2018
SAR[3,5]	Feb 26, 2016		43,329				43,329	$161.42		Feb 26, 2019 to Feb 26, 2023
PSU[3,5]	Feb 26, 2016		32,497				32,497			Feb 26, 2019
RSU (EAI)[4]	Mar 11, 2016		4,245				4,245			Mar 11, 2019
Jeff Poulton										
SAR	Feb 28, 2012	4,376					4,376	$105.50		Feb 28, 2015 to Feb 28, 2019
SAR	Feb 28, 2013	2,708					2,708	$95.04		Feb 28, 2015 to Feb 28, 2020
SAR	Feb 28, 2013	5,419					5,419	$95.04		Feb 28, 2016 to Feb 28, 2020
RSU	Feb 28, 2013	949		11		960			$157.84	Feb 28, 2016
SAR	Feb 28, 2014	635					635	$168.54		Feb 28, 2015 to Feb 28, 2021
SAR	Feb 28, 2014	635					635	$168.54		Feb 28, 2016 to Feb 28, 2021
SAR	Feb 28, 2014	1,273					1,273	$168.54		Feb 28, 2017 to Feb 28, 2021
RSU	Feb 28, 2014	333		2		335			$157.84	Feb 28, 2016
RSU	Feb 28, 2014	669					669			Feb 28, 2017
PSU[3]	Feb 28, 2014	742					742			Feb 28, 2017
SAR[3,5]	Apr 30, 2015	8,862					8,862	$245.48		Apr 30, 2018 to Apr 30, 2022
PSU[3,5]	Apr 30, 2015	6,646					6,646			Apr 30, 2018
SAR[3,5]	Feb 26, 2016		13,681				13,681	$161.42		Feb 26, 2019 to Feb 26, 2023
PSU[3,5]	Feb 26, 2016		10,261				10,261			Feb 26, 2019
RS (EAI)[4]	Mar 11, 2016		560				560			Mar 11, 2019

[1] All awards are over ADSs. The number of ADSs over which PSU, RSU and SAR awards are granted is calculated using the average three-day closing mid-market ADS price at the time of grant. The number of ADSs in respect of which a RS award is granted is determined by the acquisition price per ADS at the time of grant. Unless otherwise indicated, all awards are granted under the Shire Long-Term Incentive Plan or its predecessor plan; the Shire Portfolio Share Plan.

[2] In accordance with the rules of the respective share plans, the vested PSU and RSU awards have been increased to reflect the dividends paid by Shire in the period from the date of grant to the date of vesting.

[3] The maximum SAR and PSU awards are granted and, subject to the achievement of performance conditions, adjusted at the date of vesting. Performance conditions attached to SAR and PSU awards granted in 2013 and 2014 are Non GAAP Adjusted ROIC and Non GAAP EBITDA targets within a performance matrix. Performance conditions attached to SAR and PSU awards granted from 2015 onwards are Product Sales and Non GAAP EBITDA targets with a Non GAAP Adjusted ROIC underpin. In all cases, awards will only vest if the Committee determines that the underlying performance of the Company is sufficient to justify the vesting of the award.

[4] 25 percent of any outcome under the EAI is deferred into shares through the grant of Restricted Stock Units or Restricted Shares.

[5] A two-year holding period will apply following the three-year vesting period for SAR and PSU awards granted from 2015 onwards.

On October 31, 2016, Dr. Ornskov exercised an option over 84 notional ADSs granted under the Shire Global Employee Stock Purchase Plan ("GESPP") at an exercise price of $147.56 per ADS. On November 1, 2016, Dr. Ornskov and Mr. Poulton were each granted an option over notional ADSs pursuant to the GESPP; each electing to save $480.77 per fortnight.

Non-Executive Directors' scheme interests

Committee member	Security type[1]	Shareholding as at Dec 31, 2016 or date of resignation[2]
Susan Kilsby	ADS	7,625
William Burns	Ord Shares	3,955
Dominic Blakemore	Ord Shares	1,521
Olivier Bohuon	Ord Shares	1,829
Gail Fosler	ADS	7,907
Steven Gillis	ADS	1,388
David Ginsburg	ADS	827
Sara Mathew	ADS	1,275
Anne Minto	Ord Shares	5,218
Albert Stroucken	ADS	5,872
David Kappler[3]	Ord Shares	12,254

[1] One ADS is equal to three Ordinary Shares.
[2] No changes in Directors' interests have occurred during the period December 31, 2016 to February 22, 2017.
[3] David Kappler stood down from the Board on April 28, 2016.

d) 2016 single total figure of remuneration for the Chairman and Non-Executive Directors (subject to audit)

	Board fees		Committee fees							
	Basic fee	Additional fees[1]	Audit, Compliance & Risk Committee	Remuneration Committee	Nomination & Governance Committee	Science & Technology Committee	Travel allowance[2]	Taxable benefits[3]	Total 2016 fees	Total 2015 fees
Susan Kilsby	£450,000						£25,000	£2,057	**£477,057**	£467,605
William Burns[4]	£96,365	£18,000		£12,500	£8,750	£10,000	£15,000	£2,057	**£162,672**	£152,250
Dominic Blakemore	£93,000	£10,000	£25,000				£15,000		**£143,000**	£136,000
Olivier Bohuon[5]	£93,000	£9,000		£8,413		£10,000	£10,000		**£130,413**	£67,500
Gail Fosler[6]	£53,654	£6,000	£7,040				£5,000		**£71,694**	
Steven Gillis	£93,000	£16,000	£12,500	£12,500		£10,000	£15,000	£2,057	**£161,057**	£166,000
David Ginsburg	£93,000	£14,000			£8,750	£20,000	£15,000	£2,057	**£152,807**	£148,666
Sara Mathew	£93,000	£14,000	£12,500	£12,500			£15,000		**£147,000**	£40,181
Anne Minto	£93,000	£14,000		£25,000	£8,750		£15,000	£2,052	**£157,802**	£153,750
Albert Stroucken[7]	£53,654	£8,000	£7,040	£7,040			£5,000		**£80,734**	
David Kappler[8]	£32,038	£4,000	£4,087		£5,721				**£45,846**	£148,000

[1] For Board and Committee meetings attended in addition to those scheduled as part of the normal course of business.
[2] The Non-Executive Directors receive an additional fee of £5,000 where transatlantic travel is required to attend Board meetings.
[3] The taxable benefits figure relates to tax preparation assistance provided by the Company and has been converted into Sterling using the 2016 EUR:GBP average exchange rate of 1.2333.
[4] William Burns was appointed as the Senior Independent Director on April 28, 2016.
[5] Olivier Bohuon was appointed to the Remuneration Committee on April 28, 2016.
[6] Gail Fosler was appointed to the Board on June 3, 2016, and to the Audit, Compliance & Risk Committee on June 7, 2016.
[7] Albert Stroucken was appointed to the Board on June 3, 2016, and to the Audit, Compliance & Risk Committee and Remuneration Committee on June 7, 2016.
[8] David Kappler stepped down from the Board, the Audit, Compliance & Risk Committee and the Nomination & Governance Committee on April 28, 2016.

Payments to past Directors (subject to audit) and payments for Loss of Office (subject to audit)

In line with Matthew Emmens' contract as Chief Executive Officer of Shire, Mr. Emmens is entitled to continued medical cover up to the age of 65. This benefit was provided until June 2016 when Mr. Emmens reached age 65. The value of this benefit received during 2016 was $9,543.

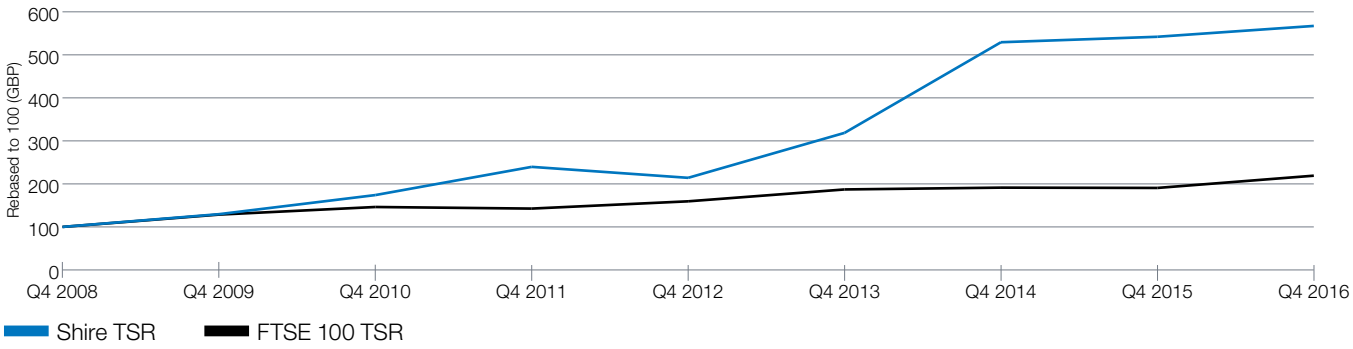
No further payments were made to past Directors. No payments were made to Directors for loss of office during the year.

e) Non-audited disclosures

TSR performance graph and CEO pay

The graph below shows the Total Shareholder Return ("TSR") for Shire and the FTSE 100 Index over an eight-year period. TSR is calculated as the change (indexed) between the fourth quarter TSR (average for the period) in the relevant year and the base year. The FTSE 100 Index reflects the 100 largest quoted companies by market capitalization in the United Kingdom and has been chosen because the FTSE 100 represents the broad market Index within which the Company's shares are traded. The graph illustrates the change in value of a hypothetical £100 holding over eight years commencing December 31, 2008 and ending December 31, 2016.

Total Shareholder Return — change in value of a hypothetical £100 holding over eight years



CEO pay

	2009	2010	2011	2012	2013		2014	2015	2016
CEO	Angus Russell	Angus Russell	Angus Russell	Angus Russell	Angus Russell	Flemming Ornskov[2]	Flemming Ornskov[2]	Flemming Ornskov	Flemming Ornskov
Short-term incentive (% of maximum)	70%	65%	50%	48%	26%	81%	100%	100%	**88%**
Long-term incentive[1] (% of maximum)	84%	88%	100%	100%	50%	–	–	100%	**100%**
Total remuneration ($'000)	$4,781	$9,634	$17,506	$13,430	$5,759	$3,402	$4,137	$16,939	**$10,326**

[1] Long-term incentive figures relate to any awards that vest shortly after the end of the relevant financial year.
[2] Dr. Ornskov did not have any long-term incentive awards vest until 2015.

Percentage change in CEO remuneration

The following table shows the percentage change in the base salary, taxable benefits and annual bonus of the CEO between the current and previous financial year compared to the average percentage change for all other employees.

	Percentage change between 2015 to 2016		
	Salary and fees	Taxable benefits	Short-term incentives[1]
CEO[2]	11%	958%	(3%)
All other employees[3]	8%	(15%)	0%

[1] Due to timing of the 2016 year-end process, the actual short-term incentive figures for all other employees had not been finalized by the date of this report. Therefore, the 2016 short-term incentive figures represent target figures multiplied by the 2016 Corporate Bonus Modifier score approved by the Committee in early February, which represents the Company's best estimate of actual bonus outcomes.
[2] Reflects the 2015 and 2016 remuneration for Flemming Ornskov as reported in the single total figure of remuneration table in Part 2(b).
[3] Reflects the average change in remuneration for all other Legacy Shire employees globally that were annual bonus eligible. To help minimize distortions in the underlying data, certain adjustments have been made. In particular, the figures have been prepared on the basis of permanent employees who have been employed with the Company for the two preceding calendar years to provide for a consistent employee comparator group (the figures therefore exclude Legacy Baxalta employees). This approach is consistent with the disclosure presented in the 2015 Annual Report on Remuneration.

CEO taxable benefits

- The above disclosure shows an increase in the CEO's taxable benefits of 958 percent from 2015 to 2016.
- This is due to the specific support that was provided to the CEO in relocating his family from Switzerland to Boston where he is permanently based.
- Therefore the benefit provision for 2016 is not typical and it is not intended that this support will be provided in future years.

Relative importance of spend on pay

All figures have been prepared using Legacy Shire data only to provide consistency in the reporting over the two preceding financial years.

Overall spend on pay increased by 9 percent in 2016 reflecting a 16 percent increase in the regular workforce in support of business growth and expansion.

Non GAAP EBITDA increased 11 percent in 2016 as a result of strong product sales growth, held back by increased investment in combined R&D and SG&A.

Shareholder distributions increased by 28 percent in 2016 due to the significantly increased number of shares in issue following the acquisition of Baxalta combined with a 15 percent growth in full-year dividend per share in U.S. Dollar terms.

Remuneration Committee

Terms of reference

The Committee is responsible for agreeing the broad remuneration policy for the organization and the individual packages for the Chairman, Executive Directors, and certain other senior leadership roles. Within the agreed policy, the Committee determines the terms and conditions to be included in service agreements, including termination payments and compensation commitments, where applicable. The Committee also determines performance targets applicable to the Company's annual bonus and long-term incentive plans, and has oversight of the Company's share incentive schemes. The Committee's terms of reference were reviewed in February 2017 and are available in full on the Company's website www.shire.com.

Membership and attendance

As at the year-end, the Remuneration Committee comprised six independent Non-Executive Directors, each appointed on the basis of their knowledge and experience of matters relating to compensation.

Committee member[1]	Date of appointment	Meeting attendance[2]
Anne Minto[3]	Jun 16, 2010	9(9)
Olivier Bohuon[4]	Apr 28, 2016	4(6)
William Burns	Mar 15, 2010	9(9)
Steven Gillis	Oct 1, 2012	9(9)
Sara Mathew[5]	Dec 3, 2015	9(9)
Albert Stroucken	Jun 7, 2016	4(4)

Note: The number in brackets denotes the number of meetings that Committee members were eligible to attend.
1 Dominic Blakemore and Ian Clark were appointed as members of the Committee on February 15, 2017.
2 There were six scheduled and three ad-hoc Committee meetings held during 2016.
3 Anne Minto served as a member of the Committee prior to her appointment as Committee Chairman on July 26, 2010.
4 Olivier Bohuon was absent from two ad-hoc Committee meetings due to illness.
5 Sara Mathew stood down as a member of the Committee on February 15, 2017.

At the invitation of the Committee Chairman, regular additional meeting attendees during the year included the Chairman of the Board and other Non-Executive Directors, the Chief Executive Officer and members of the following internal Group functions:

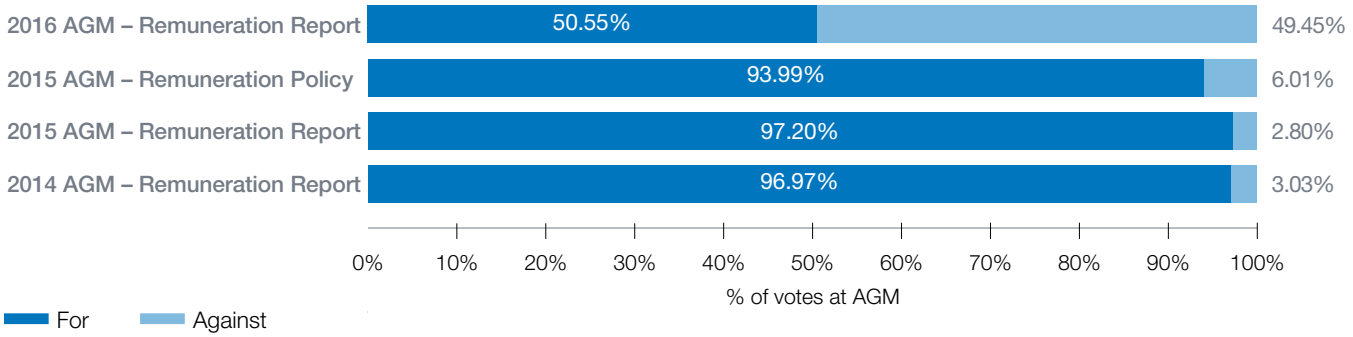
- Human Resources
- Legal and Company Secretarial
- Finance

Remuneration Committee activities in 2016

In 2016, the Committee discussed the key agenda items set out in the following table. As set out in the Chairman's letter, 2016 was a very busy year for the company and the Committee given the transaction with Baxalta and the two consultations held before and after the 2016 AGM:

	Remuneration Committee activities	January 2016	February 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	December 2016
Overall remuneration	Approval of 2015 performance and remuneration decisions for the CEO, the CFO and the Executive Committee		●								
	Revision of performance targets following the Baxalta transaction					●	●				
	Review of market trends for Chairman, CEO, CFO and Non-Executive Director remuneration										●
	Review of the 2016 year-end compensation process and budgets for all employees										●
	Review of preliminary 2016 performance and remuneration decisions for the CEO, CFO and the Executive Committee										●
Short-term incentives	Assessment of Company performance against the 2015 annual bonus funding scorecard		●								
	Approval of the 2016 Corporate Scorecard	●									
	Preliminary review of the proposed 2017 Corporate Scorecard										●
Long-term incentives	Approval of the 2016 performance measures for LTIP awards to Executive Directors		●								
	Approval of annual offerings of Sharesave and GESPP awards						●				
	Consideration of potential SAEs in relation to outstanding LTIP performance cycles										●
Governance	Approval of the 2016 DRR		●								
	Regular updates on legislative, regulatory and corporate governance changes	●	●	●	●	●	●			●	●
	Consideration of trends in executive remuneration and corporate governance developments								●	●	
	Review of the CEO, CFO and the Executive Committee's shareholdings			●							●
	Review of the Committee's effectiveness										●
Shareholder consultation	Letter to shareholders in advance of 2016 AGM	●									
	Consultation with shareholders in advance of 2016 AGM		●	●							
	Letter to shareholders post 2016 AGM setting out the intention to consult over the summer				●						
	Remuneration Committee agree approach to shareholder consultation exercise						●				
	Letter sent to shareholders setting out revised incentive targets							●			
	Initial consultation with shareholders on revised incentive targets							●	●		
	Review of feedback received from shareholder consultation exercise								●	●	
	Follow-up consultation with shareholders on proposed incentive targets								●	●	●

Statement of shareholder voting
The graphic below shows how shareholders voted in respect of the remuneration report at the AGM held on April 28, 2016 and in prior years.



Votes withheld are not a vote in law and are not counted in the calculation of the proportion of votes validly cast.

As set out earlier in this report, the advisory vote to approve the Directors' Remuneration Report was considerably lower than in previous years and therefore as the Remuneration Committee Chairman, I personally spent considerable time with the Company's largest shareholders over the course of the year to fully understand the concerns of those that voted against the report. The consultation confirmed that a significant number of shareholders who voted against the Remuneration Report in 2016 were focused on the lack of consultation over the salary increase awarded to the CEO in July 2015, and the quantum of the increase awarded without consultation. Following these discussions, the Committee is confident that shareholders fully understand the reasons why the Committee was unable to conduct their usual full and extensive approach to shareholder consultation in 2015 with respect to the increase in the CEO's salary and while it does not change the outcome of the vote, shareholders recognize the communication restrictions placed on the Committee during the Baxalta pre-acquisition period. The Committee in turn fully appreciates our shareholders' concerns around quantum and has materially responded to this concern in reducing the LTIP grant to both of our Executive Directors to 575 percent of salary for 2017 (as set out on page 88).

Advisors
In discharging its responsibilities in 2016, the Committee was materially assisted by those employees performing the roles of Chief Human Resources Officer and Group Vice President, Total Rewards. In addition, PricewaterhouseCoopers LLP ("PwC"), appointed by the Committee, continued to serve as independent external advisor to the Committee following a competitive tendering process in early 2012. PwC also provided global consultancy services to the Company in 2016, primarily in respect of tax matters. Fees paid to PwC in relation to remuneration services provided to the Committee totaled £399,990 in 2016 and were determined based on the scope and nature of the projects undertaken for the Committee.

The Committee is satisfied that the advice received by PwC in relation to executive remuneration matters during the year was independent. The Committee reviewed the potential for conflicts of interest and judged that there were appropriate safeguards against any potential conflicts. PwC is a member of the Remuneration Consultants' Group which operates a code of conduct in relation to executive remuneration consulting in the UK.

The Directors' Remuneration Report comprises pages 82 to 114 of this Annual Report.

Approved by the Board of Directors and signed on its behalf by:

Anne Minto OBE
Chairman of the Remuneration Committee
February 22, 2017

Appendix: Directors' remuneration policy — key elements

a) Executive Director remuneration policy

The purpose of the remuneration policy is to recruit and retain high-caliber executives and encourage them to enhance the Company's performance responsibly and in line with the Company's strategy and shareholder interests. The remuneration policy was approved by shareholders at the April 2015 AGM (April 28, 2015) and will be effective for a period of three years. Whilst there is currently no intention to revise the policy more frequently than every three years, the Committee will review the policy on an annual basis to ensure it remains strategically aligned and appropriately positioned against the market. Where any change to policy is considered, the Committee will consult with major shareholders prior to submitting a revised policy for shareholder approval.

This section sets out the key parts of the remuneration policy. The complete remuneration policy as approved by shareholders can be found within the 2014 Directors' Remuneration Report available on the Company's website www.shire.com.

The overall remuneration package for the Executive Directors is designed to provide an appropriate balance between fixed and variable, performance-related components, with a significant element of long-term variable pay given the long-term nature of the business.

In determining the positioning of overall remuneration, the Committee takes into consideration pay levels against a Global Biotech peer group and a U.S. BioPharma peer group. These peer groups reflect the need for Shire to be aligned with the Biotech and BioPharma sectors in which the Company operates, the markets in which the Company competes for talent, and the geographies in which the Company operates. In addition, the FTSE 50 (excluding financial services) is used as a secondary reference point, given Shire's position as a UK-listed company.

The Committee is satisfied that the composition and structure of the remuneration package is appropriate and does not incentivize undue risk-taking.

Purpose & link to strategy	Operation & Performance Assessment	Opportunity
Fixed elements — Base salary		
To recognize the market value of the role, an individual's skills, experience and performance and an individual's leadership and contribution to Company strategy.	Base salary is paid in cash and is pensionable. Individual and corporate performance are factors considered during the annual base salary review process. Any increases typically take effect on January 1 each year. Any significant salary increases, such as in cases where Executive Directors are relatively new in role, changes in responsibilities or significant variance to the market, will be appropriately explained.	Base salary is positioned with reference to Global Biotech and U.S. BioPharma peer groups. A FTSE 50 (excluding financial services) group is used as a secondary reference point. The exact positioning depends on a variety of factors such as individual experience and performance, total remuneration increases across the Company and shareholder views. Where appropriate, base salary increases are made in line with the average of employees' salary increases, unless the Committee determines otherwise based on the factors listed above. The annual base salaries for the Executive Directors are set out in Part 2(a) of this report.
Fixed elements — Retirement and other benefits		
To ensure that benefits are competitive in the markets in which the Company operates.	Executive pension benefits are provided in line with market practice in the country in which an Executive is based. The Company provides a range of other benefits which may include a car allowance, long-term disability and life cover, private medical insurance and financial and tax advisory support. These benefits are not pensionable. Other benefits may be offered if considered appropriate by the Committee. The Company may also meet certain mobility costs, such as relocation support, expatriate allowances, temporary living and transportation expenses, in line with the prevailing mobility policy and practice for senior executives. Executive Directors are eligible to participate in the all-employee share plans operated by the Company, such as the Global Employee Stock Purchase Plan ("GESPP").	Executive Directors can receive a fixed contribution of up to 30 percent of annual salary by way of a retirement benefit provision. The cost to the Company of providing other benefits may vary depending on such things as, market practice and the cost of insuring certain benefits.

[1] Formerly referred to as Performance Share Awards ("PSAs"), name changed in the LTIP approved by shareholders at the 2015 AGM.
[2] Product Sales is defined as product sales from continuing operations.
[3] Non GAAP EBITDA growth is defined as the CAGR of Non GAAP EBITDA, as derived from the Group's Non GAAP financial results included in its full year earnings releases, over the three-year vesting period.
[4] Non GAAP Adjusted ROIC reflects the definition used by the Company in its corporate scorecard. This definition aims to measure true underlying economic performance of the Company, by making a number of adjustments to ROIC as derived from the Company's Non GAAP financial results including:
- Adding back to Non GAAP operating income all R&D expenses and operating lease costs incurred in the period;
- Capitalizing on the Group's balance sheet historical, cumulative R&D, in process R&D and intangible asset impairment charges and operating lease costs which previously have been expensed;
- Deducting from Non GAAP operating income and an amortization charge for the above capitalized costs based on the estimated commercial lives of the relevant products;
- Excluding the income statement and balance sheet impact of non-operating assets (such as surplus cash and non-strategic investments); and
- Taxing the resulting adjusted operating income at the underlying Non GAAP effective tax rate.

Purpose & link to strategy	Operation & Performance Assessment	Opportunity
Short-term incentives — Executive Annual Incentive ("EAI")*		

To reward individuals with an award based on achievement of pre-defined, Committee-approved corporate objectives (the corporate scorecard) and the individual's contributions toward achieving those objectives.
 	
Key performance measures are set by the Committee in the context of annual performance and ensuring progress towards the Company's strategy — to grow value for all our stakeholders — focusing and excelling in everything we do to meet the current and future needs of patients.
	In determining EAI awards for the Executive Directors, the Committee considers performance against each of the key performance measures within the corporate scorecard, taking into account the impact of strategic actions on the Company's performance, the Company's response to external opportunities and events that could not have been predicted at the beginning of the year and performance against personal objectives. In addition, the Committee may amend the performance measures or targets in exceptional circumstances where it considers that they are no longer appropriate.
	
	The cash element (75 percent of any award) is paid in the first quarter of the year following the performance year, and the deferred shares element (25 percent of any award) is deferred and normally released after a period of three years. The release of deferred shares includes dividend shares representing accumulated dividends.
	
	Malus and clawback arrangements are in place. These are compliant with the UK Corporate Governance Code 2012 (the "Code") and in line with best practice in this area.
	
	*The short-term incentive has been renamed the Executive Annual Incentive (previously the Executive Annual Incentive Plan). There is no change to the operation of the EAI (cash or deferred element) which is in line with the Remuneration Policy approved at the 2015 AGM. The deferred portion of the EAI outcome is operated under the Deferred Bonus Plan which is a sub-set of the LTIP rules approved at the 2015 AGM.
		Up to 90 percent of base salary is payable for target performance for Executive Directors and up to 180 percent is payable for maximum performance, although actual payouts can range from 0 percent (threshold performance) upwards.
		
		Each year the Committee determines the measures and weightings for the corporate scorecard within the following parameters:
		– At least 75 percent of the corporate scorecard will be based on financial performance; and
		– Non-financial corporate scorecard measures will be based on other strategic priorities for the relevant financial year. For 2015, this was aligned with our four key strategic drivers:
		  – Growth;
		  – Innovation;
		  – Efficiency; and
		  – People.
		
		The precise allocation between financial and non-financial measures (as well as the weightings within these measures), will depend on the strategic focus of the Company in any given year.

Long-term incentives — Long-Term Incentive Plan ("LTIP")		
To incentivize individuals to achieve sustained growth through superior long-term performance and create alignment with shareholders. The LTIP measures, Product Sales and Non GAAP EBITDA, were selected by the Committee as it believes that they represent meaningful and relevant measurements of performance and are an important measure of the Company's ability to meet the strategic objective to grow value for all our stakeholders. The Committee reviews annually whether the performance measures and calibration of targets remain appropriate and sufficiently challenging taking into account the Company's strategic objectives and shareholder interests.	LTIP grants for the Executive Directors comprise two types of award: – **SAR awards.** A Stock Appreciation Right ("SAR") is the right to receive Ordinary Shares or ADSs linked to the increase in value of Ordinary Shares or ADSs from grant to exercise. – **PSU awards.** A Performance Share Unit ("PSU")[1] is the right to receive a specified number of Ordinary Shares or ADSs. SAR and PSU awards granted to Executive Directors vest three years from the date of grant, subject to the satisfaction of performance measures and are governed by the LTIP rules. SAR awards can be exercised up to the seventh anniversary of the date of grant. Vesting of awards requires the achievement of two independent measures: – Product Sales[2] targets (50 percent weighting); and – Non GAAP EBITDA[3] targets (50 percent weighting). The Committee will also use a Non GAAP Adjusted ROIC[4] underpin at the end of the three-year performance period to assess the underlying performance of the Company before determining final vesting levels. The award may include dividend shares representing accumulated dividends on the portion of the award that vests. The Committee reserves the right to make adjustments to the measures to reflect significant one off items that occur during the vesting period (Significant Adjusting Events ("SAEs")). Potential SAEs are reviewed by the Committee against pre-existing guidelines[5]. The Committee will make full and clear disclosure of any such adjustments in the Directors' Remuneration Report ("DRR") at the end of the performance period. A two-year holding period will apply following the three-year vesting period for both PSUs and SARs. Shares may be sold in order to satisfy tax or other relevant liabilities as a result of the award vesting. Malus and clawback arrangements are in place. These are compliant with the Code and in line with best practice in this area. Executive Directors are encouraged to own shares in the Company equivalent to 200 percent (for the CEO) and 150 percent (for the CFO) of base salary within a five-year period following their appointment. All shares beneficially owned by an executive or deferred under the EAI count towards achieving these guidelines.	Maximum annual awards for Executive Directors in face value terms are 840 percent of salary for grants under the LTIP, consisting of: – 480 percent of base salary for SAR awards; and – 360 percent of base salary for PSU awards. Award levels are set to reflect an individual's role, responsibilities and experience. Threshold vesting is equal to 20 percent of any award made, with maximum vesting being equal to 100 percent of any award made.

[5] The Significant Adjusting Events pre-existing guidelines consist of the following:
- The event results from a strategic action that has a short-term impact on Non GAAP Adjusted ROIC or Non GAAP EBITDA growth, but is in the long-term interest of shareholders or the event was external and results in a significant change to the Company's operating environment;
- The event is a one-off (as opposed to recurring) in nature;
- The event is "significant" which is defined by reference to its impact on Non GAAP EBITDA relative to a materiality threshold; and
- The event was not taken into account when the performance matrix was set.

Legacy matters in relation to Executive Director remuneration

The Committee will honor remuneration and related commitments to current and former directors (including the exercise of any discretions available to the Committee in relation to such commitments) where the terms were agreed prior to the approval and implementation of the remuneration policy detailed in this report.

Notes to the remuneration policy table

Elements of previous policy that continue to apply

The following existing arrangements will continue to operate on the terms and conditions set out in the relevant Portfolio Share Plan ("PSP") rules.

Purpose & link to strategy	Operation & Performance Assessment	Opportunity
Long-term incentives — Portfolio Share Plan ("PSP")		
Previous awards granted to incentivize individuals to achieve sustained growth through superior long-term performance and create alignment with shareholders' interests.	Outstanding and unvested awards for the CEO comprise SAR and PSU awards. Vesting of PSP awards will be subject to the achievement of Non GAAP EBITDA and Non GAAP Adjusted ROIC targets within a performance matrix. The Committee reserves the right to make adjustments to the measures to reflect significant one off items which occurred during the vesting period (SAEs). Potential SAEs are reviewed by the Committee against pre-existing guidelines. The Committee will make full and clear disclosure of any such adjustments in the relevant DRR at the end of the performance period. In addition, awards will only vest if the Committee determines that the underlying financial performance of the Company is sufficient to justify the vesting of the awards. Malus and clawback arrangements are in place for past awards to cover situations where results are materially misstated or in the event of serious misconduct. Where an individual's employment terminates, the PSP rules provide for unvested long-term incentive awards to lapse except as set out below. Under PSP rules, where an individual is determined to be a "good" leaver, unvested long-term incentive awards vest upon termination subject to performance against applicable performance conditions and, unless the Committee determines otherwise, pro-rating for time. Any Committee determination will take into account a number of considerations, in particular performance and other circumstances relating to their termination of employment. – Good leaver reasons include retirement in accordance with the Company's retirement policy, ill health, injury or disability, and redundancy or in other circumstances that the Committee determines. – Pro-rating for time will be calculated on the basis of the number of complete weeks in the relevant period during which the executive was employed (or would have been employed had the executive remained in employment throughout the notice period) as a proportion of the number of complete weeks in the relevant period. The PSP rules provide that unvested awards will normally only vest on a change in control to the extent that any performance condition has been satisfied, unless the Committee determines otherwise, and would be reduced where less than two years have elapsed from the relevant grant date.	Outstanding awards granted to the CEO and CFO that were granted in 2014 and 2015, are set out in Part 2(c) of this report. Threshold vesting under the performance matrix is equal to 25 percent of any award made, with maximum vesting being equal to 100 percent.

b) Chairman and Non-Executive Director remuneration policy

Purpose & link to strategy	Operation	Opportunity
Overall remuneration		
To attract and retain high-caliber individuals by offering market-competitive fee levels.	The Chairman is paid a single fee for all of his/her responsibilities. The Non-Executive Directors are paid a basic fee. The members and Chairmen of the main Board committees and the Senior Independent Director are paid a committee fee to reflect their extra responsibilities. The Chairman and Non-Executive Directors receive 25 percent of their total fees in the form of shares. Additional fees may be paid to Non-Executive Directors (excluding the Chairman) on a per-meeting basis for any non-scheduled Board or Committee meetings required in exceptional or unforeseen circumstances, up to the relevant fee cap as set out in the Company's Articles. The Company reimburses reasonably incurred expenses and the Chairman and Non-Executive Directors are also paid an additional fee in respect of each transatlantic trip made for Board meetings. The fees paid to the Chairman and the Non-Executive Directors are not performance related. The Chairman and Non-Executive Directors do not participate in any of the Group share plans, pension plans or other employee benefit schemes.	Fees are determined by the Executive Directors and the Chairman, with the exception of the Chairman's fee which is determined by the Committee. To reflect the governance environment in which Shire operates fees are benchmarked against a UK FTSE 50 (excluding financial services) group. As a secondary reference point fee levels in the Global Biotech peer group and U.S. BioPharma peer group (the groups used for the Executive Directors) are taken into account. In addition, the fee levels take into account the anticipated time commitment for the role and experience of the incumbent. The Chairman's and Non-Executive Directors' fees are reviewed on an annual basis. Where appropriate, increases are made with reference to the factors listed above and average employee salary increases since the last increase was applied.

c) Recruitment remuneration policy

The following table sets out the various components which would be considered for inclusion in the remuneration package for the appointment of an Executive Director and the approach to be adopted by the Committee in respect of each component.

Area	Policy and operation
Overall	– The Committee's approach when considering the overall remuneration arrangements in the recruitment of a member of the Board from an external party is to take account of the Executive Director's remuneration package in their prior role, the market positioning of the remuneration package, and to not pay more than necessary to facilitate the recruitment of the individual in question.
Fixed elements (Base salary, retirement and other benefits)	– The salary level will be set with reference to the Company's Global Biotech and U.S. BioPharma peer groups, with a FTSE 50 (excluding financial services) group used as a secondary reference to ensure the positioning is appropriate. – The Executive Director shall be eligible to participate in Shire's employee benefit plans, including coverage under all executive and employee pension and benefit programs in accordance with the terms and conditions of such plans, as may be amended by the Company in its sole discretion from time to time. – The Company may meet certain mobility costs, including but not limited to, relocation support, expatriate allowances, temporary living and transportation expenses in line with the prevailing mobility policy and practice for senior executives.
Short-term incentives	– The appointed Executive Director will be eligible to earn a discretionary annual incentive award in accordance with the rules and terms of Shire's Deferred Bonus Plan. – The level of opportunity will be consistent with that stated in section (a) of this policy.
Long-term incentives	– The Executive Director will be eligible for performance based equity awards in accordance with the rules and terms of Shire's Long-Term Incentive Plan. – The quantum will be consistent with that stated in section (a) of this policy.
Replacement awards	– The Committee will consider what replacement awards (if any) are reasonably necessary to facilitate the recruitment of a new Executive Director in all circumstances. This includes an assessment of the awards and any other compensation or benefits item that would be forfeited on leaving their current employer. – The Committee will seek to structure any replacement awards such that overall they are not significantly more generous in terms of quantum or vesting period than the awards due to be forfeited. – In determining quantum and structure of these commitments, the Committee will seek to provide broadly equivalent value and replicate, as far as practicable, the timing and performance requirements of remuneration forgone. – The Committee will seek to ensure that a meaningful proportion of the replacement awards which are not attributable to long-term incentives forgone will be delivered in Shire deferred shares, released at a later date and subject to continued employment. – If the Executive Director's prior employer pays any portion of the remuneration that was deemed forgone, the replacement payments shall be reduced by an equivalent amount. – Replacement share awards, if used, will be granted using the Company's existing long-term incentive plan to the extent possible, although awards may also be granted outside of this plan if necessary and as permitted under the Listing Rules. – In the case of an internal hire, any outstanding awards made in relation to the previous role will be allowed to pay out according to their original terms. If promotion is part way through the year, an additional top-up award may be made to bring the Executive Director's opportunity to a level that is appropriate in the circumstances.

d) Service contracts and termination arrangements

Executive Directors

The Committee's policy on service contracts and termination arrangements for Executive Directors is set out below. As an overriding principle, it is the Committee's policy that there should be no element of reward for failure. The Committee's approach when considering payments in the event of termination is to take account of the individual circumstances including the reason for termination, performance, contractual obligations of both parties as well as share plan and pension scheme rules.

Notice period	– The Committee's policy is that Executive Directors' service contracts should provide for a notice period of 12 months from the Company and the Executive Director. – The Committee believes this policy provides an appropriate balance between the need to retain the services of key individuals for the benefit of the business and the need to limit the potential liabilities of the Company in the event of termination. – Flemming Ornskov's contract does not have a fixed term but provides for a notice period of 12 months in line with this policy. His contract is dated October 24, 2012.
Contractual payments	– Executive Directors' contracts allow for termination with contractual notice from the Company or termination by way of payment in lieu of notice, at the Company's discretion. Neither notice nor a payment in lieu of notice will be given in the event of gross misconduct. – Payments in lieu of notice could potentially include up to 12 months' base salary and the cash equivalent of 12 months' pension contributions, car allowance and other contractual benefits. There is no contractual entitlement to annual incentive payments in respect of the notice period. Any award is at the Committee's absolute discretion, performance related and capped at the contractual target level. – Payment in lieu of notice would be made where circumstances dictate that the Executive Directors' services are not required for the full 12 months of their notice period. Contracts also allow for phased payments on termination, which allow for further reduction in payments if the individual finds alternative employment outside of the Company during the notice period.
Retirement benefits	– Normal treatment to apply as governed by the rules of the relevant pension plan; no enhancement for leavers will be made.
Short-term incentives	– Where an Executive Director's employment is terminated after the end of a performance year but before the payment is made, the executive will remain eligible for an annual incentive award for that performance year subject to an assessment based on performance achieved over the period. Where an award is made the payment may be delivered fully in cash. No award will be made in the event of gross misconduct. – Where an Executive Director's employment is terminated during a performance year, a pro-rata annual incentive award for the period worked in that performance year may be payable subject to an assessment based on performance achieved over the period. – The Committee's policy is not to award an annual incentive for any portion of the notice period not served. – The relevant plan rules provide that any outstanding deferred shares will vest in accordance with the regular vesting period, except for where an Executive Director's employment is terminated for cause in which case they will lapse. – In the event of a variation in the equity share capital of the Company, demerger, a special dividend or distribution, or any corporate event which might affect the value of an award, the Committee may make adjustments to the number or class of stock or securities subject to the award.
Long-term incentives	– The treatment of unvested long-term incentive awards is governed by the rules of the relevant incentive plan, as approved by shareholders. – Where an individual's employment terminates, the LTIP rules provide for unvested long-term incentive awards to lapse except as set out below. – Under the LTIP rules, where an individual is determined to be a "good" leaver, unvested long-term incentive awards will vest at the normal vesting date subject to performance against applicable performance conditions and, unless the Committee determines otherwise, pro-rating for time. Any Committee determination will take into account a number of considerations, in particular performance and other circumstances relating to their termination of employment. – Good leaver reasons include retirement in accordance with the Company's retirement policy, ill health, injury or disability, and redundancy or in other circumstances that the Committee determines. – Pro-rating for time will be calculated on the basis of the number of complete weeks in the relevant period during which the executive was employed as a proportion of the number of complete weeks in the relevant period. Where an executive does not work during their notice period, the Committee may apply prorating by reference to the date the notice period would have expired. – Where an Executive Director's employment is terminated or an Executive Director is under notice of termination for any reason at the date of award of any long-term incentive awards, no long-term incentive awards will be made. – In the event of a variation in the equity share capital of the Company, demerger, a special dividend or distribution, or any corporate event which might affect the value of an award, the Committee may make adjustments to the number or class of stocks or securities subject to the award and, in the case of an option, the option price.
Change in control	– In relation to unvested deferred annual bonus awards, the Deferred Bonus Plan rules provide that unvested awards will normally vest on a change in control. – In relation to unvested long-term incentive awards, the LTIP rules provide that unvested awards will normally only vest on a change in control to the extent that any performance condition has been satisfied and would be reduced where more than a year remains until the relevant vesting date, unless the Committee determines otherwise. – The Committee's policy is that contracts of employment should not provide additional compensation on severance as a result of change in control.

External appointments
Executive Directors are permitted to hold one fee-paying external non-executive directorship, subject to prior approval by the Board. Any fees received from such appointments are retained by the Executive Director. During 2016, there were no external fee-paying non-executive directorships held by the Executive Directors.

Chairman and Non-Executive Directors
The Chairman and Non-Executive Directors have letters of appointment and are appointed by the Board ordinarily for a term of two years. Their initial appointment and any subsequent re-appointment are subject to election, and thereafter annual re-election by shareholders. The Chairman and Non-Executive Directors are not entitled to compensation for loss of office. The Chairman and all Non-Executive Directors are subject to a three-month notice period.

All service contracts and letters of appointments will be available for viewing at the Company's 2017 AGM.

Shareholder engagement
The Committee takes the views of shareholders very seriously and is committed to ongoing dialogue with the Company's shareholder base, which has a significant transatlantic element. This can take a variety of forms including meetings with major shareholders to consider significant potential changes to policy or specific issues of interest to particular shareholder groups, other dialogue to update shareholders and receive their feedback on planned refinements to arrangements, and annual voting on the DRR.

Remuneration of other employees
The Committee recognizes that remuneration has an important role to play in supporting the implementation and achievement of the Company's strategy and ongoing performance. When making remuneration decisions in respect of the Executive Directors, the Committee is sensitive to pay and employment conditions across the Company, in particular in relation to base salary decisions where the Committee considers the broader employee salary increase budget. The Committee approves the overall annual bonus funding for the Company each year and has oversight over the grant of all LTIP awards across the Company. In addition, annual performance for the Executive Directors is measured against the backdrop of the same corporate scorecard that is appropriately used to assess performance across the organization. This assessment of corporate scorecard performance includes a review of Non GAAP EBITA, Non GAAP Adjusted ROIC and Product Sales, adjusted to exclude the impact of the annual bonus corporate modifier on the full year results.

Given Shire's diverse employee base, employing approximately 24,000 people across 68 countries, the Committee does not consider it appropriate to consult with employees over the remuneration policy for Executive Directors. However, many of the Company's employees are shareholders through the Company's all-employee share plans, and are therefore able to express their views on director remuneration at each general meeting. The Company also periodically carries out an employee engagement survey which provides employees the opportunity to feedback their views on a variety of employment related matters, including remuneration.

The diagram set out on the following page illustrates how our remuneration policy and arrangements reinforce the achievement of Shire's success and ensures that executives and employees are focused on delivering the same core objectives.

The Shire Remuneration Policy

Strategically and culturally aligned
Remuneration should reflect and align with our business strategy and organizational culture

Equity ownership can drive the right, long-term behaviors and alignment, in particular for leaders

Performance oriented
The way remuneration is structured and communicated can promote a performance culture

Employees should be rewarded based on their contribution to value creation

Competitive
Remuneration must be market competitive in order to attract and retain talent as well as to avoid overpaying

Relevant to employees
Each element of the package should be valued by employees and, as far as practicable, meet their differing needs and preferences

The ability to impact company value should influence the remuneration mix for employees

Clear and understandable
Remuneration should be clear and understandable so that it can have real impact

Employees should understand the rationale for each element of remuneration and, where relevant, the link between performance and their reward

These act as a framework for remuneration decisions across the Company.

Overall remuneration

The structure and quantum of individual remuneration packages varies by geography, role and level of responsibility.

In general, the proportion of variable remuneration in the total remuneration package increases with level of responsibility within the Company.

Fixed elements (base salary and benefits)
Employees' base salaries are benchmarked against the relevant market taking into account the companies with whom we compete for talent, geography and, where relevant, company size.

For example, market data for the most senior leadership roles, in particular the Executive Committee reflects both the geographies in which we operate (with more than two thirds of employees as well as the majority of senior management based in the U.S.) and companies of a comparable size in the pharmaceutical and biotechnology sectors.

Base salary increases across the Company are determined in light of similar factors as described for the Executive Directors.

Retirement and other benefit arrangements are provided to employees with appropriate consideration of market practice and geographical differences.

Short-term incentives
For Executive Directors' short-term incentives, assessment is made against a corporate scorecard of key performance measures built around Shire's key financial goals and other strategic priorities for the relevant year.

This same scorecard is appropriately used by each business and corporate function to ensure alignment with corporate goals, and also funds short-term incentives across the Company.

Scorecard targets are further used as a basis for determination of each employee's performance objectives, with annual incentive awards payable in cash, strongly differentiated based on individual performance through linkages with the performance management system.

Long-term incentives
Discretionary long-term equity awards are made on an annual basis dependent on an employee's level of responsibility within the Company and individual performance.

For Executive Directors and Executive Committee members, all awards vest at the end of a three-year period.

For the rest of the employee population, phased vesting of awards occurs over a period of three years with the majority vesting at the end of the three-year period (except for PSU awards which vest at the end of a three-year period subject to the satisfaction of performance conditions).

Additional statutory information

Directors

Appointment and replacement

Directors may be appointed by the Company by ordinary resolution or by the Board. Non-Executive Directors are appointed ordinarily for a term of two years, subject to shareholder approval. Re-appointment of Non-Executive Directors following the expiry of their term of appointment is subject to Board approval. The Board may, from time to time, appoint one or more Directors for such period and on such terms as it may determine and may also revoke or terminate any such appointment.

The Company's Articles of Association (the "Articles") provide that at each Annual General Meeting ("AGM") all those Directors who have been appointed by the Board since the last AGM, or who held office at the time of the two preceding AGMs and who did not retire at either of them, or who held office with the Company, other than executive office, for a continuous period of nine years or more at the date of the meeting, shall retire from office and may offer themselves for re-election by the members. Notwithstanding the provisions in the Articles, in accordance with the UK Corporate Governance Code, all Directors will be subject to annual re-election.

Powers

Subject to the provisions of the Companies (Jersey) Law 1991, as amended (the "Companies Act"), the Articles and directions given by the Company in general meeting by special resolution, the business of the Company is managed by the Board which may exercise all the powers of the Company whether relating to the management of the business of the Company or not. In particular, the Board may exercise all the powers of the Company to borrow money and to mortgage or charge all or any part of the undertaking, property and assets (present and future) and uncalled capital of the Company and, subject to the Companies Act, to issue debentures and other securities, whether outright or as collateral security, for a debt, liability or obligation of the Company or of a third-party.

Liability insurance and indemnification

In the year under review, the Group maintained an insurance policy for its Directors and Officers in respect of liabilities arising out of any act, error or omission whilst acting in their capacity as Directors or Officers. Qualifying third-party indemnity provisions were also in place during the year under review for the benefit of Directors in relation to certain losses and liabilities that they may potentially incur to third parties in the course of their duties. These remain in force at the date of this report.

Interests in material contracts

Other than the insurance/indemnity provisions disclosed under "Liability insurance and indemnification" above, and Dr. Ginsburg's stated interest below, none of the Directors had a material interest in any contract of significance to which the Company or any of its subsidiary undertakings was a party during the period under review.

David Ginsburg — royalty payments relating to co-invention of patents / merger agreement with Baxalta

Dr. Ginsburg, a Non-Executive Director of the Company, is the co-inventor of two patents: (i) no. US8597910 (relating to the von Willebrand Factor); and (ii) no. US8394373 (relating to ADAMTS13). As such, he is entitled to receive royalties for the use of those patents. Dr. Ginsburg assigned the von Willebrand Factor patent to the Boston Children's Hospital and the ADAMTS13 patent to the University of Michigan. These assignments are subject to ordinary course commercial terms. The assignee institutions on-licensed the patents to a subsidiary of Baxalta, prior to its acquisition by the Company, which in return paid royalties to both institutions. The institutions paid a proportion of those royalties to, among others, Dr. Ginsburg. Following Shire's acquisition of Baxalta, a subsidiary of the Company is now the originator of the royalty payments received by Dr. Ginsburg. Moreover, as a result of receiving the royalty payments, Dr. Ginsburg was considered to be interested in the merger agreement pursuant to which Shire acquired Baxalta on June 3, 2016. This interest was disclosed to shareholders prior to completion of the transaction.

Dividends

Subject to the provisions of the Companies Act, the Company may by ordinary resolution, from time to time, declare dividends not exceeding the amount recommended by the Board. Subject to the Companies Act, the Board may pay interim dividends, and also any fixed rate dividend, whenever the financial position of the Company, in the opinion of the Board, justifies its payment.

The Board may withhold payment of all or any part of any dividends or other monies payable in respect of the shares from a person with a 0.25 percent interest (as defined in the Articles) if such person has been served with a restriction notice (as defined in the Articles) after failure to provide the Company with information concerning interests in those shares required to be provided under the Articles.

Shire has put in place income access share arrangements that enable shareholders to elect to receive their dividends from a Group company resident for tax purposes in the UK. Further information is available in Note 27 to the consolidated financial statements.

In respect of the six months to December 31, 2016, the Board resolved to pay an interim dividend of 25.70 U.S. cents (2015: 22.16 U.S. cents) per Ordinary Share. Together with the first interim dividend payment of 4.63 U.S. cents (2015: 4.21 U.S. cents) per Ordinary Share, this represents total dividends of 30.33 U.S. cents (2015: 26.37 U.S. cents) per Ordinary Share for the year ended December 31, 2016.

ACS HR Solutions Share Plan Services (Guernsey) Limited (the "Trustee"), trustee of the Shire Employee Benefit Trust (the "Trust"), has waived its entitlement to any dividends that become due and payable, from time to time, in respect of shares or other securities which are registered in the name of the trustee or its nominee(s). Total dividends waived by the Trustee during the year amounted to £200,980.59.

Shares

Share capital

As at the year ended December 31, 2016, the Company's issued share capital comprised 912,173,612 Ordinary Shares of 5 pence each of which 7,971,461 Ordinary Shares were held in treasury.

Rights and obligations attaching to shares

The rights and obligations attaching to the Ordinary Shares are set out in the Articles, which are available on the Company's website. The Articles may only be amended by special resolution of the members of the Company.

Variation of rights

Subject to the Companies Act, rights attached to any class of shares may be varied with written consent of the holders of not less than two-thirds in nominal value of the issued shares of that class (calculated excluding any shares held in treasury) or with the sanction of a special resolution passed at a separate meeting of the holders of those shares. At each such separate general meeting, except an adjourned meeting, the quorum shall be two persons holding or representing by proxy not less than one third in nominal value of the issued shares of that class (calculated excluding any shares held in treasury).

Issuance of shares
Subject to applicable statutes and subject to and without prejudice to any rights attached to existing shares, shares may be issued with such rights and restrictions as the Company may by special resolution decide or, if no such resolution has been passed or so far as the resolution does not make specific provision, as the Board may decide. Subject to the Articles, the Companies Act and other shareholders' rights, unissued shares are at the disposal of the Board.

Restrictions on transfer of shares
There are no restrictions on the transfer of shares in the Company, except (i) that certain restrictions may, from time to time, be imposed by laws and regulations (for example insider trading laws); and (ii) pursuant to the Listing Rules of the UK Financial Conduct Authority whereby certain Directors and employees of the Company require the approval of the Company to deal in the Company's Ordinary Shares.

Voting
It is the Company's practice to hold a poll on every resolution at general meetings. Every member present in person or by proxy has, upon a poll, one vote for every share held by him. In the case of joint holders of a share the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders and, for this purpose, seniority shall be determined by the order in which the names stand in the register of members in respect of the joint holding.

Restrictions on voting
No member shall, unless the Board otherwise decides, be entitled to attend or vote at any general or class meeting in respect of any shares held if any call or other sum payable by that member remains unpaid. Also, a member may not be entitled to attend or vote if served with a restriction notice (as defined in the Articles).

The Company is not aware of any agreements between holders of securities that may result in restrictions on voting rights.

The Company maintains an American Depositary Receipt ("ADR") program in the U.S. Each American Depositary Share ("ADS") represents three Ordinary Shares. An ADS is evidenced by an ADR issued by Citibank, N.A. as Depositary, and is listed on the NASDAQ Global Select Market. Each ADS holder is entitled to the financial rights attached to such shares although the ADR Depositary is the registered holder of the underlying Ordinary Shares.

As at December 31, 2016, the Trust held 0.11 percent of the issued share capital of the Company (excluding treasury shares) on trust for the benefit of participants in the Company's employee share plans. The voting rights in relation to these shares are exercised by the Trustee. The Trustee may vote or abstain from voting in any way it thinks fit and in doing so may take into account both financial and non-financial interests of the beneficiaries of the Trust or their dependents. Historically the Trustee has not exercised its right to vote.

Purchase of own shares
At its General Meeting held on May 27, 2016, the Company was authorized, until the earlier of July 27, 2017, or the conclusion of the 2017 AGM, to make market purchases of up to 89,697,280 of its own Ordinary Shares. Further details regarding purchases by the Company of its own shares can be found in Note 27 to the consolidated financial statements.

Substantial shareholdings
As at the year ended December 31, 2016, the Company had been notified of the following interests in its issued Ordinary Share capital pursuant to DTR 5 of the Disclosure Guidance and Transparency Rules:

	Number of Ordinary Shares	Percentage of issued share capital[1]
BlackRock, Inc.	71,248,018	7.92%

[1] Excluding treasury shares

No further interests have been disclosed to the Company as at the date of this Annual Report.

Significant agreements

The following significant agreements contain provisions entitling counterparties to exercise the following rights in the event of a change of control of the Company:

- Under the $2,100 million credit facility agreement dated December 12, 2014, between, amongst others, the Company and a number of its subsidiaries, Barclays Bank PLC (as the facility agent) and the banks and financial institutions named therein as lenders, upon a change of control any lender may, following not less than 30 days' notice, cancel its commitments and require prepayment of its participation in any outstanding loans. For these purposes, a change of control occurs if any person or group of persons acting in concert gains the ability to control more than half the votes at a general meeting of the Company or holds more than half the equity share capital of the Company. A waiver of the mandatory prepayment provision would require the consent of each lender under the agreement. As at February 22, 2017, an amount of $370 million was outstanding under the agreement.
- Under the $5,600 million term facilities agreement dated November 2, 2015, between, amongst others, the Company, Morgan Stanley Bank International Limited and Deutsche Bank AG, London Branch (acting as mandated lead arrangers and bookrunners), upon a change of control any lender may, following not less than 30 days' notice, cancel its commitments and require prepayment of its participation in any outstanding loans. For these purposes, a change of control occurs if any person or group of persons acting in concert gains the ability to control more than half the votes at a general meeting of the Company or holds more than half the equity share capital of the Company. A waiver of the mandatory prepayment provision would require the consent of each lender under the agreement. As at February 22, 2017, an amount of $4,600 million was outstanding under the agreement.
- The $5 billion Baxalta Inc. notes are senior unsecured obligations and, with the exception of the $375 million Floating Rate Notes due 2018, may be redeemed at Baxalta Inc.'s option at the greater of (1) 100 percent of the principal amount plus accrued and unpaid interest or (2) the sum of the present values of the remaining scheduled payments of interest and principal discounted to the date of redemption on a semi-annual basis at the applicable treasury rate (as defined) plus an incremental margin, plus, in either case, accrued and unpaid interest. The Baxalta Inc. notes also contain a change of control provision that may require that Baxalta Inc. offer to purchase the Baxalta Inc. notes at a price equal to 101 percent of the principal amount plus accrued and unpaid interest to the date of purchase under certain circumstances.
- On September 23, 2016, Shire Acquisitions Investments Ireland Designated Activity Company ("SAIIDAC"), issued senior notes with a total aggregate principal value of $12,100 million ("SAIIDAC Notes"), guaranteed by Shire plc and, as of December 1, 2016,

by Baxalta. SAIIDAC used the net proceeds to fully repay amounts outstanding under the January 2016 Facilities Agreement which was used to finance the cash consideration payable related to the Company's acquisition of Baxalta. The SAIIDAC Notes are senior unsecured obligations and may be redeemed at SAIIDAC's option at the greater of (1) 100 percent of the principal amount plus accrued and unpaid interest or (2) the sum of the present values of the remaining scheduled payments of interest and principal discounted to the date of redemption on a semi-annual basis at the applicable treasury rate (as defined) plus an incremental margin, plus, in either case, accrued and unpaid interest. The SAIIDAC Notes also contain a change of control provision that may require that SAIIDAC offer to purchase the SAIIDAC Notes at a price equal to 101 percent of the principal amount plus accrued and unpaid interest to the date of purchase under certain circumstances.

Earnings guidance

The following extracts were published by the Company during the year in its quarterly earnings releases:

- February 11, 2016 — We expect Non GAAP diluted earnings per ADS growth in the 7 percent to 10 percent range in 2016 (9 percent to 13 percent on a Non GAAP CER basis)[1].
- April 29, 2016 — For Non GAAP diluted earnings per ADS, we expect 2016 growth in the 7 percent to 10 percent range (9 percent to 13 percent on a Non GAAP CER basis)[1].
- August 2, 2016 — Following the strong performance in the first half of the year, we are updating our guidance for 2016.

Full Year 2016	US GAAP Outlook	Non GAAP[1] Outlook
Diluted earnings per ADS	($0.40) – $0.00	$12.70 – $13.10

- November 1, 2016 — After our first full quarter following the acquisition of Baxalta, we are reiterating our Non GAAP guidance from Q2 2016 and updating our US GAAP guidance.

Full Year 2016	US GAAP Outlook	Non GAAP[1] Outlook
Diluted earnings per ADS	($1.10) – ($0.70)	$12.70 – $13.10

The realized earnings in respect of the 2016 financial year were:

Full Year 2016	US GAAP	Non GAAP[1]
Diluted earnings per ADS	$1.27	$13.10
Growth against 2015 financial year	(81%)	12%

The US GAAP diluted earnings per ADS growth was 281 percentage points ahead of the most recently published guidance, with the variance primarily due to the impact of acquisition accounting. The Non GAAP[1] diluted earnings per ADS growth was in line with the most recently published guidance. Further commentary on the performance of the Company during the year can be found starting on page 43.

[1] For a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP, see pages 185 to 187.

Post year-end events

The following important events affecting the Company or its subsidiaries occurred between December 31, 2016, and the date of this report:

ELAPRASE

On September 24, 2014, Shire's Brazilian affiliate, Shire Farmaceutica Brasil Ltda, was served with a lawsuit brought by the State of Sao Paulo and in which the Brazilian Public Attorney's office has intervened alleging that Shire is obligated to provide certain medical care including ELAPRASE for an indefinite period at no cost to patients who participated in ELAPRASE clinical trials in Brazil, and seeking recoupment to the Brazilian government for amounts paid on behalf of these patients to date, and moral damages associated with these claims.

On May 6, 2016, the trial court judge ruled on the case and dismissed all the claims under the class action, which was appealed. On February 20, 2017, the Court of Appeals in Sao Paulo issued the final decision on merit in favor of Shire and dismissed all the claims under the class action. The final decision can be appealed through the Superior Court of Justice or through the Supreme Court, however, the likelihood of one of those courts accepting the appeal is remote.

Political donations

During the year ended December 31, 2016, Shire made political donations equal to an aggregate amount of $34,250 (2015: $nil). These donations were made only to committees of various political state candidates within the U.S. who had demonstrated support for improving patient access to medicines and other medical treatments. The donations were made pursuant to commitments and arrangements already in place at Baxalta prior to its acquisition by Shire. In accordance with Shire's policy concerning political donations and expenditure, it is intended that no further political donations will be made.

Information required under 9.8.4 R of the Listing Rules ("LR")

Information requirement	Location within Annual Report 2016
Details of information required by LR 9.2.18 R.	Page 117
Details of any contract of significance in which a Director is, or was, materially interested.	Page 115
Details of any arrangement under which a shareholder has waived, or agreed to waive, any dividends.	Page 115
Where a shareholder has agreed to waive future dividends, details of such waiver together with those relating to dividends which are payable during the period under review.	Page 115

Other information requirements set out in LR 9.8.4 R are not applicable to the Company.

Branches

Details of branches of group subsidiaries can be found in Note 31 to the consolidated financial statements.

Directors' responsibilities statement

The Directors are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors are required to prepare the Group financial statements in accordance with accounting principles generally accepted in the United States of America. Under company law the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Group and of the profit or loss of the Group for that period.

In preparing the Group financial statements, the Directors are required to:

- properly select and apply accounting policies
- present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information
- provide additional disclosures when compliance with the specific requirements within accounting principles generally accepted in the United States of America are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance
- make an assessment of the Group's ability to continue as a going concern

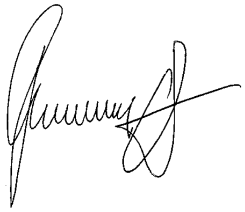
The Directors are responsible for keeping proper accounting records that are sufficient to show and explain the Group's transactions and disclose with reasonable accuracy at any time the financial position of the Group and enable them to ensure that the financial statements comply with the Companies (Jersey) Law 1991. They are also responsible for safeguarding the assets of the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Responsibilities statement

Each of the Directors confirms that to the best of their knowledge:

- the financial statements, prepared in accordance with the accounting principles generally accepted in the United States of America, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and the undertakings included in the consolidation taken as a whole
- the Strategic Report includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face
- the Annual Report and financial statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for shareholders to assess the Group's performance, business model and strategy
- there is no relevant audit information of which the Company's auditor is unaware
- they have taken all the steps that they ought to have taken as Directors in order to make themselves aware of any relevant audit information and to establish that the Company's auditor is aware of that information

The Responsibilities Statement and the Directors' Report, which comprises pages 2 to 118 of this Annual Report, were approved by the Board of Directors and signed on its behalf by:



Flemming Ornskov, MD, MPH
Chief Executive Officer
February 22, 2017

Jeffrey Poulton
Chief Financial Officer
February 22, 2017

Independent auditor's report to the members of Shire plc

Opinion on financial statements of Shire plc

In our opinion the consolidated financial statements of Shire plc and subsidiaries (together the "Group"):

- **give a true and fair view of the state of Shire plc and subsidiaries' affairs (together the Group) as at December 31, 2016 and of the Group's profit for the year then ended;**
- **have been properly prepared in accordance with accounting principles generally accepted in the United States of America; and**
- **have been properly prepared in accordance with the requirements of the Companies (Jersey) Law 1991.**

The financial statements that we have audited comprise:

- the consolidated balance sheet;
- the consolidated statement of income;
- the consolidated statement of comprehensive income;
- the consolidated statement of changes in equity;
- the consolidated statement of cash flows; and
- the related notes 1 to 31.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and accounting principles generally accepted in the United States of America.

Summary of our audit approach

Key risks	The key risks that we identified in the current year were: • The business combination with Baxalta Inc. and in particular the key judgements made by management in the valuation of currently marketed product intangible assets; • The business combination with Dyax Corp. and in particular the key judgements made by management in the valuation of the SHP-643 asset; and • Management's estimation of rebates against revenue as a result of contractual and regulatory requirements for certain products in the United States. Within this report, any new risks are identified with ⌃ and any risks which are the same as the prior year are identified with ›.
Materiality	The materiality that we used in the current year was $150 million, determined as 6 percent of adjusted pre-tax profit.
Scoping	We identified three components, being North American Financial Operations (NAFO), UK Financial Operations (UKFO) and Baxalta which has a number of sub-components which we have scoped based on the relative size of the Baxalta Group. This assessment focused our group audit scope primarily on the U.S., UK, Irish, Swiss and Austrian entities. In addition we identified certain companies to perform an audit of specified account balances where considered significant. Together with the Group functions these locations represent the principal operations and account for 96 percent of the Group's total assets and 86 percent of the Group's revenue.
Significant changes in our approach	Following the acquisition of Baxalta Inc. the group audit scope was extended to cover the most significant entities within this new component. As a consequence of the acquisition, our materiality was increased in the current year. The significant risks included in our audit report reflect the acquisitions made by the Group during the year, with two new reported risks. The risk associated with gross-to-net revenue in the U.S. is consistent with that of the prior year.

Going concern and the Directors' assessment of the principal risks that would threaten the solvency or liquidity of the Group

We have reviewed the Directors' statement regarding the appropriateness of the going concern basis of accounting contained within the Directors' statement on the longer-term viability of the Group contained within the Corporate Governance Report on page 70.

We are required to state whether we have anything material to add or draw attention to in relation to:

- the Directors' confirmation on page 118 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 on pages 54 to 65 that describe those risks and explain how they are being managed or mitigated;
- the Directors' statement in the Corporate Governance Report about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements; and
- the Directors' explanation on page 75 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 confirm that we have nothing material to add or draw attention to in respect of these matters.

We agreed with the Directors' adoption of the going concern basis of accounting and we did not identify any such material uncertainties. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's ability to continue as a going concern.

Independence

We are required to comply with the Financial Reporting Council's Ethical Standards for Auditors and confirm that we are independent of the Group and we have fulfilled our other ethical responsibilities in accordance with those standards.

We confirm that we are independent of the Group and we have fulfilled our other ethical responsibilities in accordance with those standards. We also confirm we have not provided any of the prohibited non-audit services referred to in those standards.

Our assessment of risks of material misstatement

The assessed risks of material misstatement described below are those that had the greatest effect on our audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team.

The prior year reported risk related to the NPS acquisition has not been separately reported on in the current year given the accounting for the acquisition completed in 2015 and there have been no significant changes in 2016. The risk related to revenue recognition reported in the prior year has also been removed on the basis that it is not considered a significant risk in 2016.

Risk description	How the scope of our audit responded to the risk
Baxalta business combination — valuation of acquired CMP intangible assets	
The Directors' determination of the purchase price allocation for the acquisition of Baxalta is included at Note 4 and the critical accounting policy and estimate in relation to acquired intangible assets is set out at Note 3. We identified a risk that the allocation of the purchase price to currently marketed product (CMP) intangible assets acquired as part of the Baxalta business combination is not appropriate. In particular there is risk that management has not determined appropriate assumptions for the impact that launches of competing products may have on future revenues from existing products. We consider this to be a significant risk due to the size of the CMP intangible assets balance (preliminary valuation of $22.0 billion) in addition to the complexity and subjectivity of judgements.	In order to assess the valuation of the acquired CMP intangible assets, as part of the allocation of the purchase price, we have performed the following specific procedures: • independently assessed the design and implementation and tested operating effectiveness of the Group's relevant financial controls; • assessed the competence and independence of management's valuation expert, and used our own internal valuation experts to consider and challenge the appropriateness of valuation methodologies used and the accuracy of calculations; and • considered and challenged the Directors' underlying judgements in light of existing internal evidence, market analyst expectations, publicly available competitor information and external market studies.
Valuation of acquired intangible assets affecting the acquisition accounting for Dyax	
The Directors' determination of the purchase price allocation for the acquisition of Dyax is included at Note 4 and the critical accounting policy and estimate in relation to acquired intangible assets is set out at Note 3. We identified a risk that the allocation of the purchase price to acquired assets and liabilities in relation to the Dyax business combination, in particular the valuation of the SHP-643 intangible asset, is not appropriate. In particular there is risk that management has not determined appropriate assumptions for prevalence, efficacy, probability of clinical success ("POS") and U.S. price rises. This has been highlighted as a significant risk due to its size (SHP-643 has been valued at $4.1 billion) and the complexity and subjectivity of judgements.	In order to assess the valuation of the acquired Dyax intangible assets, as part of the allocation of the purchase price, we have performed the following specific procedures: • independently assessed the design and implementation and tested operating effectiveness of the Group's relevant financial controls; • assessed the competence of management's market expert and undertook a series of interviews with them to understand the scope and output of their work; • obtained the forecast models prepared by management's market expert including the key assumptions for POS, price rises, prevalence rate and efficacy associated with the SHP-643 asset; • obtained evidence including external studies, market analyst reports and comparable product data and obtained an understanding of the primary information and opinions obtained from key opinion leaders by management's market specialist, using this information to challenge the relevant assumptions made by management; and • assessed the competence and independence of management's valuation expert, and used our own internal valuation experts to consider and challenge the appropriateness of valuation methodologies used and the accuracy of calculations.

Risk description	How the scope of our audit responded to the risk

The estimation of rebates against revenue as a result of contractual and regulatory requirements in the United States

A description of the key accounting policy for sales deductions is included at Note 2 and the critical accounting policy and estimate in relation to the level of rebates and other sales deductions is set out at Note 3.

The Directors are required to make certain judgements in respect of the level of rebates and other sales deductions that will be realised against the Group's sales.

The largest of these judgements relate to rebates for Medicaid and Managed Care programmes, for which the Group held accrued rebates as at December 31, 2016 of $1,431 million (2015: $982 million) in aggregate. The risk is primarily focused on the Neuroscience and Gastro Intestinal products.

The key elements of the judgements relating to Medicaid and Managed Care rebates include:

- the proportion of the inventory pipeline that will attract specific rebates; and
- the future value of rebate per unit expected to be applicable.

We identified a risk that these judgements are not appropriate and, as a result, rebate liabilities and sales deductions are recorded at an incorrect level.

There is a significant track record of actual rebate levels which informs our assessment of the level of risk of material misstatement. Nevertheless due to the manual nature and extent of the accounting process in this area it forms a significant part of our audit effort and requires a notable level of resource within the audit engagement.

We have considered the Group's processes for making judgements in this area and performed the following procedures:

- considered the appropriateness of the process and tested the design, implementation and operating effectiveness of controls adopted by management in determining the accounting for rebates and other sales deductions;
- undertook an analysis of the historical accuracy of judgements by reference to actual rebates paid in prior periods;
- confirmed rebate levels accrued during the year against subsequent payments;
- analysed and recalculated components of the year end liability based on contracted and statutory rebate rates; and
- challenged the key elements of judgements that were made in the period in light of externally verifiable data, such as pipeline levels and industry practice.

We also evaluated the presentation and disclosure of the transactions within the Group financial statements.

The description of risks above should be read in conjunction with the significant issues considered by the Audit, Compliance and Risk Committee discussed on pages 76 and 77. Our audit procedures relating to these matters were designed in the context of our audit of the financial statements as a whole, and not to express an opinion on individual accounts or disclosures. Our opinion on the financial statements is not modified with respect to any of the risks described above and we do not express an opinion on these individual matters.

Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

Group materiality	$150 million (2015: $100 million)
Basis for determining materiality	Group materiality is 6 percent (2015: 5 percent) of adjusted pre-tax profit and the change on last year reflects the increase in the size of the Group. Pre-tax profit of $486 million (2015: $1,385 million) has been adjusted by removing the impact of non-recurring items such as the $1,087 million unwind of the fair value uplift associated with the Baxalta inventory acquired and acquisition and integration costs of $791 million directly associated with the Baxalta acquisition.
Rationale for the benchmark applied	Adjusted profit before tax from continuing operations represents the most appropriate benchmark in light of the views of investors and analysts, unusual one off events, the status of the Group and its key performance indicators.

We agreed with the Audit, Compliance and Risk Committee that we would report to the Committee all audit differences in excess of $7.5 million (2015: $5.0 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit, Compliance and Risk Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

An overview of the scope of our audit

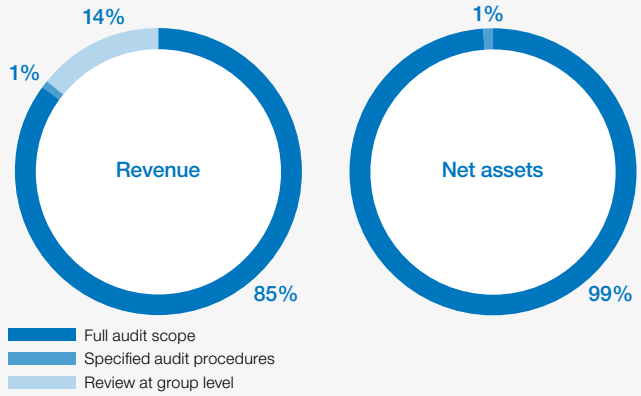
Our group audit was scoped by obtaining an understanding of the Group and its environment, including group-wide controls, and assessing the risks of material misstatement at the group level.

Based on that assessment, we identified three components, being North American Financial Operations (NAFO), UK Financial Operations (UKFO) and Baxalta which has a number of sub-components which we have scoped based on the relative size of the Baxalta Group. This assessment focused our group audit scope primarily on U.S., UK, Irish, Swiss and Austrian entities. In addition we identified certain companies to perform an audit of specified account balances where considered significant. These locations represent the principal operations and together with the Group functions in scope account for 96 percent (2015: 96 percent) of the Group's total assets and 86 percent (2015: 79 percent) of the Group's revenue.

They were also selected to provide an appropriate basis for undertaking audit work to address the risks of material misstatement identified above. Our audit work at the individual locations was performed at component materiality levels which ranged from $37.5 million to $95.0 million, which were determined by reference to a proportion of Group materiality appropriate to the relative scale of the business concerned.

At group level we also audited the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to full scope audit or specified procedures.

The Group audit team directly supervises the work performed across all of the full scope and specified procedure components, with comprehensive referral instructions issued to each component team, and follows a programme of planned site visits that is designed to ensure that the Senior Statutory Auditor or other senior members of the audit team spend appropriate time in each of the full scope locations throughout the year. In addition to this the Group audit team will visit other locations not in full scope on a rotational basis.



Opinion on other matters prescribed by our engagement letter

In our opinion:

- the financial statements have been properly prepared in accordance with the provisions of the Companies Act 2006 that would have been applied were the Group incorporated in the United Kingdom;
- the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the provisions of the Companies Act 2006 that would have been applied were the Group incorporated in the United Kingdom; and
- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

In the light of the knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified any material misstatements in the Strategic Report and the Directors' Report.

Matters on which we are required to report by exception

Adequacy of explanations received and accounting records

Under the Companies (Jersey) Law 1991 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
- proper accounting records have not been kept by the parent company, or proper returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Corporate Governance Statement

Under the Listing Rules we are also required to review part of the Corporate Governance Statement relating to the company's compliance with certain provisions of the UK Corporate Governance Code.

We have nothing to report arising from our review.

Our duty to read other information in the Annual Report
Under International Standards on Auditing (UK and Ireland), we are required to report to you if, in our opinion, information in the annual report is:

- materially inconsistent with the information in the audited financial statements; or
- apparently materially incorrect based on, or materially inconsistent with, our knowledge of the Group acquired in the course of performing our audit; or
- otherwise misleading.

In particular, we are required to consider whether we have identified any inconsistencies between our knowledge acquired during the audit and the Directors' statement that they consider the annual report is fair, balanced and understandable and whether the annual report appropriately discloses those matters that we communicated to the Audit, Compliance and Risk Committee which we consider should have been disclosed.

We confirm that we have not identified any such inconsistencies or misleading statements.

Respective responsibilities of Directors and Auditor

As explained more fully in the Directors' Responsibilities Statement, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). We also comply with International Standard on Quality Control 1 (UK and Ireland). Our audit methodology and tools aim to ensure that our quality control procedures are effective, understood and applied. Our quality controls and systems include our dedicated professional standards review team and independent partner reviews.

This report is made solely to the company's members, as a body, in accordance with Article 113A of the Companies (Jersey) Law 1991. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an Auditor's report and/or those further matters we have expressly agreed to report to them on in our engagement letter and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

John Adam
For and on behalf of Deloitte LLP
Chartered Accountants and Recognised Auditors
London, United Kingdom
February 22, 2017

Consolidated balance sheets

Years ended December 31	Notes	2016 $'M	2015 $'M
Assets			
Current assets:			
Cash and cash equivalents		528.8	135.5
Restricted cash		25.6	86.0
Accounts receivable, net	9	2,616.5	1,201.2
Inventories	10	3,562.3	635.4
Prepaid expenses and other current assets	11	806.3	197.4
Total current assets		7,539.5	2,255.5
Investments		191.6	50.8
Property, plant and equipment ("PP&E"), net	12	6,469.6	828.1
Goodwill	13	17,888.2	4,147.8
Intangible assets, net	14	34,697.5	9,173.3
Deferred tax asset	22	96.7	121.0
Other non-current assets		152.3	33.3
Total assets		67,035.4	16,609.8
Liabilities and equity			
Current liabilities:			
Accounts payable and accrued expenses	17	4,312.4	2,050.6
Short-term borrowings and capital lease obligations	18	3,068.0	1,512.7
Other current liabilities		362.9	142.8
Total current liabilities		7,743.3	3,706.1
Long-term borrowings and capital lease obligations	18	19,899.8	82.1
Deferred tax liability	22	8,322.7	2,205.9
Other non-current liabilities		2,121.6	786.6
Total liabilities		38,087.4	6,780.7
Commitments and contingencies	25		
Equity:			
Common stock of 5p par value; 1,500 million shares authorized; and 912.2 million shares issued and outstanding (2015: 1,000 million shares authorized; and 601.1 million shares issued and outstanding)	27	81.3	58.9
Additional paid-in capital		24,740.9	4,486.3
Treasury stock: 9.0 million shares (2015: 9.7 million shares)	27	(301.9)	(320.6)
Accumulated other comprehensive loss	20	(1,497.6)	(183.8)
Retained earnings		5,925.3	5,788.3
Total equity		28,948.0	9,829.1
Total liabilities and equity		67,035.4	16,609.8

The accompanying notes are an integral part of these Consolidated Financial Statements.

Approved by the Board of Directors and signed on its behalf by:

Jeffrey Poulton
Chief Financial Officer
February 22, 2017

Consolidated statements of operations

Years ended December 31	Notes	2016 $'M	2015 $'M	2014 $'M
Revenues:				
Product sales		**10,885.8**	6,099.9	5,830.4
Royalties and other revenues		**510.8**	316.8	191.7
Total revenues		**11,396.6**	6,416.7	6,022.1
Costs and expenses:				
Cost of sales		**3,816.5**	969.0	979.3
Research and development		**1,439.8**	1,564.0	1,067.5
Selling, general and administrative		**3,015.2**	1,842.5	1,782.0
Amortization of acquired intangible assets	14	**1,173.4**	498.7	243.8
Integration and acquisition costs	6	**883.9**	39.8	158.8
Reorganization costs	7	**121.4**	97.9	180.9
Gain on sale of product rights		**(16.5)**	(14.7)	(88.2)
Total operating expenses, net		**10,433.7**	4,997.2	4,324.1
Operating income from continuing operations		**962.9**	1,419.5	1,698.0
Interest income		**18.4**	4.2	24.7
Interest expense		**(469.6)**	(41.6)	(30.8)
Other (expense)/income, net		**(25.6)**	3.7	8.9
Receipt of break fee	24	**–**	–	1,635.4
Total other (expense)/income, net		**(476.8)**	(33.7)	1,638.2
Income from continuing operations before income taxes and equity in (losses)/earnings of equity method investees		**486.1**	1,385.8	3,336.2
Income taxes	22	**126.1**	(46.1)	(56.1)
Equity in (losses)/earnings of equity method investees, net of taxes		**(8.7)**	(2.2)	2.7
Income from continuing operations, net of taxes		**603.5**	1,337.5	3,282.8
(Loss)/gain from discontinued operations, net of taxes[1]	8	**(276.1)**	(34.1)	122.7
Net income		**327.4**	1,303.4	3,405.5
Earnings per Ordinary Share — basic				
Earnings from continuing operations	21	**0.78**	2.27	5.60
(Loss)/gain from discontinued operations	21	**(0.35)**	(0.06)	0.21
Earnings per Ordinary Share — basic		**0.43**	2.21	5.81
Earnings per Ordinary Share — diluted				
Earnings from continuing operations	21	**0.77**	2.26	5.55
(Loss)/gain from discontinued operations	21	**(0.35)**	(0.06)	0.21
Earnings per Ordinary Share — diluted		**0.42**	2.20	5.76
Cash dividends declared and paid per Ordinary Share		**0.27**	0.23	0.21
Weighted average number of shares (millions):				
Basic	21	**770.1**	590.4	586.7
Diluted	21	**776.2**	593.1	591.3

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated statements of comprehensive income

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Net income	**327.4**	1,303.4	3,405.5
Other comprehensive loss:			
Foreign currency translation adjustments	**(1,323.3)**	(156.4)	(136.1)
Pension and other employee benefits (net of tax expense of $8.8 million)	**(5.2)**	–	–
Unrealized holding gain/(loss) on available-for-sale securities (net of tax benefit of $0.1 million, $nil, and $1.3 million)	**8.3**	4.1	(5.6)
Hedging activities (net of tax expense of $3.3 million)	**6.4**	–	–
Comprehensive (loss)/income	**(986.4)**	1,151.1	3,263.8

The components of Accumulated other comprehensive loss as of December 31, 2016 and December 31, 2015 are as follows:

Years ended December 31	2016 $'M	2015 $'M
Foreign currency translation adjustments	**(1,505.4)**	(182.1)
Pension and other employee benefits, net of taxes	**(5.2)**	–
Unrealized holding gain/(loss) on available-for-sale securities, net of taxes	**6.6**	(1.7)
Hedging activities, net of taxes	**6.4**	–
Accumulated other comprehensive loss	**(1,497.6)**	(183.8)

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated statements of changes in equity

	Common stock Number of shares M's	Common stock $'M	Additional paid-in capital $'M	Treasury stock $'M	Accumulated other comprehensive loss $'M	Retained earnings $'M	Total equity $'M
As of January 1, 2016	601.1	58.9	4,486.3	(320.6)	(183.8)	5,788.3	9,829.1
Net income	–	–	–	–	–	327.4	327.4
Other comprehensive loss, net of tax	–	–	–	–	(1,313.8)	–	(1,313.8)
Shares issued under employee benefit plans	5.9	0.4	138.4	–	–	–	138.8
Shares issued for the acquisition of Baxalta	305.2	22.0	19,788.9	–	–	–	19,810.9
Share-based compensation	–	–	318.5	–	–	–	318.5
Tax benefit associated with exercise of stock options	–	–	8.8	–	–	–	8.8
Shares released by employee benefit trust to satisfy exercise of stock options	–	–	–	18.7	–	(19.1)	(0.4)
Dividends	–	–	–	–	–	(171.3)	(171.3)
As of December 31, 2016	912.2	81.3	24,740.9	(301.9)	(1,497.6)	5,925.3	28,948.0

The accompanying notes are an integral part of these Consolidated Financial Statements.

Dividends per share

During the year ended December 31, 2016, Shire plc declared and paid dividends of $0.27 per Ordinary Share (equivalent to $0.81 per ADS) totaling $171.3 million.

	Common stock Number of shares M's	Common stock $'M	Additional paid-in capital $'M	Treasury stock $'M	Accumulated other comprehensive loss $'M	Retained earnings $'M	Total equity $'M
As of January 1, 2015	599.1	58.7	4,338.0	(345.9)	(31.5)	4,643.6	8,662.9
Net income	–	–	–	–	–	1,303.4	1,303.4
Other comprehensive loss, net of tax	–	–	–	–	(152.3)	–	(152.3)
Options exercised	2.0	0.2	16.4	–	–	–	16.6
Share-based compensation	–	–	100.3	–	–	–	100.3
Tax benefit associated with exercise of stock options	–	–	31.6	–	–	–	31.6
Shares released by employee benefit trust to satisfy exercise of stock options	–	–	–	25.3	–	(24.3)	1.0
Dividends	–	–	–	–	–	(134.4)	(134.4)
As of December 31, 2015	601.1	58.9	4,486.3	(320.6)	(183.8)	5,788.3	9,829.1

The accompanying notes are an integral part of these Consolidated Financial Statements.

Dividends per share

During the year ended December 31, 2015, Shire plc declared and paid dividends of $0.23 per Ordinary Share (equivalent to $0.70 per ADS) totaling $134.4 million.

	Common stock Number of shares M's	Common stock $'M	Additional paid-in capital $'M	Treasury stock $'M	Accumulated other comprehensive loss $'M	Retained earnings $'M	Total equity $'M
As of January 1, 2014	597.5	58.6	4,186.3	(450.6)	110.2	1,461.5	5,366.0
Net income	–	–	–	–	–	3,405.5	3,405.5
Other comprehensive income, net of tax	–	–	–	–	(141.7)	–	(141.7)
Options exercised	1.6	0.1	15.1	–	–	–	15.2
Share-based compensation	–	–	97.0	–	–	–	97.0
Tax benefit associated with exercise of stock options	–	–	39.6	–	–	–	39.6
Shares released by employee benefit trust to satisfy exercise of stock options	–	–	–	104.7	–	(102.2)	2.5
Dividends	–	–	–	–	–	(121.2)	(121.2)
As of December 31, 2014	599.1	58.7	4,338.0	(345.9)	(31.5)	4,643.6	8,662.9

The accompanying notes are an integral part of these Consolidated Financial Statements.

Dividends per share

During the year ended December 31, 2014, Shire plc declared and paid dividends of $0.21 per Ordinary Share (equivalent to $0.62 per ADS) totaling $121.2 million.

Consolidated statements of cash flows

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Cash flows from operating activities:			
Net income	**327.4**	1,303.4	3,405.5
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	**1,466.3**	637.2	407.3
Share-based compensation	**318.5**	100.3	97.0
Amortization of deferred financing costs	**125.5**	–	–
Change in fair value of contingent consideration	**11.1**	(149.9)	14.7
Unwind of inventory fair value step-up	**1,118.0**	31.1	91.9
Impairment of intangible assets	**8.9**	643.7	190.3
Movement in deferred taxes	**(594.6)**	(198.2)	(14.3)
Write-down of PP&E	**92.4**	–	–
Other, net	**31.4**	–	(27.9)
Changes in operating assets and liabilities:			
Increase in accounts receivable	**(701.7)**	(211.4)	(66.1)
Increase in sales deduction accruals	**288.3**	97.6	107.6
Increase in inventory	**(255.8)**	(63.2)	(25.3)
Decrease/(increase) in prepayments and other assets	**(198.4)**	37.2	42.4
Increase in accounts and notes payable and other liabilities	**621.6**	109.2	5.3
Net cash provided by operating activities	**2,658.9**	2,337.0	4,228.4
Cash flows from investing activities:			
Movements in restricted cash	**62.8**	(32.0)	(32.6)
Purchases of subsidiary undertakings and businesses, net of cash acquired	**(17,476.2)**	(5,553.4)	(4,104.4)
Purchases of non-current investments and PP&E	**(648.7)**	(124.2)	(100.1)
Proceeds from short-term investments	**–**	67.0	57.8
Proceeds received on sale of product rights	**10.9**	17.5	127.0
Proceeds from disposal of non-current investments and PP&E	**0.9**	18.7	21.5
Other, net	**(41.9)**	(13.5)	0.2
Net cash used in investing activities	**(18,092.2)**	(5,619.9)	(4,030.6)

The accompanying notes are an integral part of these Consolidated Financial Statements.

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Cash flows from financing activities:			
Proceeds from revolving line of credit, long-term and short-term borrowings	**32,443.4**	3,760.8	2,310.8
Repayment of revolving line of credit, long-term and short-term borrowings	**(16,404.3)**	(3,110.9)	(1,461.8)
Repayment of debt acquired through business combinations	**–**	–	(551.5)
Proceeds from ViroPharma call options	**–**	–	346.7
Payment of dividend	**(171.3)**	(134.4)	(121.2)
Debt issuance costs	**(172.3)**	(24.1)	(10.2)
Contingent consideration payments	**(8.0)**	(101.2)	(15.2)
Proceeds from exercise of options	**129.0**	16.6	17.4
Other, net	**9.3**	32.2	39.5
Net cash provided by financing activities	**15,825.8**	439.0	554.5
Effect of foreign exchange rate changes on cash and cash equivalents	**0.8**	(3.0)	(9.3)
Net increase/(decrease) in cash and cash equivalents	**393.3**	(2,846.9)	743.0
Cash and cash equivalents at beginning of period	**135.5**	2,982.4	2,239.4
Cash and cash equivalents at end of period	**528.8**	135.5	2,982.4

Supplemental information associated with continuing operations:

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Interest paid	**(284.0)**	(20.0)	(14.5)
Income taxes (paid)/received	**(431.0)**	(69.0)	194.4
Receipt of break fee	**–**	–	1,635.4

For stock issued as purchase consideration on the Baxalta acquisition related to non-cash investing activities, see Note 4, Business Combinations.

The accompanying notes are an integral part of these Consolidated Financial Statements.

Notes to the consolidated financial statements

1. Description of Operations

Shire plc and its subsidiaries (collectively referred to as either "Shire", or the "Company") is the leading global biotechnology company focused on serving people with rare diseases and other highly specialized conditions across core therapeutic areas including Hematology, Genetic Diseases, Neuroscience, Immunology, Internal Medicine, Ophthalmology, and Oncology.

Some of the Company's marketed products include ADVATE/ ADYNOVATE,VONVENDI and FEIBA for hematology, CINRYZE, ELAPRASE and REPLAGAL for genetic diseases, VYVANSE and ADDERALL XR for neuroscience, GAMMAGARD and HYQVIA for immunology, LIALDA/MEZAVANT and PENTASA for internal medicine, XIIDRA for ophthalmology and ONCASPAR and ONIVYDE for oncology.

The Company has grown both organically and through acquisition, completing a series of major transactions that have brought therapeutic, geographic and pipeline growth and diversification. The Company will continue to conduct its own research and development ("R&D") focused on rare diseases and other highly specialized conditions, as well as evaluate companies, products and pipeline opportunities that offer a strategic fit and have the potential to deliver value to all of the Company's stakeholders: patients, physicians, policy makers, payers, partners, investors and employees.

2. Summary of Significant Accounting Policies

Basis of preparation

The accompanying Consolidated Financial Statements include the accounts of Shire plc, all of its subsidiary undertakings and the Income Access Share trust, after elimination of inter-company accounts and transactions. They have been prepared in accordance with generally accepted accounting principles in the United States of America ("US GAAP") and U.S. Securities and Exchange Commission ("SEC") regulations for annual reporting.

On June 3, 2016, the Company completed its acquisition of Baxalta for $32.4 billion, representing the preliminary fair value of purchase consideration. The Company's Consolidated Financial Statements include the results of Baxalta from the date of acquisition. For further details regarding the acquisition, please refer to Note 4, Business Combinations.

Due to the Baxalta acquisition, the Company concluded that it was appropriate to reclassify the Amortization of Acquired Intangibles from Selling, General and Administrative ("SG&A") on the Consolidated Statements of Operations. Accordingly, the Company reclassified the Amortization of Acquired Intangibles from SG&A in comparative periods to conform to the current classification. The Company reclassified capital lease obligations from Other current liabilities to the Short-term borrowings and from Other non-current liabilities to Long-term borrowings and capital lease obligations in comparative periods to conform the current classification.

Use of estimates in Consolidated Financial Statements

The preparation of the Consolidated Financial Statements, in conformity with US GAAP and SEC regulations, requires management to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities and equity at the date of the Consolidated Financial Statements and reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, judgments and methodologies. Estimates are based on historical experience, current conditions and on various other assumptions that are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities and equity and the amounts of revenues and expenses. Actual results may differ from these estimates under different assumptions or conditions.

Consolidation

The Consolidated Financial Statements reflect the financial statements of the Company and those of the Company's wholly-owned subsidiaries. For consolidated entities where the Company owns or is exposed to less than 100 percent of the economics, the Company records net income (loss) attributable to non-controlling interests in its Consolidated Statements of Operations equal to the percentage of the economic or ownership interest retained in such entities by the respective non-controlling parties. Intercompany balances and transactions are eliminated in consolidation.

The Company determines whether to consolidate subsidiaries based on either the variable interest entity ("VIE") model or the voting interest model. The Company consolidates a VIE if it is determined that the Company is the primary beneficiary of the VIE. In determining whether the Company is the primary beneficiary of an entity, management applies a qualitative approach that determines whether the Company has both (1) the power to direct the economically significant activities of the entity and (2) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity. The Company consolidates entities that are not VIEs if it is determined that the Company holds a majority voting interest in the entity.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary. Intercompany balances and transactions are eliminated in consolidation.

Revenue recognition

The Company recognizes revenue when all of the following criteria are met:

- there is persuasive evidence an arrangement exists;
- delivery has occurred or services have been rendered;
- the price to the customer is fixed or determinable; and
- collectibility is reasonably assured.

Where applicable, all revenues are stated net of value added and similar taxes and trade discounts. The Company's principal revenue streams and their respective accounting treatments are discussed below:

Product sales

Revenues from Product sales are recognized when title and risk of loss have passed to the customer, which is typically upon delivery. Product sales are recorded net of applicable reserves for discounts and allowances.

Reserves for Discounts and Allowances

The Company establishes reserves for trade discounts, chargebacks, distribution service fees, Medicaid rebates, managed care rebates, incentive rebates, product returns and other governmental rebates or applicable allowances. These reserves are based on estimates of the amounts earned or to be claimed on the related sales. Management's estimates take into consideration historical experience, current contractual and statutory requirements, specific known market events and trends, industry data and forecasted customer buying and payment patterns. Actual amounts may ultimately differ from estimates. If actual results vary, management adjusts these estimates, which have an effect on earnings in the period of adjustment.

2. Summary of Significant Accounting Policies (continued)

- Trade discounts are generally credits granted to wholesalers, specialty pharmacies and other customers for remitting payment on their purchases within established incentive periods and are classified as a reduction of accounts receivable, offset by revenue.
- Chargebacks are credits or payments issued to wholesalers and distributors who provide products to qualified healthcare providers at prices lower than the list prices charged to the wholesaler or distributor. Reserves are estimated based on expected purchases by those qualified healthcare providers. Chargeback reserves are classified as a reduction of accounts receivable.
- Distribution service fees are credits or payments issued to wholesalers, distributors and specialty pharmacies for compliance with various contractually-defined inventory management practices or services provided to support patient access to a product. These fees are generally based on a percentage of gross purchases but can also be based on additional services these entities provide. Most of these costs are reflected as a reduction of gross sales; however, to the extent benefit from services can be separately identified and the fair value determined, costs are classified in Selling, general and administrative expense. Reserves are classified within accrued expenses.
- Medicaid rebates are payments to States under statutory and voluntary reimbursement arrangements. Reserves for these rebates are generally based on an estimate of expected product usage by Medicaid patients and expected rebate rates. Statutory rates are generally based on a percentage of selling price adjusted upwards for price increases in excess of published inflation indices. As a result, rebates generally increase as a percentage of the selling price over the life of the product (as prices increase). Medicaid rebate reserves are classified within accrued expenses.
- Managed care rebates are payments to third parties, primarily pharmacy benefit managers and other health insurance providers. The reserve for these rebates is based on an estimate of customer buying patterns and applicable contractual rebate rates to be earned over each period. Reserves are classified within accrued expenses.
- Incentive rebates are generally credits or payments issued to specialty pharmacies or Group Purchasing Organizations for qualified purchases of certain products. Reserves are estimated based on the terms of each individual contract and purchase volumes and are classified within accrued expenses.
- Return credits are issued to customers for return of product damaged in shipment and, for certain products, return due to lot expiry. The majority of returns are due to expiry, and reserves are estimated based on historical returns experience. The returns reserve is classified within accrued expenses.
- Other discounts and allowances include Medicare rebates, coupon and patient co-pay assistance. Medicare rebates are payments to health insurance providers of Medicare Part D coverage to qualified patients. Reserve estimates are based on customer buying patterns and applicable contractual rebate rates to be earned over each period. Coupon and co-pay assistance programs provide discounts to qualified patients. Reserve estimates are based on expected claim volumes under these programs and estimated cost per claim that the Company expects to pay. Reserves for Medicare and coupon and patient co-pay programs are classified within accrued expenses.

Royalties and Other Revenue

Royalty income relating to licensed technology is recognized when the licensee sells the underlying product, with the amount of royalty income recorded based on sales information received from the relevant licensee. The Company estimates sales amounts and related royalty income based on the historical product information for any period that the sales information is not available from the relevant licensee.

Other revenue includes revenues derived from product out-licensing arrangements, which may consist of an initial up-front payment on inception of the license and subsequent milestone payments upon achievement of certain clinical and sales milestones. To the extent the license requires Shire to provide services to the licensee; up-front payments are deferred and recognized over the service period.

Business combinations

Business combinations are accounted for using the acquisition method of accounting. Under the acquisition method, assets acquired, including in-process research and development ("IPR&D") projects, and liabilities assumed are recorded at their respective fair values as of the acquisition date in the Consolidated Financial Statements. The excess of the fair value of consideration transferred over the fair value of the net assets acquired is recorded as goodwill. Contingent consideration obligations incurred in connection with a business combination (including the assumption of an acquiree's liability arising from a business combination it completed prior to the acquisition) are recorded at their fair values on the acquisition date and remeasured at their fair values each subsequent reporting period until the related contingencies are resolved. The resulting changes in fair values are recorded in earnings.

Goodwill

Goodwill represents the difference between the purchase price and the fair value of the identifiable tangible and intangible net assets acquired in a business combination. Goodwill is not amortized, but instead is reviewed for impairment. Goodwill is reviewed annually, as of October 1, and whenever events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable. Events or changes in circumstances which could trigger an impairment review include but are not limited to: unexpected adverse business conditions, economic factors, unanticipated technological changes or competitive activities and acts by governments and courts.

For the purpose of assessing the carrying value of goodwill for impairment, goodwill is allocated at the Company's reporting unit level. As described in Note 23, Segment Reporting, the Company operates in one operating segment which it considers to be its only reporting unit.

The Company reviews goodwill for impairment by firstly assessing qualitative factors, including comparing the market capitalization of the Company to the carrying value of its assets, to determine whether events or circumstances exist which indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The Company assesses all events or circumstances and determines if it is more likely than not that the fair value of a reporting unit exceeds its carrying value. If, after assessing these qualitative factors, it is deemed more likely than not that the fair value of a reporting unit is less than its carrying value, a "two step" quantitative assessment is performed by comparing the carrying value of the reporting unit's net assets (including allocated goodwill) to the fair value of the reporting unit.

The Company compares the fair value of its reporting unit to its carrying value. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of its reporting unit, then it determines the implied fair value of its reporting unit's goodwill. If the carrying value of the reporting unit's goodwill exceeds its implied fair value, then an impairment loss equal to the difference is recorded.

Intangible Assets
Intangible assets primarily relate to commercially marketed products and IPR&D projects. Intangible assets are recorded at fair value at the time of their acquisition and are stated in the Consolidated Balance Sheets, net of accumulated amortization and impairments, if applicable.

Intangible assets related to commercially marketed products are amortized over their estimated useful lives. Remaining useful lives range from 2 to 25 years (weighted average 20 years) and the Company amortizes its intangibles on a straight-line basis. The Company reviews intangible assets for impairment when facts or circumstances suggest that the carrying value of these assets may not be recoverable.

Milestone payments made to third parties on and subsequent to regulatory approval are capitalized as intangible assets, and amortized over the remaining useful life of the related product.

The following factors, where applicable, are considered in estimating the useful lives of intangible assets:

- expected use of the asset;
- regulatory, legal or contractual provisions, including the regulatory approval and review process, patent issues and actions by government agencies;
- the effects of obsolescence, changes in demand, competing products and other economic factors, including the stability of the market, known technological advances, development of competing drugs that are more effective clinically or economically;
- actions of competitors, suppliers, regulatory agencies or others that may eliminate current competitive advantages; and
- historical experience of renewing or extending similar arrangements.

Acquired IPR&D represents the fair value assigned to research and development assets that have not reached technological feasibility. The value assigned to acquired IPR&D is determined by estimating the costs to develop the acquired technology into commercially viable products, estimating the resulting revenue from the projects, and discounting the net cash flows to present value. The revenue and costs projections used to value acquired IPR&D are, as applicable, reduced based on the probability of success of developing a new drug. Additionally, the projections consider the relevant market sizes and growth factors, expected trends in technology, and the nature and expected timing of new product introductions by the Company and its competitors. The rates utilized to discount the net cash flows to their present value are commensurate with the stage of development of the projects and uncertainties in the economic estimates used in the projections. Upon the acquisition of IPR&D, the Company completes an assessment of whether the acquisition constitutes the purchase of a single asset or a group of assets. The Company considers multiple factors in this assessment, including the nature of the technology acquired, the presence or absence of separate cash flows, the development process and stage of completion, quantitative significance and its rationale for entering into the transaction.

If the Company acquires a business as defined under applicable accounting standards, then the acquired IPR&D is capitalized as an intangible asset. If the Company acquires an asset or group of assets that do not meet the definition of a business, then the acquired IPR&D is expensed on its acquisition date. Future costs to develop these assets are recorded to research and development expense as they are incurred.

IPR&D projects are considered to be indefinite-lived until completion of the associated R&D efforts. If and when development is complete, which generally occurs when regulatory approval to market a product is obtained, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time. Intangible assets related to IPR&D projects are tested for impairment at least annually, as of October 1, until commercialization, after which time the IPR&D is amortized over its estimated useful life.

The Company evaluates the carrying value of long-lived assets, except for goodwill and indefinite lived intangible assets, whenever events or changes in circumstances indicate that the carrying amounts of the relevant assets may not be recoverable. When such a determination is made, management's estimate of undiscounted cash flows to be generated by the use and ultimate disposition of these assets is compared to the carrying value of the assets to determine whether the carrying value is recoverable. If the carrying value is deemed not to be recoverable, the amount of the impairment recognized in the Consolidated Financial Statements is determined by estimating the fair value of the relevant assets and recording an impairment loss for the amount by which the carrying value exceeds the estimated fair value. This fair value is usually determined based on estimated discounted cash flows.

When performing the impairment assessment, the Company calculates the fair value using the same methodology as described above. If the carrying value of the acquired IPR&D exceeds its fair value, then the intangible asset is written-down to its fair value.

Fair Value Measurements
The Company has certain financial assets and liabilities recorded at fair value which have been classified as Level 1, 2 or 3 within the fair value hierarchy as described in the accounting standards for fair value measurements:

- Level 1 — Fair values are determined utilizing quoted prices (unadjusted) in active markets for identical assets or liabilities that we have the ability to access;
- Level 2 — Fair values are determined by utilizing quoted prices for identical or similar assets and liabilities in active markets or other market observable inputs such as interest rates, yield curves and foreign currency spot rates; and
- Level 3 — Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

The majority of the Company's financial assets have been classified as Level 1 and 2. The Company's financial assets, which include cash equivalents, derivative contracts, marketable equity and debt securities, and plan assets for deferred compensation, have been initially valued at the transaction price and subsequently valued, at the end of each reporting period, utilizing third-party pricing services or other market observable data. The Company utilizes industry standard valuation models, including both income and market-based approaches and observable market inputs to determine value. These observable market inputs include

2. Summary of Significant Accounting Policies (continued)

reportable trades, benchmark yields, credit spreads, broker/dealer quotes, bids, offers, current spot rates and other industry and economic events.

Accounts receivable

The Company's accounts receivable arise from Product sales and represent amounts due from its customers. The Company monitors the financial performance and credit worthiness of its large customers so that it can assess and respond to changes in their credit profile. The Company provides reserves against accounts receivable for estimated losses, if any, that may result from a customer's inability to pay. Amounts determined to be uncollectible are written off against the reserve.

Investments

The Company has certain investments in pharmaceutical and biotechnology companies whose securities are not publicly traded and where fair value is not readily available. These investments are recorded using either the cost method or the equity method of accounting, depending on its ownership percentage and other factors that suggest the Company has significant influence. Under the equity method of accounting, the Company records its investments in equity-method investees in the consolidated balance sheet under Investments and its share of the investees' earnings or losses together with other-than- temporary impairments in value under equity in (losses)/ earnings of equity method investees, net of taxes in the Consolidated Statements of Operations. The Company monitors these investments to evaluate whether any decline in their value has occurred that would be other-than-temporary, based on the implied value of recent company financings, public market prices of comparable companies, and general market conditions.

All other equity investments, which consist of investments for which the Company does not have the ability to exercise significant influence, are accounted for under the cost method or at fair value. Investments in private companies are carried at cost, less provisions for other-than-temporary impairment in value. For investments in equity investments that have readily determinable fair values, the Company classifies its equity investments as available-for-sale and, accordingly, records these investments at their fair values with unrealized holding gains and losses included in the consolidated statement of comprehensive income, net of any related tax effect. Realized gains and losses, and declines in value of available-for-sale securities judged to be other-than-temporary, are included in other income, net in the Consolidated Statements of Operations. The cost of securities sold is based on the specific identification method. Interest on securities classified as available-for-sale is included as interest income in the Consolidated Statements of Operations.

Inventories

Inventories are stated at the lower of cost or market. Cost incurred in bringing each product to its present location and condition is based on purchase costs calculated on a first-in, first-out basis, including transportation costs. The inventory costs are classified as long-term when the Company expects to utilize the inventory beyond the normal operating cycle and includes these costs in Other assets in the Consolidated Balance Sheets.

Capitalization of Inventory Costs

The Company capitalizes inventory costs associated with its products prior to regulatory approval, when, based on management's judgment, future commercialization is considered highly probable and the future economic benefit is expected to be realized.

Obsolescence and Unmarketable Inventory

Inventories are written down for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and estimated market value based upon assumptions about future demand and market conditions. Amounts written down due to unmarketable inventory are charged to Cost of product sales.

Property, plant and equipment

Property, plant and equipment are carried at cost, net of accumulated depreciation and impairment losses. Property, plant and equipment are subject to review for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. The cost of normal, recurring, or periodic repairs and maintenance activities related to property, plant and equipment are expensed as incurred. The cost for planned major maintenance activities, including the related acquisition or construction of assets, is capitalized if the repair will result in future economic benefits.

Interest costs incurred during the construction of major capital projects are capitalized until the underlying asset is ready for its intended use, at which point the interest costs are amortized as depreciation expense over the useful life of the underlying asset. The Company also capitalizes certain direct and incremental costs associated with the validation effort required for licensing by regulatory agencies of new manufacturing equipment for the production of a commercially approved drug. These costs primarily include direct labor and material and are incurred in preparing the equipment for its intended use. The validation costs are amortized over the useful life of the related equipment.

Depreciation of property, plant and equipment is calculated using the straight-line method over the estimated useful lives as follows:

Asset category	Estimated useful lives
Land	Not depreciated
Buildings and leasehold improvements	15 to 50 years
Office furniture, fittings and equipment	3 to 10 years
Machinery, equipment and other	3 to 15 years

At the time property, plant and equipment is retired or otherwise disposed of, the cost and accumulated depreciation are eliminated from the asset and accumulated depreciation accounts. The profit or loss on such disposition is reflected in operating income.

Discontinued operations

Discontinued operations comprise those activities that were disposed of during the period or which were classified as held for sale at the end of the period, and represent a separate major line of business or geographical area that can be clearly distinguished for operational and financial reporting purposes.

Contingent consideration payable

Contingent consideration payable represents future milestones and royalties the Company may be required to pay in conjunction with various business combinations. The amounts ultimately payable by the Company are dependent upon the successful achievement of the underlying scientific or commercial event and future net sales of the relevant products over applicable term. The Company records an obligation for such contingent payments at fair value on the acquisition date. The Company assesses the probability, and estimated timing, of these milestones being achieved and the present value of forecast future net sales of the relevant products and re-measures the related contingent consideration to fair value

each balance sheet date. The amount of contingent consideration which may ultimately be payable by Shire in relation to future royalties is dependent upon future net sales of the relevant products over the life of the royalty term.

The fair value of the Company's contingent consideration payable could significantly increase or decrease due to changes in certain assumptions which underpin the fair value measurements. Each set of assumptions and milestones is specific to the individual contingent consideration payable. The assumptions include, among other things, the probability of, and period in which, the relevant milestone event is expected to be achieved; the amount of royalties that will be payable based on forecast net sales of the relevant products; and the discount rates to be applied in calculating the present values of the relevant milestone or royalty. The Company regularly reviews these assumptions, and makes adjustments to the fair value measurements as required by facts and circumstances.

Derivative financial instruments
The Company uses derivative financial instruments to manage its exposure to foreign exchange risk to earnings relating to forecasted transactions and recognized assets and liabilities. For each derivative instrument that is designated and effective as a cash flow hedge, the gain or loss on the derivative is recorded in Accumulated Other Comprehensive Income ("AOCI") and then recognized in earnings consistent with the underlying hedged item. Cash flow hedges are classified in revenues and cost of sales and primarily relate to forecasted third-party sales denominated in foreign currencies and forecasted intercompany sales denominated in foreign currencies, respectively.

In its application of hedge accounting, the Company assesses, both at inception and on a prospective basis, whether the derivatives that are used in hedging transactions are highly effective in offsetting the changes in cash flows or fair values of the hedged items. The Company also assesses hedge effectiveness on a retrospective basis every quarter with any hedge ineffectiveness recorded to the Consolidated Statement of Operations.

The Company uses forward contracts to mitigate the effects of changes in foreign exchange relating to certain of the Company's intercompany and third-party receivables and payables. These derivative instruments generally are not formally designated as hedges and the terms of these instruments generally do not exceed three months. The fair values of these instruments are included on the balance sheet in current assets/liabilities, with changes in the fair value recognized in the Consolidated Statements of Operations. The cash flows relating to these instruments are presented within net cash provided by operating activities in the Consolidated Statements of Cash Flows, unless the derivative instruments are economically hedging specific investing or financing activities.

Translation of foreign currency
The functional currency for most of the foreign subsidiaries is their local currency. For the non-U.S. subsidiaries that transact in a functional currency other than the U.S. Dollar, assets and liabilities are translated at current rates of exchange at the balance sheet date. Income and expense items are translated at the average foreign exchange rates for the period. Adjustments resulting from the translation of the financial statements of the foreign operations into U.S. Dollars are excluded from the determination of Net income and are recorded in AOCI, a separate component of equity. For subsidiaries where the functional currency of the assets and liabilities differ from the local currency, non-monetary assets and liabilities are translated at the rate of exchange in effect on the date assets were acquired while monetary assets and liabilities are translated at current rates of exchange as of the balance sheet date. Income and expense items are translated at the average foreign currency rates for the period. Translation adjustments of these subsidiaries are included in Other income/(expense), net, in Net income.

Foreign currency exchange transaction losses included in Consolidated Statements of Operations in the years ended December 31, 2016, 2015 and 2014 amounted to $17.7 million, $(26.5) million and $(15.6) million, respectively.

Cost of product sales
Cost of product sales includes the cost of purchasing finished product for sale, the cost of raw materials and costs of manufacturing those products including shipping and handling costs, depreciation and amortization of intangible assets in respect of favorable manufacturing contracts. Royalties payable to third-party intellectual property owners related to the sold products are also included in Cost of product sales.

Research and development ("R&D") expense
Research and development expenses consist of upfront fees and milestones paid to collaborators and expenses incurred in performing research and development activities, which include compensation and benefits, facilities and overhead expenses, clinical trial expenses and fees paid to contract research organizations ("CROs"), clinical supply and manufacturing expenses. R&D expense also includes the impairment charges related to intangible assets.

Research and development expenses are expensed as incurred. Payments that were made for research and development services prior to the services being rendered are recorded as Prepaid expenses and other current assets on the Consolidated Balance Sheets and are expensed as the services are provided. Management also accrues the costs of ongoing clinical trials associated with programs that have been terminated or discontinued for which there is no future economic benefit at the time the decision is made to terminate or discontinue the program.

Selling, general and administrative expenses
Selling, general and administrative expenses are primarily comprised of compensation and benefits associated with sales and marketing, finance, human resources, legal, information technology and other administrative personnel, outside marketing, advertising and legal expenses and other general and administrative costs.

Advertising costs are expensed as incurred. Advertising costs amounted to $216.0 million, $56.1 million and $56.4 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Collaborative arrangements
The Company enters into collaborative arrangements to develop and commercialize drug candidates. These collaborative arrangements often require up-front, milestone, royalty or profit share payments, or a combination of these, with payments often contingent upon the success of the related development and commercialization efforts. Collaboration agreements entered into by the Company may also include expense reimbursements or other such payments to the collaborating partner. The Company records payments received from the collaborative partners for their share of the development costs as a reduction of research and development expense.

2. Summary of Significant Accounting Policies (continued)
For collaborations with commercialized products, if the Company is the principal, we record revenue and the corresponding operating costs in their respective line items in the Consolidated Statements of Operations. If we are not the principal, we record operating costs as a reduction of revenue.

Leased assets
The costs of operating leases are charged to operations on a straight-line basis over the lease term, even if rental payments are not made on such a basis.

Assets acquired under capital leases are included in the Consolidated Balance Sheets as property, plant and equipment and are depreciated over the shorter of the period of the lease or their useful lives. The capital element of future lease payments is recorded as a liability, while the interest element is charged to operations over the period of the lease to produce a level yield on the balance of the capital lease obligation.

Finance costs of debt
Financing costs relating to debt issued are recorded against the corresponding debt and amortized to the Consolidated Statements of Operations over the period to the earliest redemption date of the debt, using the effective interest rate method. On extinguishment of the related debt, any unamortized deferred financing costs are written off and charged to interest expense in the Consolidated Statements of Operations.

Income taxes
The provision for income taxes includes federal, state, local and foreign taxes. Income taxes are accounted for under the liability method.

Uncertain tax positions are recognized in the Consolidated Financial Statements for positions which are considered more likely than not of being sustained, based on the technical merits of the position on audit by the tax authorities. The measurement of the tax benefit recognized in the Consolidated Financial Statements is based upon the largest amount of tax benefit that, in management's judgment, is greater than 50 percent likely of being realized based on a cumulative probability assessment of the possible outcomes.

The Company recognizes interest and penalties relating to income taxes within income taxes. Interest income on cash required to be deposited with the tax authorities is recognized within interest income.

Deferred tax assets and liabilities are recognized for differences between the carrying amounts of assets and liabilities in the Consolidated Financial Statements and the tax bases of assets and liabilities that will result in future taxable or deductible amounts. The deferred tax assets and liabilities are measured using the enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income.

Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Earnings per share
Basic earnings per share is based upon net income attributable to the Company divided by the weighted average number of Ordinary Shares outstanding during the period. Diluted earnings per share is based upon net income attributable to the Company divided by the weighted average number of Ordinary Share equivalents outstanding during the period, adjusted for the dilutive effect of all potential Ordinary Shares equivalents that were outstanding during the year. Such potentially dilutive shares are excluded when the effect would be to increase diluted earnings per share or reduce the diluted loss per share.

Share-based compensation
The share-based compensation programs grant awards that include stock-settled share appreciation rights ("SARs"), stock options, performance share awards ("PSAs"), restricted stock units ("RSUs") and performance share units ("PSUs"). The Company also operates a Global Employee Stock Purchase Plan, and Sharesave Plans in the UK and Ireland.

Share-based compensation represents the cost of share-based awards granted to employees. The Company measures share-based compensation cost for awards classified as equity at the grant date, based on the estimated fair value of the award. Predominantly all of the Company's awards have service and/or performance conditions and the fair values of these awards are estimated using a Black-Scholes valuation model.

For share-based compensation awards which cliff vest, the Company recognizes the cost of the relevant share-based payment award as an expense on a straight-line basis (net of estimated forfeitures) over the employee's requisite service period. For those share-based compensation awards with a graded vesting schedule, the Company recognizes the cost of the relevant share-based payment award as an expense on a straight-line basis (net of estimated forfeitures) over the requisite service period for the entire award (that is, over the requisite service period for the last separately vesting portion of the award). The share-based compensation expense is recorded in Cost of product sales, R&D, SG&A, Reorganization costs and Integration and Acquisition costs in the Consolidated Statements of Operations based on the employees' respective functions.

The Company records deferred tax assets for awards that result in deductions on the Company's income tax returns, based on the amount of compensation cost recognized and the Company's statutory tax rate in the jurisdiction in which it will receive a deduction. Differences between the deferred tax assets recognized for financial reporting purposes and the actual tax deduction reported on the Company's income tax return are recorded in additional paid-in capital (if the tax deduction exceeds the deferred tax asset) or in the Consolidated Statements of Operations (if the deferred tax asset exceeds the tax deduction and no additional paid-in capital exists from previous awards). The Company's share-based compensation plans are described more fully in Note 28, Share-based Compensation Plans.

New accounting pronouncements
From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that the Company adopts as of the specified effective date. Unless otherwise discussed below, the Company does not believe that the impact of recently issued standards that are not yet effective will have a material impact on the Company's financial position or results of operations upon adoption.

Adopted during the period

Reporting requirements for development stage entities

In June 2014, the FASB issued Accounting Standards Update ("ASU") No. 2014-10 Development Stage Entities (Topic 915) Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation. ASU 2014-10 simplified the existing guidance for development stage entities by removing all incremental financial reporting requirements and the exception available for development stage entities when determining whether the development stage entity is a variable interest entity. The elimination of the exception may change the consolidation analysis, consolidation decision, and disclosure requirements for a reporting entity that has an interest in an entity in the development stage. Shire adopted this guidance as of January 1, 2016, with prospective application. The adoption of this guidance did not impact the Company's consolidated financial position, results of operations or cash flows.

Debt Issuance Costs

In April 2015, the FASB issued ASU No. 2015-03, Interest — Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. The new standard requires debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. In August 2015, the FASB issued additional guidance which clarified that debt issuance costs related to line-of-credit arrangements can be presented in the balance sheet as an asset and amortized over the term of the line-of-credit arrangement. The recognition and measurement guidance for debt issuance costs were not affected by these amendments.

Shire adopted this guidance as of January 1, 2016, with retroactive application. The Short-term borrowings and Long-term borrowings line items in the Consolidated Balance Sheets and related footnote disclosures for all periods presented have been adjusted accordingly. The adoption of this guidance did not impact the Company's results of operations or cash flows.

Cloud Computing Arrangement

In April 2015, the FASB issued ASU No. 2015-05, Intangibles — Goodwill and Other — Internal-Use Software (Subtopic 350-40): Customer's Accounting for Fees Paid in a Cloud Computing Arrangement. Under the standard, if a cloud computing arrangement includes a software license, then the software license element of the arrangement should be accounted for consistent with the acquisition of other software licenses. If a cloud computing arrangement does not include a software license, the arrangement should be accounted for as a service contract. Shire adopted this guidance as of January 1, 2016, with prospective application. The adoption of this guidance did not impact the Company's consolidated financial position, results of operations or cash flows.

Measurement-Period Adjustments

In September 2015, the FASB issued ASU No. 2015-16, Business Combinations (Topic 805): Simplifying the Accounting for Measurement-Period Adjustments to simplify the accounting for adjustments related to business combinations arising within one year of the acquisition. The standard simplifies the accounting for adjustments related to business combinations arising within one year of the acquisition. The new standard requires that an acquirer recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined and record the effect on earnings of those changes as if the accounting had been completed at the acquisition date, and sets forth new disclosure requirements related to the adjustments. Shire adopted this guidance as of January 1, 2016, with prospective application. The adoption of this guidance impacted the recognition and disclosure of measurement period adjustments identified during the twelve months ended December 31, 2016 related to the Baxalta and Dyax acquisitions. Refer to Note 4, Business Combinations for further information.

Financial Instrument Accounting

In March 2016, the FASB issued ASU No. 2016-06, Derivatives and Hedging (Topic 815): Contingent Put and Call Options in Debt Instruments. The new guidance clarifies the requirements for assessing whether contingent call and put options that can accelerate the payment of principal of debt instruments are clearly and closely related to their debt host. This guidance will be effective beginning on January 1, 2017, and modified retrospective application is required. Early adoption is permitted. Shire adopted this guidance as of 2016, and it had no impact on the Company's financial position or results of operations.

Pension Plans

In May 2015, the FASB issued ASU No. 2015-07, Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent). The new guidance removes the disclosure requirement to categorize within the fair value hierarchy all investments that measure fair value using the net asset value per share as a practical expedient and certain disclosures associated with these types of investments. This guidance became effective beginning on January 1, 2016, and retrospective application is required. This guidance was adopted during the current period and impacted the disclosure of certain acquired pension plan assets in the fair value hierarchy in Note 19, Retirement and Other Benefit Programs, but did not impact the Company's financial position or results of operations.

To be adopted in future periods

Simplifying the Test for Goodwill Impairment

In January 2017, the FASB issued ASU 2017-04-Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. The new guidance eliminates Step 2 from the goodwill impairment test. Under Step 2, an entity had to perform procedures to determine the fair value at the impairment testing date of its assets and liabilities (including unrecognized assets and liabilities) following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, under the amendments in this Update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable.

The Board also eliminated the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. Therefore, the same impairment assessment applies to all reporting units. An entity is required to disclose the amount of goodwill allocated to each reporting unit with a zero or negative carrying amount of net assets. An entity still

2. Summary of Significant Accounting Policies (continued)

has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary.

The amendment is effective for the Company beginning on January 1, 2020, with early adoption permitted for annual goodwill impairment tests performed after January 1, 2017. The Company is currently evaluating the potential impact on its financial position and results of operations of the amendment.

Definition of a Business

In January 2017 the FASB issued ASU No. 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business. This new standard clarifies the definition of a business and provides a screen to determine when an integrated set of assets and activities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This new standard will be effective for us on January 1, 2018.

Revenue from Contracts with Customers

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. The new standard also requires additional qualitative and quantitative disclosures.

In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which delayed the effective date of the new standard from January 1, 2017 to January 1, 2018. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date.

In March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations, which clarifies the implementation guidance on principal versus agent considerations.

In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, which clarifies certain aspects of identifying performance obligations and licensing implementation guidance.

In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients related to disclosures of remaining performance obligations, as well as other amendments to guidance on collectability, non-cash consideration and the presentation of sales and other similar taxes collected from customers.

In May 2016, the FASB rescinded several SEC Staff Announcements that are codified in ASC 605, including, among other items, guidance relating to accounting for shipping and handling fees and freight services.

These standards have the same effective date and transition date of January 1, 2018. The Company is currently evaluating the method of adoption and the potential impact on its financial position and results of operations of adopting this guidance.

Inventory

In July 2015, the FASB issued ASU No. 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory. The new guidance requires an entity to measure inventory at the lower of cost and net realizable value. Net realizable value is defined as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. This standard is effective for the Company as of January 1, 2017. Early adoption is permitted. The Company does not believe the adoption of this guidance will have a material impact on its financial position or results of operations.

Financial Instrument Accounting

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments — Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The new standard amends certain aspects of accounting and disclosure requirements of financial instruments, including the requirement that equity investments with readily determinable fair values be measured at fair value with changes in fair value recognized in the results of operations. The new standard does not apply to investments accounted for under the equity method of accounting or those that result in consolidation of the investee. Equity investments that do not have readily determinable fair values may be measured at fair value or at cost minus impairment adjusted for changes in observable prices. A financial liability that is measured at fair value in accordance with the fair value option is required to be presented separately in Other Comprehensive Income for the portion of the total change in the fair value resulting from change in the instrument-specific credit risk. In addition, a valuation allowance should be evaluated on deferred tax assets related to available-for-sale debt securities in combination with other deferred tax assets. The new standard will be effective for the Company as of January 1, 2018. The Company is currently evaluating the method of adoption and the potential impact on its financial position and results of operations of adopting this guidance.

Leases

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). The new accounting guidance will require the recognition of all lease assets and lease liabilities by lessees and sets forth new disclosure requirements for those lease assets and liabilities. The standard requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet using a modified retrospective approach at the beginning of the earliest comparative period in the financial statements. This standard is effective for the Company as of January 1, 2019. Early adoption is permitted. The Company is currently evaluating the potential impact on its financial position and results of operations of adopting this guidance. For detail on the Company's commitments under operating leases see Note 25 Commitments and Contingencies.

Share-Based Payment Accounting

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The new standard requires recognition of the income tax effects of vested or settled awards in the income statement and involves several other aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows and allows a one-time accounting policy election to account for forfeitures as they occur. The new standard will be effective on January 1, 2017.

The Company will adopt ASU 2016-09 in the first quarter of 2017. Currently, excess tax benefits or deficiencies from the Company's equity awards are recorded as Additional paid-in capital in its Consolidated Balance Sheets. Upon adoption, the Company will

record any excess tax benefits or deficiencies from its equity awards in its Consolidated Statements of Operations in the reporting periods in which vesting or settlement occurs. Subsequent to adoption, the Company's income tax expense and associated effective tax rate will be impacted by fluctuations in stock price between the grant dates and vesting or settlement dates of equity awards and timing of employee exercise activity.

Upon adoption of ASU 2016-09, the Company will elect to change its accounting policy to account for forfeitures as they occur. These changes will be applied on a modified retrospective basis with an immaterial cumulative effect adjustment to retained earnings as of January 1, 2017.

Statement of Cash Flows

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. The new standard clarifies certain aspects of the statement of cash flows, and aims to reduce diversity in practice regarding how certain transactions are classified in the statement of cash flows. This amendment is effective for the Company as of January 1, 2018. Early adoption is permitted. The adoption of this guidance is not expected to have a significant impact on the Company's Consolidated Statement of Cash Flows.

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash. The new guidance is intended to reduce diversity in the presentation of restricted cash and restricted cash equivalents in the statement. The guidance requires that restricted cash and restricted cash equivalents be included as components of total cash and cash equivalents as presented on the statement of cash flows. This pronouncement goes into effect for the Company as of January 1, 2018. The adoption of this guidance is not expected to have a significant impact on the Company's Consolidated Statement of Cash Flows.

Statutory accounts

The Consolidated Financial Statements are prepared in accordance with US GAAP, in fulfillment of the Company's United Kingdom Listing Authority ("UKLA") annual reporting requirements and will be filed with the UKLA in due course.

Statutory accounts of Shire, consisting of the solus accounts of Shire plc for the year to December 31, 2016 are prepared in accordance with UK GAAP and the Companies (Jersey) Law 1991 and are included in the Annual Report.

3. Critical accounting estimates

The preparation of Consolidated Financial Statements, in conformity with accounting principles generally accepted in the United States ("US GAAP") and SEC regulations, requires management to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities and equity at the date of the Consolidated Financial Statements and reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, judgments and methodologies. Estimates are based on historical experience, current conditions and on various other assumptions that are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities and equity and the amounts of revenues and expenses. Actual results may differ from these estimates under different assumptions or conditions.

Valuation of intangible assets

In conjunction with the accounting for business combinations, the Company recorded intangible assets primarily related to marketed products and in-process research and development ("IPR&D") projects. The Company has intangible assets of $34,697.5 million as of December 31, 2016 and $9,173.3 million as of December 31, 2015.

If the Company acquires an asset or group of assets that do not meet the definition of a business under applicable accounting standards, the acquired IPR&D is expensed on its acquisition date. Future costs to develop these assets are recorded to research and development expense as they are incurred.

The identifiable intangible assets are measured at their respective fair values as of the acquisition date. When significant identifiable intangible assets are acquired, the Company engages an independent third-party valuation firm to assist in determining the fair values of these assets as of the acquisition date. The models used in valuing these intangible assets require the use of significant estimates and assumptions including but not limited to:

- estimates of revenues and operating profits related to the products or product candidates;
- the probability of success for unapproved product candidates considering their stages of development;
- the time and resources needed to complete the development and approval of product candidates;
- projecting regulatory approvals; and
- developing appropriate discount rates and probability rates by project.

The Company believes the fair values used to record intangible assets acquired in connection with a business combination are based upon reasonable estimates and assumptions given the facts and circumstances as of the acquisition date.

If IPR&D projects fail during development, are abandoned or subject to significant delay, or do not receive the relevant regulatory approvals, the Company may not realize the future cash flows that it has estimated nor recover the value of the R&D investment made subsequent to acquisition of the project. If such circumstances occur, the Company's future operating results could be materially adversely impacted.

IPR&D projects are considered to be indefinite-lived until completion of the associated R&D efforts. If and when development is complete, which generally occurs when regulatory approval to market a product is obtained, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time. Intangible assets related to IPR&D projects are tested for impairment at least annually, as of October 1st, until commercialization, after which time the IPR&D is amortized over its estimated useful life.

Intangible assets related to commercially marketed products are amortized over their estimated useful lives on a straight-line basis. Intangible assets related to commercially marketed products are reviewed for impairment when facts or circumstances suggest that the carrying value of these assets may not be recoverable.

Goodwill

Goodwill represents the excess of the consideration transferred over the estimated fair value of assets acquired and liabilities assumed in a business combination. The Company has $17,888.2 million and $4,147.8 million of goodwill as of December 31, 2016 and 2015, respectively, as a result of accounting for business combinations using the acquisition method of accounting.

3. Critical accounting estimates (continued)

The Company assesses the goodwill balance within its single reporting unit annually, as of October 1, and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable to determine whether any impairment in this asset may exist and, if so, the extent of such impairment. The Company reviews goodwill for impairment by assessing qualitative and quantitative factors, including comparing the market capitalization of the Company to the carrying value of its assets. Events or circumstances that might require an interim evaluation include unexpected adverse business conditions, economic factors, unanticipated technological changes or competitive activities and acts by governments and courts.

The Company completed its annual impairment test in the fourth quarters of 2016, 2015 and 2014, respectively, and determined in each of those periods that the carrying value of goodwill was not impaired. In each year, the fair value of the reporting unit, which includes goodwill, was significantly in excess of the carrying value of the reporting unit.

Revenue Recognition and Related Allowances

a. Product Revenue

The Company recognizes revenues from Product sales when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed or determinable and collectability is reasonably assured. The Company records Product sales net of sales deductions.

b. Other Revenue

Royalty income relating to licensed technology is generally recognized when the licensee sells the underlying product. The Company estimates sales amounts and related royalty income based on the historical product information. Estimates are revised pursuant to receiving sales information from the relevant licensee. If the Company is unable to reliably estimate the amount based on past experiences, the amount of royalty income is recorded when sales information from the relevant licensee is received.

c. Sales Deductions

Sales deductions consist primarily of statutory rebates to State Medicaid and other government agencies; Medicare Part D rebates; commercial rebates and fees to Managed Care Organizations ("MCOs"), Group Purchasing Organizations ("GPOs"), distributors and specialty pharmacies; product returns; sales discounts (including trade discounts); distribution service fees; wholesaler chargebacks; and allowances for coupon and patient assistance programs. These deductions are recorded as reductions to revenue in the same period as the related sales are recognized. Reserves are based on estimates of the amounts earned or to be claimed on the related sales. Estimates are based on the Company's historical experience of existing or similar programs, current contractual and statutory requirements, specific known market events and trends, industry data and forecasted customer buying and payment patterns. Additionally, certain rebates are based on annual purchase volumes which are not known until completion of the annual period on which they are based. As a result, the Company estimates the accruals and related reserves required for amounts payable under these programs.

If actual results vary, the Company may need to adjust these estimates, which could have an effect on earnings in the period of the adjustment.

Aggregate reserves for Medicaid and MCO rebates as of December 31, 2016 and 2015 were $1,431.3 million and $982.4 million, or 13 percent and 16 percent, respectively, of Product sales. Historically, actual rebates have not varied significantly from the reserves provided.

d. Product Returns

The Company typically accepts customer product returns in the following circumstances: (a) expiration of shelf life on certain products; (b) product damaged while in the Company's possession; (c) under sales terms that allow for unconditional return (guaranteed sales); or (d) following product recalls or product withdrawals. Generally, returns for expired product are accepted three months before and up to one year after expiration date of the relevant product and the returned product is destroyed. Depending on the product and the Company's return policy with respect to that product, the Company may either refund the sales price paid by the customer by issuance of a credit, or exchange the returned product with replacement inventory. The Company typically does not provide cash refunds.

The Company estimates the proportion of recorded revenue that will result in a return by considering relevant factors, including but not limited to:

- past product returns activity;
- the duration of time taken for products to be returned;
- the estimated level of inventory in the distribution channel;
- product recalls and discontinuances;
- the shelf life of products;
- the launch of new drugs or new formulations; and
- the loss of patent protection, exclusivity or new competition.

The accrual estimation process for product returns involves, in each case, a number of interrelating assumptions, which vary for each combination of product and customer.

As of December 31, 2016, 2015 and 2014, reserves for product returns were $118.4 million, $128.3 million, and $131.7 million or 1.1 percent, 2.1 percent and 2.3 percent, respectively, of Product sales. Historically, actual returns have not varied significantly from the reserves provided.

Income Taxes

The Company accounts for income taxes under the asset and liability method. Provisions for federal, state and foreign income taxes are calculated on reported pre-tax earnings based on current laws. Deferred taxes are provided using enacted tax rates on the future tax consequences of temporary differences, which are the differences between the financial statement carrying amount of assets and liabilities and their respective tax bases and the tax benefits of carryforwards. In the normal course of business, the Company is audited by the Irish and foreign tax authorities, and it is periodically challenged regarding the amount of taxes due. These challenges primarily relate to the timing and amount of deductions and the transfer pricing in various tax jurisdictions. The Company believes its tax positions comply with applicable tax law and the Company intends to defend its positions.

In accounting for uncertainty in income taxes, management is required to develop estimates as to whether a tax benefit should be recognized in the Consolidated Financial Statements, based on whether it is more likely than not that the technical merits of the position will be sustained based on audit by the tax authorities. In accounting for income tax uncertainties, management is required to make judgments in the determination of the unit of account, the evaluation of the facts, circumstances and information in respect of the tax position taken, together with the estimates of amounts that the Company may be required to pay in ultimate settlement with the tax authority.

Any outcome upon settlement that differs from the recorded provision for uncertain tax positions may result in a materially higher or lower tax expense in future periods, which could significantly impact the Company's results of operations or financial condition. However, the Company does not believe it is possible to reasonably estimate the potential impact of any such change in assumptions, estimates or judgments and the resultant change, if any, in the Company's provision for uncertain tax positions, as any such change is dependent on factors such as future changes in tax law or administrative practice, the amount and nature of additional taxes which may be asserted by the taxation authorities, and the willingness of the relevant tax authorities to negotiate a settlement for any such position.

The Company has significant deferred tax assets due to various tax attributes, including net operating losses ("NOLs") and tax credits from Research and Development activities principally in the Republic of Ireland, the U.S., Switzerland, Belgium and Germany. The realization of these assets is not assured and is dependent on various factors. Management is required to exercise judgment in determining whether it is more likely than not that it would realize these deferred tax assets. In assessing the need for a valuation allowance, management weighs all available positive and negative evidence including cumulative losses in recent years, expectations of future taxable income, carry forward and carry back potential under relevant tax law, expiration period of tax attributes, taxable temporary differences, and prudent and feasible tax-planning strategies. A valuation allowance is established where there is an expectation that on the balance of probabilities management considers it is more likely than not that the relevant deferred tax assets will not be realized. If actual events differ from management's estimates, or to the extent that these estimates are adjusted in the future, any changes to the valuation allowance could significantly impact the Company's financial condition and results of operations.

Litigation and legal proceedings

The Company has a number of lawsuits pending. The Company recognizes loss contingency provisions for probable losses when management is able to reasonably estimate the loss. Estimates of losses may be developed substantially before the ultimate loss is known, and are therefore refined each accounting period as additional information becomes known. In instances where the Company is unable to develop a reasonable estimate of loss, no loss contingency provision is recorded at that time; however, disclosure would be made if the loss contingency is at least reasonably possible to occur. These estimates are reviewed quarterly and changed when expectations are revised. An outcome that deviates from the Company's estimate may result in an additional expense (or credit) in a future accounting period. As of December 31, 2016, provisions for litigation losses, insurance claims and other disputes totaled $415.0 million (December 31, 2015: $9.9 million).

Contingent consideration payable

The fair value of the Company's contingent consideration payable as of December 31, 2016 was $1,058.0 million (December 31, 2015: $475.9 million).

Contingent consideration payable represents future milestones and royalties the Company may be required to pay in conjunction with various business combinations. The amounts ultimately payable by the Company are dependent upon the successful achievement of the relevant milestones and future net sales of the relevant products over the life of the milestone or term, respectively.

The Company estimates the fair value of contingent consideration payable using the income approach, based on a discounted cash flow method. The discounted cash flow method uses inputs with values that may not be observable in a public trading market, including, but not limited to: the probability of, and period in which, the relevant milestone event is expected to be achieved; the amount of royalties that will be payable based on forecast net sales of the relevant products; and the discount rates to be applied in calculating the present values of the relevant milestone or royalty. Significant judgment is employed by the Company in developing these estimates and assumptions. If actual events differ from management's estimates, or to the extent that these estimates are adjusted in the future, the Company's financial condition and results of operations could be materially affected in the period of any such change of estimate.

Pension and other post employment benefit ("OPEB") plans

The valuation of the funded status and net periodic benefit cost is calculated using actuarial assumptions. These significant assumptions include the following:

- interest rates used to discount pension and OPEB plan liabilities;
- the long-term rate of return on pension plan assets;
- rates of increases in employee compensation (used in estimating liabilities);
- anticipated future healthcare costs (used in estimating the OPEB plan liability); and
- other assumptions involving demographic factors such as retirement, mortality and turnover (used in estimating liabilities).

Selecting assumptions involves an analysis of both short-term and long-term historical trends and known economic and market conditions at the time of the measurement date. The use of different assumptions would result in different measures of the funded status and net cost. Actual results in the future could differ from expected results. The Company's key assumptions are listed in Note 19, Retirement and Other Benefit Programs, to the Consolidated Financial Statements.

Share-based compensation

The Company makes certain assumptions in order to value and record expense associated with awards made under the share-based compensation arrangements. Changes in these assumptions may lead to variability with respect to the amount of expense recognized in connection with share-based payments.

The Company uses the Black-Scholes model to compute the estimated fair value of stock option awards. Using this model, fair value is calculated based on assumptions with respect to (i) expected volatility of stock price, (ii) the periods of time options are expected to be held prior to exercise (expected lives), (iii) expected dividend yield on common stock, and (iv) risk-free interest rates.

3. Critical accounting estimates (continued)

Share-based compensation expense also includes an estimate, which is made at the time of grant, of the number of awards that are expected to be forfeited. This estimate is revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Restructuring costs

The Company has made estimates and judgments regarding the amount and timing of its restructuring expense and liability, including current and future period termination benefits, pipeline program termination costs and other exit costs to be incurred when related actions take place. Severance and other related costs are reflected in the Consolidated Statements of Operations as a component of Reorganization costs. Actual results may differ from these estimates.

4. Business Combinations

Acquisition of Baxalta

On June 3, 2016, Shire acquired all of the outstanding common stock of Baxalta for $18.00 per share in cash and 0.1482 Shire American Depository Shares ("ADSs") per Baxalta share, or if a former Baxalta shareholder properly elected, 0.4446 Shire Ordinary Shares per Baxalta share.

Baxalta was a global biopharmaceutical company that focused on developing, manufacturing and commercializing therapies for orphan diseases and underserved conditions in hematology, oncology and immunology.

The preliminary fair value of the purchase price consideration consisted of the following:

	Estimated fair value $'M
Cash paid to shareholders	12,366.7
Fair value of stock issued to shareholders	19,353.2
Fair value of partially vested stock options and RSUs assumed	508.8
Contingent consideration payable	169.0
Total Purchase Consideration	32,397.7

The acquisition of Baxalta was accounted for as a business combination using the acquisition method of accounting. Shire issued 305.2 million shares to former Baxalta shareholders at the date of the acquisition. For a more detailed description of the fair value of the partially vested stock options and RSUs assumed, please see Note 28, Share-based Compensation Plans, to the Consolidated Financial Statements.

The assets acquired and the liabilities assumed from Baxalta have been recorded at their preliminary fair value as of June 3, 2016, the date of acquisition. The Company's Consolidated Financial Statements included the results of Baxalta from the date of acquisition. The amount of Baxalta's post-acquisition revenues included in the Company's Consolidated Statements of Operations for the year ended December 31, 2016 is $4,011.6 million. After the closing of the acquisition, the Company began integrating Baxalta and as such the combined business is now sharing various research and development and selling, general and administrative functions. As a result, computing a separate measure of Baxalta's stand-alone profitability for periods after the acquisition date is not practical.

The Company's preliminary allocation of the purchase price to the assets acquired and liabilities assumed as of the acquisition date, including measurement period adjustments identified during the year ended December 31, 2016, is outlined below.

	Preliminary values as of June 3, 2016 $'M	Measurement period adjustments $'M	**Preliminary values as of December 31, 2016 $'M**
Assets			
Current assets:			
Cash and cash equivalents	583.2	–	**583.2**
Accounts receivable	1,071.7	(2.0)	**1,069.7**
Inventories	5,341.1	(1,447.7)	**3,893.4**
Other current assets	673.3	(97.3)	**576.0**
Total current assets	7,669.3	(1,547.0)	**6,122.3**
Property, plant and equipment	5,687.7	(235.0)	**5,452.7**
Investments	128.2	–	**128.2**
Goodwill	6,106.4	5,316.0	**11,422.4**
Intangible assets			
Currently marketed products	24,550.0	(2,555.0)	**21,995.0**
In-Process Research and Development ("IPR&D")	2,940.0	(2,210.0)	**730.0**
Contract based arrangements	72.2	(30.0)	**42.2**
Other non-current assets	103.3	51.7	**155.0**
Total assets	47,257.1	(1,209.3)	**46,047.8**
Liabilities			
Current liabilities:			
Accounts payable and accrued expenses	1,283.9	38.0	**1,321.9**
Other current liabilities	241.0	113.4	**354.4**
Long-term borrowings and capital lease obligations	5,424.9	–	**5,424.9**
Deferred tax liability	6,831.7	(1,386.4)	**5,445.3**
Other non-current liabilities	1,092.1	11.5	**1,103.6**
Total liabilities	14,873.6	(1,223.5)	**13,650.1**
Preliminary fair value of identifiable assets acquired and liabilities assumed	32,383.5	14.2	**32,397.7**
Consideration			
Preliminary fair value of purchase consideration	32,383.5	14.2	**32,397.7**

The purchase price allocation is preliminary pending final determination of the fair values of certain assets and liabilities. As of December 31, 2016, certain items related to the fair values of other current and non-current liabilities and current and deferred taxes have not been finalized and may be subject to change as additional information is received and certain tax returns are finalized. The finalization of these matters and any additional information received that was existed as of acquisition date may result in changes to the underlying assets, liabilities and goodwill. These changes may be material. The final determination of these fair values will be completed as soon as possible but no later than one year from the acquisition date.

Intangible Assets

The preliminary fair value of the identifiable intangible assets has been estimated using an income approach, which is a valuation technique that provides an estimate of the fair value of an asset based on market participant expectations of the incremental after tax cash flows an asset would generate over its remaining useful life. The preliminary useful lives for Currently marketed products were determined based upon the remaining useful economic lives of the assets that are expected to contribute to future cash flows.

Currently marketed products totaling $21,995.0 million relate to intellectual property ("IP") rights acquired for Baxalta's currently marketed products. The estimated useful life of the intangible assets related to currently marketed products range from 8 to 23 years (weighted average 21 years), with amortization being recorded on a straight-line basis.

IPR&D intangible assets totaling $730.0 million represent the value assigned to research and development ("R&D") projects acquired. The IPR&D intangible assets are capitalized and accounted for as indefinite-lived intangible assets and will be subject to impairment testing until completion or abandonment of the projects. Upon successful completion of each project, the Company will make a separate determination of the estimated useful life of the IPR&D intangible asset and the related amortization will be recorded as an expense over the estimated useful life.

Some of the more significant assumptions inherent in the development of those asset valuations include the estimated net cash flows for each year for each asset or product (including net revenues, cost of sales, R&D costs, selling and marketing costs, working capital/asset contributory asset charges and other cash flow assumptions), the appropriate discount rate to select in order to measure the risk inherent in each future cash flow stream, the assessment of each asset's life cycle, the potential regulatory and commercial success risks, competitive trends impacting the asset and each cash flow stream as well as other factors.

The discount rate used to arrive at the present value at the acquisition date of the IPR&D intangible assets was 9.5 percent to reflect the internal rate of return and incremental commercial uncertainty in the cash flow projections. No assurances can be given that the underlying assumptions used to prepare the discounted cash flow analysis will not change. For these and other reasons, actual results may vary significantly from estimated results.

The measurement period adjustments for Intangible assets reflect changes in the estimated fair value of Currently marketed products and IPR&D. The changes in the estimated fair values for Intangible assets are primarily to better reflect market participant assumptions about facts and circumstances existing as of the acquisition date. The measurement period adjustments did not result from intervening events subsequent to the acquisition date.

Goodwill

Goodwill of $11,422.4 million, which is not deductible for tax purposes, includes the expected synergies that will result from combining the operations of Baxalta with Shire; intangible assets that do not qualify for separate recognition at the time of the acquisition; the value of the assembled workforce; and impacted by establishing a deferred tax liability for the acquired identifiable intangible assets which have no tax basis.

For the year ended December 31, 2016, the Company expensed $791.4 million relating to the acquisition and integration of Baxalta, which have been recorded within Integration and Acquisition costs in the Company's Consolidated Statements of Operations.

Contingent Consideration

The Company acquired certain contingent obligations classified as contingent consideration related to Baxalta's historical business combinations. Additional consideration is conditionally due upon the achievement of certain milestones related to the development, regulatory, first commercial sale and other sales milestones, which could total up to approximately $1.5 billion. The Company may also pay royalties based on certain Product sales. The Company estimated the fair value of the assumed contingent consideration to be $169.0 million using a probability weighting approach that considered the possible outcomes based on assumptions related to the timing and probability of the product launch date, discount rates matched to the timing of first payment, and probability of success rates and discount adjustments on the related cash flows.

Inventory

The preliminary estimated fair value of work-in-process and finished goods inventory was determined utilizing the Net realizable value, based on the expected selling price of the inventory, adjusted for incremental costs to complete the manufacturing process and for direct selling efforts, as well as for a reasonable profit allowance. The preliminary estimated fair value of raw material inventory was valued at replacement cost, which is equal to the value a market participant would pay to acquire the inventory.

The changes in the estimated fair values for Inventory are primarily to better reflect the expected selling price of the inventory based on market participant assumptions existing as of the acquisition date. The measurement period adjustments did not result from intervening events subsequent to the acquisition date.

Retirement plans

The Company assumed pension plans as part of the acquisition of Baxalta, including defined benefit and post-retirement benefit plans in the United States and foreign jurisdictions which had a net liability balance of $610.4 million. As of June 3, 2016, the Baxalta defined benefit pension plans had assets with a fair value of $358.5 million.

Supplemental disclosure of pro forma information

The following unaudited pro forma financial information presents the combined results of the operations of Shire and Baxalta as if the acquisition of Baxalta had occurred as of January 1, 2015. The unaudited pro forma financial information is not necessarily indicative of what the consolidated results of operations actually would have been had the respective acquisitions been completed on January 1, 2015. In addition, the unaudited pro forma financial information does not purport to project the future results of operations of the combined Company.

Years to December 31	**2016 $'M**	2015 $'M
Revenues	13,999.6	12,564.7
Net income/(loss) from continuing operations	2,235.9	(1,014.2)
Per share amounts:		
Net income/(loss) from continuing operations per share — basic	2.90	(1.72)
Net income/(loss) from continuing operations per share — diluted	2.88	(1.72)

4. Business Combinations (continued)

The unaudited pro forma financial information above reflects the following pro forma adjustments:

(i) an adjustment to increase net income for the year ended December 31, 2016 by $678.9 million to eliminate integration and acquisition related costs incurred by Shire and Baxalta and a corresponding decrease in net income for the year ended December 31, 2015 by $678.9 million to give effect to the integration and acquisition of Baxalta as if it had occurred on January 1, 2015;

(ii) an adjustment to increase net income for the year ended December 31, 2016 by $897.1 million and a corresponding decrease for the year ended December 31, 2015 by $1,428.2 million, respectively, to reflect amortization of the fair value adjustments for inventory as inventory is sold. As acquired inventory turns within 12 months of the acquisition, there has been no expense included in net income for the year ended December 31, 2016;

(iii) an adjustment to increase amortization expense by $330.9 million and $815.0 million for the year ended December 31, 2016 and December 31, 2015, respectively, related to the identifiable intangible assets acquired; and

(iv) an adjustment to decrease net income for the year ended December 31, 2016 by $42.5 million and for the year ended December 31, 2015 by $357.6 million, respectively, primarily related to the additional interest expense and deferred debt issuance costs associated with the debt incurred to partially fund the acquisition of Baxalta and the bonds issued to replace the debt incurred for the acquisition.

The adjustments above are stated net of their tax effects, where applicable.

Acquisition of Dyax

On January 22, 2016, Shire acquired all of the outstanding common stock of Dyax for $37.30 per share in cash. Under the terms of the merger agreement, former Dyax shareholders may receive additional value through a non-tradable contingent value right worth $4.00 per share, payable upon U.S. Food and Drug Administration ("FDA") approval of SHP643 (formerly DX-2930) in Hereditary Angioedema ("HAE").

Dyax was a publicly-traded, Massachusetts-based rare disease biopharmaceutical company primarily focused on the development of plasma kallikrein ("pKal") inhibitors for the treatment of HAE. Dyax's most advanced clinical program was SHP643, a Phase 3 program with the potential for improved efficacy and convenience for HAE patients. SHP643 has received Fast Track, Breakthrough Therapy, and Orphan Drug Designations by the FDA and has also received Orphan Drug status in the EU. Dyax's sole marketed product, KALBITOR, is a pKal inhibitor for the treatment of acute attacks of HAE in patients 12 years of age and older.

The acquisition of Dyax was accounted for as a business combination using the acquisition method. The preliminary acquisition-date fair value consideration was $6,330.0 million, comprising cash paid on closing of $5,934.0 million and the preliminary fair value of the contingent value right of $396.0 million (maximum payable $646.0 million). The assets acquired and the liabilities assumed from Dyax have been recorded at their preliminary fair value as of January 22, 2016, the date of acquisition. The Company's Consolidated Financial Statements include the results of Dyax as of January 22, 2016. The amount of Dyax's post-acquisition revenues included in the Company's Consolidated Statements of Operations for the year ended December 31, 2016 is $77.1 million. After the closing of the acquisition, the Company began integrating Dyax and as such the combined business is now sharing various research and development and selling, general and administrative functions. As a result, computing a separate measure of Dyax's stand-alone profitability for periods after the acquisition date is not practical.

Since the acquisition date, the Company adjusted its preliminary valuation and allocation of purchase price consideration. The adjustment, which was not material, decreased goodwill and deferred tax liabilities. The revised preliminary allocation of the total purchase price is as follows:

	Fair value $'M
Assets	
Current assets:	
Cash and cash equivalents	241.2
Accounts receivable	22.5
Inventories	20.2
Other current assets	8.1
Total current assets	292.0
Property, plant and equipment	5.8
Goodwill	2,702.1
Intangible assets	
Currently marketed projects	135.0
IPR&D	4,100.0
Contract based royalty arrangements	425.0
Other non-current assets	28.6
Total assets	7,688.5
Liabilities	
Current liabilities:	
Accounts payable and accrued expenses	30.0
Other current liabilities	1.7
Deferred tax liability	1,325.4
Other non-current liabilities	1.4
Total liabilities	1,358.5
Preliminary fair value of identifiable assets acquired and liabilities assumed	6,330.0
Consideration	
Preliminary fair value of purchase consideration	6,330.0

Currently marketed products

Currently marketed products totaling $135.0 million relate to intellectual property rights acquired for KALBITOR. The fair value of the currently marketed product has been estimated using an income approach, based on the present value of incremental after tax cash flows attributable to KALBITOR.

The estimated useful life of the KALBITOR intangible asset is 18 years, with amortization being recorded on a straight-line basis.

IPR&D

The IPR&D asset of $4,100.0 million relates to Dyax's clinical program SHP643, a Phase 3 program with the potential for improved efficacy and convenience for HAE patients. The IPR&D intangible asset is capitalized and accounted for as indefinite-lived intangible assets and will be subject to impairment testing until completion or abandonment of the projects. The fair value of this IPR&D asset was estimated based on an income approach, using the present value of incremental after tax cash flows expected to be generated by this development project. The estimated cash flows have been probability adjusted to take into account the development stage of completion and the remaining risks and uncertainties surrounding the future development and commercialization.

The estimated probability adjusted after tax cash flows used to estimate the fair value of Intangible assets have been discounted at 9 percent.

Royalty rights

Intangible assets totaling $425.0 million relate to royalty rights arising from licensing agreements of a portfolio of product candidates. This portfolio includes two approved products, marketed by Eli Lilly & Company, and various development-stage products. Multiple product candidates with other pharmaceutical companies are in various stages of clinical development for which the Company is eligible to receive future royalties and/or milestone payments.

The fair value of these royalty rights has been estimated using an income approach, based on the present value of incremental after-tax cash flows attributable to each royalty right.

The estimated useful lives of these royalty rights range from seven to nine years (weighted average eight years), with amortization being recorded on a straight-line basis.

Goodwill

Goodwill of $2,702.1 million, which is not deductible for tax purposes, includes the expected synergies that will result from combining the operations of Dyax with Shire; intangible assets that do not qualify for separate recognition at the time of the acquisition; the value of the assembled workforce; and impacted by establishing a deferred tax liability for the acquired identifiable intangible assets which have no tax basis.

For the year ended December 31, 2016, the Company expensed $67.7 million relating to the acquisition and integration of Dyax, which has been recorded within Integration and Acquisition costs in the Company's Consolidated Statements of Operations.

Supplemental disclosure of pro forma information

The following unaudited pro forma financial information presents the combined results of the operations of Shire and Dyax as if the acquisitions of Dyax had occurred as of January 1, 2015. The unaudited pro forma financial information is not necessarily indicative of what the consolidated results of operations actually would have been had the respective acquisitions been completed at the date indicated. In addition, the unaudited pro forma financial information does not purport to project the future results of operations of the combined Company.

Years to December 31	**2016 $'M**	2015 $'M
Revenues	**11,402.5**	6,503.8
Net income from continuing operations	**792.2**	1,056.6
Per share amounts:		
Net income from continuing operations per share — basic	**1.03**	1.79
Net income from continuing operations per share — diluted	**1.02**	1.78

The unaudited pro forma financial information above reflects the following pro forma adjustments:

(i) an adjustment to increase net income for the year ended December 31, 2016 by $111.1 million to eliminate acquisition related costs incurred by Shire and Dyax and a corresponding decrease in net income for the year ended December 31, 2015 by $111.1 million to give effect to the acquisition of Dyax as if it had occurred on January 1, 2015;

(ii) an adjustment to decrease net income for the year ended December 31, 2015 by $5.4 million, to reflect amortization of the fair value adjustments for inventory as inventory is sold;

(iii) an adjustment to increase amortization expense for the year ended December 31, 2016 by $1.3 million and a corresponding adjustment to decrease net income for the year ended December 31, 2015 by $21.6 million, related to the identifiable intangible assets acquired; and

(iv) an adjustment to record interest expense for the year ended December 31, 2015 of $81.6 million associated with the debt incurred to partially fund the acquisition of Dyax and the amortization of related deferred debt issuance costs.

The adjustments above are stated net of their tax effects, where applicable.

4. Business Combinations (continued)

Acquisition of NPS

On February 21, 2015, Shire completed its acquisition of all of the outstanding common stock of NPS. As of the acquisition date, fair value of the cash consideration paid on closing was $5,219.6 million.

The acquisition of NPS added GATTEX/REVESTIVE and NATPARA/NATPAR to Shire's portfolio of currently marketed products. GATTEX/REVESTIVE is approved in the U.S. and EU for the treatment of adults with short bowel syndrome ("SBS") who are dependent on parenteral support, a rare and potentially fatal gastrointestinal disorder. NATPARA/NATPAR is approved in the U.S. and indicated as an adjunct to calcium and vitamin D to control hypocalcemia in patients with hypoparathyroidism ("HPT"), a rare endocrine disease.

The acquisition of NPS was accounted for as a business combination using the acquisition method. The assets acquired and the liabilities assumed from NPS have been recorded at their fair values at the date of acquisition, February 21, 2015. The Company's Consolidated Financial Statements include the results of NPS from February 21, 2015.

The purchase price allocation for the acquisition of NPS was finalized in the fourth quarter of 2015. The Company's allocation of the purchase price to the fair value of assets acquired and liabilities assumed is outlined below:

	Fair value $'M
Assets	
Current assets:	
Cash and cash equivalents	41.6
Short-term investments	67.0
Accounts receivable	33.4
Inventories	89.4
Other current assets	11.1
Total current assets	242.5
Property, plant and equipment	4.8
Goodwill	1,551.0
Intangible assets	
Currently marketed products	4,640.0
Royalty rights (categorized as "Other amortized intangible assets")	353.0
Total assets	6,791.3
Liabilities	
Current liabilities:	
Accounts payable and other current liabilities	75.7
Short-term borrowings and capital lease obligations	27.4
Long-term borrowings and capital lease obligations	78.9
Deferred tax liabilities	1,385.2
Other non-current liabilities	4.5
Total liabilities	1,571.7
Fair value of identifiable assets acquired and liabilities assumed	5,219.6
Consideration	
Cash consideration paid	5,219.6

Currently marketed products

Currently marketed products totaling $4,640.0 million relate to intellectual property rights of NATPARA/NATPAR and GATTEX/REVESTIVE. The fair value of the currently marketed products has been estimated using an income approach, based on the present value of incremental after tax cash flows attributable to each separately identifiable intangible asset.

The estimated useful lives of the NATPARA/NATPAR and GATTEX/REVESTIVE intangible assets are 24 years, with amortization being recorded on a straight-line basis.

Royalty rights

Intangible assets totaling $353.0 million relate to the royalty rights arising from the collaboration agreements with Amgen Inc ("Amgen"), Janssen Pharmaceutica N.V. ("Janssen") and Kyowa Hakko Kirin Co. Ltd ("Kyowa Hakko Kirin"). Amgen markets cinacalcet HCl as Sensipar in the U.S. and as Mimpara in the EU; Janssen markets tapentadol as Nucynta in the U.S.; and Kyowa Hakko Kirin markets cinacalcet HCl as Regpara in Japan, Hong Kong, Malaysia, Macau, Singapore, and Taiwan. From the acquisition of NPS, the Company is entitled to royalties from the net sales of these products.

The fair value of these royalty rights has been estimated using an income approach, based on the present value of incremental after tax cash flows attributable to each royalty right.

The estimated useful lives of these royalty rights range from four to five years (weighted average four years) with amortization being recorded on a straight-line basis.

Goodwill

Goodwill of $1,551.0 million, which is not deductible for tax purposes, includes the expected synergies that will result from combining the operations of NPS with the operations of Shire; intangible assets that do not qualify for separate recognition at the time of the acquisition; the value of the assembled workforce; and impacted by establishing a deferred tax liability for the acquired identifiable intangible assets which have no tax basis.

Supplemental disclosure of pro forma information

The following unaudited pro forma financial information presents the combined results of the operations of Shire and NPS as if the acquisitions of NPS had occurred as of January 1, 2014. The unaudited pro forma financial information is not necessarily indicative of what the consolidated results of operations actually would have been had the respective acquisitions been completed on January 1, 2014. In addition, the unaudited pro forma financial information does not purport to project the future results of operations of the combined Company.

Year to December 31	2015 $'M
Revenues	6,446.6
Net income from continuing operations	1,293.6
Per share amounts:	
Net income from continuing operations per share — basic	2.19
Net income from continuing operations per share — diluted	2.18

The unaudited pro forma financial information above reflects the following pro forma adjustments:

(i) an adjustment to increase net income for the year ended December 31, 2015 by $105.3 million, to eliminate acquisition related costs incurred by Shire and NPS;

(ii) an adjustment to increase net income by $18.8 million for the year ended December 31, 2015, to reflect charges on the unwind of inventory fair value adjustments as acquisition date inventory is sold; and

(iii) an adjustment to increase amortization expense for the year ended December 31, 2015 by $22.2 million, related to the identifiable intangible assets acquired.

The adjustments above are stated net of their tax effects, where applicable.

5. Collaborative and Other Licensing Arrangements

The Company is party to certain collaborative and licensing arrangements. In some of these arrangements, Shire and the licensee are both actively involved in the development and commercialization of the licensed product and have exposure to risks and rewards dependent on its commercial success.

Out-licensing arrangements

The Company has entered into various licensing arrangements where it has licensed certain product or intellectual property rights for consideration such as up-front payments, development milestones, sales milestones and/or royalty payments. Under the terms of these licensing arrangements, the Company may receive development milestone payments up to an aggregate amount of $10.3 million and sales milestones up to an aggregate amount of $15.7 million. The receipt of these substantive milestones is uncertain and contingent on the achievement of certain development milestones or the achievement of a specified level of annual net sales by the licensee. During the year ended 2016 and 2015, the Company received cash related to up-front and milestone payments of $10.5 million and $19.6 million, respectively. During the year ended 2016, 2015 and 2014, the Company recognized milestone income of $17.4 million, $8.9 million and $16.7 million, respectively, in other revenues, and $63.0 million, $51.0 million and $46.5 million, respectively, in product sales for shipment of product to the relevant licensee.

Collaboration and in-licensing arrangements

The Company is party to various collaborative and in-licensing arrangements, many of which were acquired through the acquisition of Baxalta. These agreements generally provide for commercialization rights to a product or products being developed by the counterparty, and in exchange often resulted in an upfront payment upon execution of the agreement and an obligation that the Company make future development, regulatory approval or commercial milestone payments as well as royalty payments. The following is a description of the Company's significant collaboration agreements, including those that were acquired by the Company. The acquisition-date fair value of the collaboration agreements acquired from Baxalta was included in the IPR&D.

Pfizer Inc.

In July 2016, the Company licensed the global rights to all indications for SHP647 from Pfizer Inc. SHP647 is an investigational biologic being evaluated for the treatment of moderate-to-severe inflammatory bowel disease. Under the terms of the agreement, Pfizer received an up-front payment of $90.0 million, and is eligible to receive between $75.0 million to $460.0 million in milestone payments based on clinical, regulatory and commercialization milestones and low double-digit royalties on any potential sales if the product is approved.

Sangamo BioSciences

In September 2015, Shire and Sangamo BioSciences, Inc. ("Sangamo") agreed to revise the collaboration and license agreement originally entered into in January 2012 to expedite the development of ZFP Therapeutics for hemophilia A and B and Huntington's disease. Under the revised terms, Shire has returned to Sangamo the exclusive world-wide rights to gene targets for the development, clinical testing and commercialization of ZFP Therapeutics for hemophilia A and B, and has retained rights and will continue to develop ZFP Therapeutic clinical leads for Huntington's disease and a ZFP Therapeutic for one additional gene target. Each company will be responsible for expenses associated with its own programs and will reimburse the other for any ongoing services provided. Sangamo has granted Shire a right of first negotiation to license the hemophilia A and B programs. No milestone payments will be made on any program and each company will pay certain royalties to the other on commercial sales up to a specified maximum cap.

Precision BioSciences

In June 2016, the Company acquired a strategic immuno-oncology collaboration with Precision BioSciences ("Precision"), a private biopharmaceutical company based in the United States, specializing in genome editing technology. The Company acquired the collaboration through the acquisition of Baxalta. Together, Shire and Precision will develop chimeric antigen receptor ("CAR") T cell therapies for up to six unique targets, with the first program expected to enter clinical studies in late 2017. On a product-by-product basis, following successful completion of early-stage research activities up to Phase 2, Shire will have exclusive option rights to complete late-stage development and worldwide commercialization. Precision is responsible for development costs for each target prior to option exercise. Precision also has the right to participate in the development and commercialization of any licensed products resulting from the collaboration through a 50/50 co-development and co-promotion option in the United States. As of the balance sheet date, the Company had the potential to make future payments related to option fees and development, regulatory and commercial milestones totaling up to $1.5 billion, in addition to future royalty payments on worldwide sales.

5. Collaborative and Other Licensing Arrangements (continued)

Symphogen

In June 2016, the Company acquired a research, option and commercial agreement with Symphogen, a private biopharmaceutical company headquartered in Denmark that is developing recombinant antibodies and antibody mixtures. The Company acquired the agreement through the acquisition of Baxalta. Under the terms of the agreement, the Company has options to obtain exclusive licensing rights for four specified proteins in development for the treatment of immune-oncology diseases as well as two additional proteins that may be selected at a later date. Each option is exercisable for a period of 90 days when each protein is ready for Phase 2 clinical trials. Symphogen is responsible for development costs for each protein until option exercise, at which point Shire would become responsible for development costs.

Each option exercise fee is variable depending on when it is exercised, with a maximum exercise price of up to €20.0 million for each protein. As of the balance sheet date, the Company had the potential to make additional future payments of up to approximately €1.2 billion related to development, regulatory and commercial milestones achieved after option exercise for all six proteins, in addition to future royalty payments.

Merrimack Pharmaceuticals, Inc.

In June 2016, the Company acquired an exclusive license agreement with Merrimack Pharmaceuticals, Inc. ("Merrimack") relating to the development and commercialization of ONIVYDE (nanoliposomal irinotecan injection), also known as "nal-IRI" or MM-398. The Company acquired the agreement through the acquisition of Baxalta. The arrangement includes all potential indications for nal-IRI across all markets with the exception of the U.S. and Taiwan. The first indication being pursued is for the treatment of patients with metastatic pancreatic cancer who were previously treated with gemcitabine-based therapy. As of December 31, 2016, the company had potential payments related to development, regulatory and commercial milestones of $637.5 million.

Coherus Biosciences, Inc.

In June 2016, the Company acquired a license agreement with Coherus Biosciences, Inc. ("Coherus") to develop and commercialize a biosimilar to ENBREL® (etanercept). The Company acquired the agreement through the acquisition of Baxalta. The Company also obtained the right of first refusal to certain other biosimilars in the collaboration. Under the terms of the agreement, Coherus was responsible for the development plan, preparation of regulatory filings, and manufacture of the product, subject to certain cost reimbursement by the Company. In September 2016, the Company terminated the licensing agreement with Coherus in accordance with its terms.

Momenta Pharmaceuticals, Inc.

In June 2016, the Company acquired an exclusive license agreement with Momenta Pharmaceuticals, Inc. ("Momenta") to develop and commercialize biosimilars, including adalimumab (BAX 2923), a biosimilar product candidate for HUMIRA® (adalimumab). The agreement was acquired through the acquisition of Baxalta. The arrangement includes specified funding by the Company, as well as other responsibilities, relating to development and commercialization activities. In December 2016, the Company formally terminated its agreement with Momenta and agreed to pay $51.2 million, which was paid in January 2017, to satisfy its remaining obligations under the agreement, except with respect to certain clinical and regulatory services. The Company will be responsible for costs associated with those activities through April 2017. As part of this termination, on December 31, 2016, the Company and Momenta entered into an Asset Return and Termination Agreement that provided for the earlier termination of the license agreement and agreed to the terms associated with the termination.

Other arrangements

SFJ Pharmaceuticals Group

In June 2015, Baxalta entered into a co-development agreement with SFJ Pharmaceuticals IX, L.P., a SFJ Pharmaceuticals Group company ("SFJ") relating to BAX 2923, whereby SFJ would fund specified development costs related to the BAX 2923 program, in exchange for payments in the event the product obtains regulatory approval in the United States and Europe. There were certain termination provisions that could have triggered payment of the contingent success payments prior to regulatory approval.

The preliminary fair value of the assumed contingency was recorded as a long-term liability at June 3, 2016 and as of the balance sheet date, as part of Company's purchase accounting for the Baxalta acquisition. The fair value of the assumed contingency on the date of acquisition was $288.6 million.

This co-development agreement was terminated by mutual agreement of the Company and SFJ in September 2016 and the Company made a one-time $288.0 million payment to SFJ in connection with the termination, in full satisfaction of the Company's financial obligations under the agreement.

6. Integration and Acquisition Costs

For the year ended December 31, 2016, Shire recorded integration and acquisition costs of $883.9 million, primarily due to the acquisition and integration of Baxalta and Dyax and related contract termination costs. The Baxalta integration is estimated to be completed by mid to late 2019 and the integration of Dyax is substantially complete as of December 31, 2016.

As part of the Company's activities to integrate Baxalta, it terminated certain employees and announced plans to close certain facilities. For the year ended December 31, 2016, the Company incurred costs relating to employee termination benefits of $381.2 million including severance and acceleration of stock compensation. The Baxalta integration activities are ongoing and the Company is continuing to evaluate the total costs expected to be incurred and the time-frame.

The following table summarizes the related reserve as of December 31, 2016:

	Severance and employee benefits $'M
As of January 1, 2016	–
Amount charged to integration costs	267.3
Paid/utilized	(193.3)
As of December 31, 2016	74.0

For the year ended December 31, 2015, Shire recorded net integration and acquisition costs of $39.8 million. The net integration and acquisition costs principally comprises costs related to the acquisition and integration of NPS Pharma, Viropharma, Dyax and Baxalta of $189.7 million, offset by a net credit relating to the change in the fair value of contingent consideration liabilities of $149.9 million. This net credit principally relates to the acquisition of Lumena, reflecting the agreement in the third quarter of 2015 to settle all future contingent milestones payable to former Lumena shareholders for a one-time cash payment of $90.0 million and the acquisition of Lotus Tissue Repair, Inc. reflecting a lower probability of success for the SHP608 asset (for the treatment of Dystrophic Epidermolysis Bullosa ("DEB")) as a result of certain preclinical toxicity findings.

For the year ended December 31, 2014, Shire recorded integration and acquisition costs of $158.8 million, comprised of $144.1 million relating to the acquisition and integration of ViroPharma and a net charge of $14.7 million relating to the change in fair value of contingent consideration liabilities mainly related to the acquisition of SARcode Bioscience Inc. ("SARcode") offset by credits in relation to the acquisition of FerroKin BioSciences, Inc., reflecting the decision to place the Phase 2 clinical trial for SHP602 on clinical hold.

7. Reorganization Costs

The Company incurred reorganization costs totaling $121.4 million during the year ended December 31, 2016. The costs primarily relate to the planned closure of certain manufacturing facilities and associated asset impairments of $77.4 million and employee termination and other costs of $16.2 million. As of December 31, 2016, cash payments associated with these costs were not significant. Other restructuring charges recorded, which were not significant for the year ended December 31, 2016, relate to the closure of other offices and the related employee relocation.

In October 2014, the Company announced its plans to relocate positions to Lexington, Massachusetts from its Chesterbrook, Pennsylvania, site and establish Lexington as the Company's U.S. operational headquarters in continuation of the One Shire efficiency program. During 2015 and 2014, the Company incurred reorganization costs totaling $97.9 million and $180.9 million, respectively, relating to employee involuntary termination benefits and other reorganization costs primarily related to the Company's One Shire business reorganization. The One Shire reorganization was substantially completed as of December 31, 2015.

8. Results of Discontinued Operations

Following the divestment of the Company's DERMAGRAFT business in January 2014, the operating results associated with the DERMAGRAFT business have been classified as discontinued operations in the Consolidated Statements of Operations for all periods presented.

During the year ended December 31, 2016, the Company recorded a loss from discontinued operations of $276.1 million (net of tax of $98.8 million), primarily due to legal contingencies related to the divested DERMAGRAFT business.

During the year ended December 31, 2015, the Company recorded a loss from discontinued operations of $34.1 million (net of tax of $18.9 million), primarily relating to a change in estimate in relation to reserves for onerous leases retained by the Company.

During the year ended December 31, 2014, the Company recorded a gain from discontinued operations of $122.7 million (net of tax of $211.3 million). The gain from discontinued operations for the year ended December 31, 2014 includes a tax credit of $211.3 million primarily driven by a tax benefit arising following a reorganization of the former Regenerative Medicine business undertaken in the fourth quarter of 2014, associated with the divestment of the DERMAGRAFT business in the first quarter of 2014. This gain was partially offset by costs associated with the divestment of the DERMAGRAFT business, including a loss on re-measurement of contingent consideration receivable from Organogenesis to its fair value.

9. Accounts Receivable, Net

Accounts receivable as of December 31, 2016 of $2,616.5 million (December 31, 2015: $1,201.2 million), are stated at the invoiced amount and net of provision for discounts and doubtful accounts of $169.6 million (December 31, 2015: $55.8 million, 2014: $48.5 million).

Provision for discounts and doubtful accounts:

	2016 $'M	2015 $'M	2014 $'M
As of January 1	**55.8**	48.5	47.9
Provision charged to operations	**838.1**	424.2	338.2
Provision utilization	**(724.3)**	(416.9)	(337.6)
As of December 31	**169.6**	55.8	48.5

As of December 31, 2016 accounts receivable included $102.2 million (December 31, 2015: $79.0 million) related to royalty receivable.

10. Inventories

Inventories are stated at the lower of cost or market. Inventories comprise:

Years to December 31	2016 $'M	2015 $'M
Finished goods	1,380.0	184.9
Work-in-progress	1,491.0	302.0
Raw materials	691.3	148.5
	3,562.3	635.4

As of December 31, 2016 and 2015, there was $18.1 million and $nil amounts of inventory which have been capitalized in advance of regulatory approval, respectively.

For a more detailed description of the inventories acquired with Baxalta and Dyax, please see Note 4, Business Combinations, to the Consolidated Financial Statements.

11. Prepaid Expenses and Other Current Assets

Components of prepaid expenses and other current assets are summarized as follows:

Years to December 31	2016 $'M	2015 $'M
Income tax receivable	237.5	73.6
Prepaid expenses	183.9	35.6
Value added taxes receivable	40.3	18.2
Other current assets	344.6	70.0
	806.3	197.4

12. Property, Plant and Equipment, Net

Property, plant and equipment are recorded at cost, net of accumulated depreciation. Components of property, plant and equipment, net are summarized as follows:

Years to December 31	2016 $'M	2015 $'M
Land	337.9	96.7
Buildings and leasehold improvements	1,915.4	606.4
Machinery, equipment and other	2,547.2	827.4
Assets under construction	2,632.5	93.7
Total property, plant and equipment at cost	7,433.0	1,624.2
Less: Accumulated depreciation	(963.4)	(796.1)
Property, plant and equipment, net	6,469.6	828.1

Depreciation expense for the years ended December 31, 2016, 2015 and 2014 was $292.9 million, $138.5 million and $163.5 million, respectively.

13. Goodwill

The following table provides a roll-forward of the goodwill balance:

	2016 $'M	2015 $'M
As of January 1	4,147.8	2,474.9
Acquisitions	14,124.5	1,700.1
Foreign currency translation	(384.1)	(27.2)
As of December 31	17,888.2	4,147.8

During 2016, the Company completed the acquisitions of Baxalta and Dyax which resulted in aggregate goodwill of $14,124.5 million (see Note 4, Business Combinations, to the Consolidated Financial Statements for details).

14. Intangible Assets

The following table summarizes the Company's intangible assets:

	Currently marketed products $'M	IPR&D $'M	Other intangible assets $'M	Total $'M
December 31, 2016				
Gross acquired intangible assets	31,217.5	5,746.6	842.2	37,806.3
Accumulated amortization	(2,908.6)	–	(200.2)	(3,108.8)
Intangible assets, net	28,308.9	5,746.6	642.0	34,697.5
December 31, 2015				
Gross acquired intangible assets	9,371.9	1,362.0	375.0	11,108.9
Accumulated amortization	(1,852.1)	–	(83.5)	(1,935.6)
Intangible assets, net	7,519.8	1,362.0	291.5	9,173.3

Intangible assets are comprised primarily of royalty rights and other contract rights associated with Baxalta, Dyax and NPS.

The change in the net book value of Intangible assets for the year ended December 31, 2016 and 2015 is shown in the table below:

	2016 $'M	2015 $'M
As of January 1,	9,173.3	4,934.4
Additions	27,462.8	5,474.9
Amortization charged	(1,173.4)	(498.7)
Impairment charges	(8.9)	(643.7)
Foreign currency translation	(756.3)	(93.6)
As of December 31,	34,697.5	9,173.3

In connection with the acquisition of Baxalta, the Company acquired IP rights related to currently marketed products of $21,995.0 million, IPR&D assets of $730.0 million and other contract rights of $42.2 million. For a more detailed description of this acquisition, refer to Note 4, Business Combinations.

In connection with the acquisition of Dyax, the Company acquired IP rights related to currently marketed products of $135.0 million, IPR&D assets of $4,100.0 million and royalty rights of $425.0 million. For a more detailed description of this acquisition, refer to Note 4, Business Combinations.

In the year ended December 31, 2015, the Company acquired intangible assets totaling $5,474.9 million, primarily relating to the fair value of intangible assets for currently marketed products and royalty rights acquired with NPS Pharma of $4,993.0 million and IPR&D assets of $475.0 million acquired with Meritage and Foresight.

The Company reviews its intangible assets for impairment whenever events or circumstances suggest that their carrying value may not be recoverable.

For the year ended December 31, 2015, the Company recorded $643.7 million (within R&D expenses) in impairment charges related to its SHP625 and SHP608 IPR&D assets. The fair values of the related contingent consideration liabilities (recorded within integration and acquisition costs) were reduced by $203.2 million.

Estimated amortization expense can be affected by various factors including future acquisitions, disposals of product rights, regulatory approval and subsequent amortization of acquired IPR&D projects, foreign exchange movements and the technological advancement and regulatory approval of competitor products. The estimated future amortization of acquired intangible assets for the next five years is expected to be as follows:

	Anticipated future amortization $'M
2017	1,592.0
2018	1,585.2
2019	1,506.5
2020	1,502.8
2021	1,496.8

15. Fair Value Measurement

Assets and liabilities that are measured at fair value on a recurring basis

As of December 31, 2016 and December 31, 2015, the following financial assets and liabilities are measured at fair value on a recurring basis using quoted prices in active markets for identical assets (Level 1); significant other observable inputs (Level 2); and significant unobservable inputs (Level 3).

	Carrying value and fair value			
As of December 31, 2016	**Total $'M**	**Level 1 $'M**	**Level 2 $'M**	**Level 3 $'M**
Financial assets:				
Marketable equity securities	**65.8**	**65.8**	**–**	**–**
Marketable debt securities	**15.5**	**3.6**	**11.9**	**–**
Contingent consideration receivable	**15.6**	**–**	**–**	**15.6**
Derivative contracts	**18.0**	**–**	**18.0**	**–**
Total	**114.9**	**69.4**	**29.9**	**15.6**
Financial liabilities:				
Derivative contracts	**8.3**	**–**	**8.3**	**–**
Contingent consideration payable	**1,058.0**	**–**	**–**	**1,058.0**
Total	**1,066.3**	**–**	**8.3**	**1,058.0**

	Carrying value and fair value			
As of December 31, 2015	Total $'M	Level 1 $'M	Level 2 $'M	Level 3 $'M
Financial assets:				
Marketable equity securities	17.2	17.2	–	–
Contingent consideration receivable	13.8	–	–	13.8
Derivative contracts	1.9	—	1.9	–
Total	32.9	17.2	1.9	13.8
Financial liabilities:				
Derivative contracts	11.5	–	11.5	–
Contingent consideration payable	475.9	–	—	475.9
Total	487.4	–	11.5	475.9

Marketable equity and debt securities are included within Investments in the Consolidated Balance Sheets. Shire's strategic investment portfolio includes investments in equity securities of certain biotechnology companies and in venture capital funds where the underlying investments are in equity securities of biotechnology companies. Contingent consideration receivable is included within prepaid expenses and other current assets and Other non-current assets in the Consolidated Balance Sheets. Contingent consideration payable is included within Other current liabilities and Other non-current liabilities in the Consolidated Balance Sheets. For a discussion of the Company's derivative contracts, see Note 16, Financial Instruments, to the Consolidated Financial Statements.

15. Fair Value Measurement (continued)

Certain estimates and judgments were required to develop the fair value amounts. The estimated fair value amounts shown above are not necessarily indicative of the amounts that the Company would realize upon disposition, nor do they indicate the Company's intent or ability to dispose of the financial instrument.

The following methods and assumptions were used to estimate the fair value of each material class of financial instrument:

- Marketable equity securities: the fair values of marketable equity securities are estimated based on quoted market prices for those investments.
- Marketable debt securities: the fair values of debt securities are obtained from pricing services or broker/dealers who either use quoted prices in an active market or proprietary pricing applications, which include observable market information for like or same securities.
- Contingent consideration receivable: the fair value of the contingent consideration receivable has been estimated using the income approach (using a probability weighted discounted cash flow method).
- Derivative contracts: the fair values of the swap and forward foreign exchange contracts have been determined using the month-end interest rate and foreign exchange rates, respectively.
- Contingent consideration payable: the fair value of the contingent consideration payable has been estimated using the income approach (using a probability weighted discounted cash flow method).

Assets and Liabilities Measured at Fair Value on a Recurring Basis Using Significant Unobservable Inputs (Level 3)

The following table provides a roll forward of the fair values of our contingent consideration receivable and payables which include Level 3 measurements:

Contingent consideration receivable

	2016 $'M	2015 $'M
Balance at January 1,	**13.8**	15.9
Change in fair value included in earnings	**1.6**	13.6
Other	**0.2**	(15.7)
Balance at December 31,	**15.6**	13.8

Contingent consideration payable

	2016 $'M	2015 $'M
Balance at January 1,	**475.9**	629.9
Additions	**565.4**	92.8
Change in fair value included in earnings	**11.1**	(149.9)
Other	**5.6**	(96.9)
Balance at December 31,	**1,058.0**	475.9

The increase in contingent consideration payable is primarily related to the Company's acquisition of Dyax as well as contingent consideration payable assumed in the acquisition of Baxalta. Other primarily includes foreign currency adjustments.

Of the $1,058.0 million of contingent consideration payable as of December 31, 2016, $65.1 million is recorded within Other current liabilities and $992.9 million is recorded within Other non-current liabilities in the Company's Consolidated Balance Sheets.

Quantitative Information about Assets and Liabilities Measured at Fair Value on a Recurring Basis Using Significant Unobservable Inputs (Level 3)

Quantitative information about the Company's recurring Level 3 fair value measurements is included below:

	Fair value at the measurement date			
Financial assets: As of December 31, 2016	**Fair value $'M**	**Valuation technique**	**Significant unobservable inputs**	**Range**
Contingent consideration receivable ("CCR")	15.6	Income approach (probability weighted discounted cash flow)	Probability weightings applied to different sales scenarios	10 to 90%
			Future forecast consideration receivable based on contractual terms with purchaser	$0 to $21 million
			Assumed market participant discount rate	8%

	Fair value at the measurement date			
Financial liabilities: As of December 31, 2016	**Fair value $'M**	**Valuation technique**	**Significant unobservable inputs**	**Range**
Contingent consideration payable	1,058.0	Income approach (probability weighted discounted cash flow)	Cumulative probability of milestones being achieved	6 to 90%
			Assumed market participant discount rate	1.2 to 10.5%
			Periods in which milestones are expected to be achieved	2017 to 2040
			Forecast quarterly royalties payable on net sales of relevant products	$0.1 to $7.5 million

Contingent consideration payable represents future milestones and royalties the Company may be required to pay in conjunction with various business combinations and license agreements.

The fair value of the Company's contingent consideration receivable and payable could significantly increase or decrease due to changes in certain assumptions which underpin the fair value measurements. Each set of assumptions is specific to the individual contingent consideration receivable or payable.

Financial assets and liabilities that are disclosed at fair value

The carrying amounts and estimated fair values of the Company's financial assets and liabilities are as follows:

	December 31, 2016		December 31, 2015	
	Carrying amount $'M	Fair value $'M	Carrying amount $'M	Fair value $'M
Financial liabilities:				
Senior notes	12,039.2	11,633.8	–	–
Baxalta notes	5,063.6	5,066.5	–	–
Capital lease obligation	353.6	353.6	13.4	13.4

The estimated fair values of Senior Notes and Baxalta Notes were based upon recent observable market prices and are considered level 2 in the fair value hierarchy. The estimated fair value of the capital lease obligations is based on Level 2 inputs.

The carrying amounts of other financial assets and liabilities approximate their estimated fair value due to their short-term nature, such as liquidity and maturity of these amounts, or because there have been no significant changes since the asset or liability was last re-measured to fair value on a non-recurring basis.

16. Financial Instruments

Foreign Currency Contracts

Due to the global nature of operations, portions of the Company's revenues and operating expenses are recorded in currencies other than the U.S. Dollar. The value of revenues and operating expenses measured in U.S. Dollars is therefore subject to changes in foreign currency exchange rates. In order to mitigate these changes, the Company uses foreign currency forward contracts to lock in exchange rates associated with a portion of its forecasted international revenues and operating expenses. The main trading currencies of the Company are the U.S. Dollar, Euro, Pounds Sterling, Swiss Franc, Canadian Dollar and Japanese Yen.

Transactional exposure arises where transactions occur in currencies different to the functional currency of the relevant subsidiary. It is the Company's policy that these exposures are minimized to the extent practicable by denominating transactions in the subsidiary's functional currency. Where significant exposures remain, the Company uses foreign exchange contracts (spot, forward and swap contracts) to manage the exposure for balance sheet assets and liabilities that are denominated in currencies different to the functional currency of the relevant subsidiary.

The Company has master netting agreements with a number of counterparties to these foreign exchange contracts and on the occurrence of specified events, the Company has the ability to terminate contracts and settle them with a net payment by one party to the other. The Company has elected to present derivative assets and derivative liabilities on a gross basis in the Consolidated Balance Sheets. The Company does not have credit risk related contingent features or collateral linked to the derivatives.

Designated Derivative Instruments

Certain foreign currency forward contracts have been designated as cash flow hedges and accordingly, to the extent effective, any unrealized gains or losses on these foreign currency forward contracts are reported in AOCI. Realized gains and losses for the effective portion of such contracts are recognized in cost of sales when the sale of product in the currency being hedged is recognized. To the extent ineffective, hedge transaction gains and losses are reported in Other income/(expense), net. The amount of ineffectiveness for the years ended December 31, 2016 and December 31, 2015 was immaterial.

As of December 31, 2016, the foreign currency forward contracts had a total notional value of $78.7 million with a maximum duration of six months. The Company did not have any designated forward contracts as of December 31, 2015. As of December 31, 2016, the fair value of these contracts was a net asset of $4.2 million (2015: $nil). The portion of the fair value of these foreign currency forward contracts that was included in AOCI in total equity reflected net gain of $14.6 million as of December 31, 2016. The Company expects all contracts to be settled over the next six months and any amounts in AOCI to be reported as an adjustment to revenue or cost of sales. The Company considers the impact of its and its counterparties' credit risk on the fair value of the contracts as well as the ability of each party to execute its contractual obligations. As of December 31, 2016, credit risk did not change the fair value of the Company's foreign currency forward contracts.

16. Financial Instruments (continued)

Undesignated Derivative Instruments

The Company uses forward contracts to mitigate the foreign currency risk related to certain balance sheet positions, including intercompany and third-party receivables and payables. The Company has not elected hedge accounting for these derivative instruments as the duration of these contracts is typically three months or less. The changes in fair value of these derivatives are reported in earnings. The notional amount of undesignated derivative instruments was $1,309.1 million and $645.2 million as of December 31, 2016 and 2015, respectively.

As of December 31, 2016 the undesignated derivative instruments included option contracts assumed from Baxalta that were previously designated as cash flow hedges. The notional amount of these option contracts totaled $11.2 million as of December 31, 2016. Upon acquisition, the Company did not elect to redesignate these option contracts as cash flow hedges. In addition, the company also assumed undesignated forward contracts from Baxalta, included in undesignated derivative instruments as of December 31, 2016. The notional amount of these undesignated forward contracts totaled $776.4 million as of December 31, 2016.

As of December 31, 2016, the fair value of these contracts was a net asset of $6.7 million (2015: $nil).

Interest Rate Contracts

The Company is exposed to the risk that its earnings and cash flows could be adversely impacted by fluctuations in benchmark interest rates relating to its debt obligations on which interest is set at floating rates. The Company's policy is to manage this risk to an acceptable level. The Company is principally exposed to interest rate risk on any borrowings under the Company's various debt facilities. Interest on each of these debt obligations is set at floating rates, to the extent utilized. Shire's exposure under these facilities is to changes in U.S. Dollar interest rates. For further details related to interest rates on the Company's various debt facilities, see Note 18, Borrowings and Capital Lease Obligations, to the Consolidated Financial Statements.

Designated Derivative Instruments

As of December 31, 2016, interest rate swap contracts with an aggregate notional amount of $1.0 billion and maturing in June 2020 and June 2025 were in place. These interest rate swap contracts were designated as fair value hedges. The effective portion of the changes in the fair value of interest rate swap contracts are recorded as a component of the underlying Baxalta Notes with the ineffective portion recorded as income. Any net interest payments made or received on the interest rate swap contracts are recognized as a component of interest expense in the Consolidated Statements of Operations. As of December 31, 2016, the fair value of these contracts was a net liability of $1.1 million (2015: $nil) presented within other non-current liabilities. For the year ended December 31, 2016, the Company recognized a loss of $6.0 million as ineffectiveness (2015: $nil) related to these contracts as a component of interest expense.

Undesignated Derivative Instruments

During the year ended December 31, 2016, the Company entered into interest rate swap contracts with a total notional amount of $5.1 billion related to the November 2015 Facilities Agreement, which matured during 2016. The Company did not elect hedge accounting for these contracts. As of December 31, 2016 and December 31, 2015, the Company did not have any outstanding undesignated derivative instruments. For the year ended December 31, 2016, the Company recognized $3.2 million (2015: $nil) loss related to these contracts, which was recognized as a component of Interest expense.

The following tables summarize the income statement locations and gains and losses on the Company's designated and undesignated derivative instruments for the year ended December 31, 2016. There were no designated derivatives for the year ended December 31, 2015.

As of December 31, 2016, the Company had in total 155 swaps and forward foreign exchange contracts.

Years ended December 31	Gain (loss) recognized in OCI 2016 $'M	Gain (loss) recognized in OCI 2015 $'M	Location in Statements of Operations	Gain (loss) reclassified from AOCI into income 2016 $'M	Gain (loss) reclassified from AOCI into income 2015 $'M
Designated Derivative Instruments					
Cash flow hedges					
Foreign exchange contracts	**14.6**	–	Cost of sales	**4.9**	–

Years ended December 31	Location of gain (loss) in Statements of Operations	Gain (loss) recognized in income 2016 $'M	Gain (loss) recognized in income 2015 $'M
Fair value hedges			
Interest rate contracts	Interest expense	(6.0)	–
Undesignated Derivative Instruments			
Foreign exchange contracts	Other (expense)/ income, net	(40.2)	9.5
Interest rate swap contracts	Interest expense	(3.2)	–

As of December 31, 2016, $6.2 million of deferred gains, net of tax, on derivative instruments included in AOCI are expected to be recognized in earnings during the next 12 months, coinciding with when the hedged items are expected to impact earnings.

The following table presents the classification and estimated fair value of the Company's derivative instruments as of December 31, 2016:

	Derivatives in asset positions		Derivatives in liability positions	
	Balance Sheet location	Fair Value $'M	Balance Sheet location	Fair Value $'M
Designated Derivative Instruments				
Foreign exchange contracts	Prepaid expenses and other current assets	4.3	Accounts payable and accrued expenses	0.1
Interest rate contracts	Long term borrowings	0.1	Long-term borrowings	1.3
		4.4		1.4
Undesignated Derivative Instruments				
Foreign exchange forward contracts	Prepaid expenses and other current assets	13.6	Accounts payable and accrued expenses	6.9
		18.0		8.3

16. Financial Instruments (continued)

As of December 31, 2016, the potential effect of rights to offset associated with the Interest rate swap and foreign exchange forward contracts would be an offset to both assets and liabilities of $1.7 million, resulting in net derivative assets and derivative liabilities of $16.3 million and $6.6 million, respectively.

17. Accounts Payable and Accrued Expenses

Components of Accounts payable and accrued expenses are summarized as follows:

Years ended December 31	2016 $'M	2015 $'M
Accounts payable and accrued purchases	**911.9**	441.4
Accrued employee compensation and benefits payable	**574.8**	254.5
Accrued rebates	**1,431.3**	982.4
Accrued sales returns	**118.4**	128.3
Other accrued expenses	**1,276.0**	244.0
	4,312.4	2,050.6

18. Borrowings and Capital Lease Obligations

Years ended December 31	2016 $'M	2015 $'M
Short-term borrowings:		
Borrowings under the Revolving Credit Facilities Agreement (the "RCF")	**450.0**	750.0
Borrowings under the November 2015 Facilities Agreement	**2,594.8**	—
Borrowings under the January 2015 Facilities Agreement	**—**	750.0
Other borrowings and capital lease obligations (short-term portion)	**23.2**	12.7
	3,068.0	1,512.7
Long-term borrowings:		
Senior Notes	**12,039.2**	—
Baxalta Notes	**5,063.6**	—
Borrowings under the November 2015 Facilities Agreement	**2,391.8**	—
Capital lease obligations (long-term portion)	**347.2**	12.2
Other borrowings	**58.0**	69.9
	19,899.8	82.1
	22,967.8	1,594.8

The future payments related to short and long-term borrowings and capital lease obligations, on maturities, as of December 31, 2016 are as follows:

	$'M
2017	3,072.6
2018	3,217.2
2019	3,341.3
2020	1,035.3
2021	3,320.5
Thereafter	9,116.1
Total obligations	23,103.0
Less: Deferred financing costs	(135.2)
Total debt obligations	22,967.8

Senior Notes Issuance

On September 23, 2016, Shire Acquisitions Investments Ireland Designated Activity Company ("SAIIDAC"), a wholly owned subsidiary of Shire Plc, issued senior notes with a total aggregate principal value of $12.1 billion ("SAIIDAC Notes"), guaranteed by Shire plc and, as of December 1, 2016, by Baxalta. SAIIDAC used the net proceeds to fully repay amounts outstanding under the January 2016 Facilities Agreement (discussed below), which was used to finance the cash consideration payable related to the Company's acquisition of Baxalta. Below is a summary of the SAIIDAC Notes as of December 31, 2016:

	Aggregate amount $'M	Coupon rate %	Effective interest rate %	Carrying amount $'M
Fixed-rate notes due 2019	3,300.0	1.900	2.05	3,287.5
Fixed-rate notes due 2021	3,300.0	2.400	2.53	3,283.0
Fixed-rate notes due 2023	2,500.0	2.875	2.97	2,487.9
Fixed-rate notes due 2026	3,000.0	3.200	3.30	2,980.8
	12,100.0			12,039.2

The SAIIDAC Notes are senior unsecured obligations and may be redeemed at SAIIDAC's option at the greater of (1) 100 percent of the principal amount plus accrued and unpaid interest or (2) the sum of the present values of the remaining scheduled payments of interest and principal discounted to the date of redemption on a semi-annual basis at the applicable treasury rate (as defined) plus an incremental margin, plus, in either case, accrued and unpaid interest. The SAIIDAC Notes also contain a change of control provision that may require that SAIIDAC to offer to purchase the SAIIDAC Notes at a price equal to 101 percent of the principal amount plus accrued and unpaid interest to the date of purchase under certain circumstances. On December 1, 2016, Baxalta Inc., a wholly owned subsidiary of Shire Plc, has fully and unconditionally guaranteed the SAIIDAC Notes.

The costs and discount associated with this offering of $60.8 million have been recorded as a reduction to the carrying amount of the debt on the Consolidated Balance Sheets. These costs will be amortized as additional interest expense using the effective interest rate method over the period from issuance through maturity. Interest on the SAIIDAC Notes is payable March 23 and September 23 of each year, beginning on March 23, 2017.

Baxalta Notes

Shire plc guaranteed senior notes issued by Baxalta with a total aggregate principal amount of $5.0 billion in connection with the Baxalta acquisition ("Baxalta Notes"). Below is a summary of the Baxalta Notes as of December 31, 2016:

	Aggregate principal $'M	Coupon rate %	Effective interest rate %	Carrying amount $'M
Variable-rate notes due 2018	375.0	LIBOR plus 0.780	2.20	371.6
Fixed-rate notes due 2018	375.0	2.000	2.00	374.8
Fixed-rate notes due 2020	1,000.0	2.875	2.80	1,004.3
Fixed-rate notes due 2022	500.0	3.600	3.30	508.4
Fixed-rate notes due 2025	1,750.0	4.000	3.90	1,772.8
Fixed-rate notes due 2045	1,000.0	5.250	5.10	1,031.7
Total Baxalta Notes	5,000.0			5,063.6

The effective interest rates above exclude the effect of any related interest rate swaps. The book values above include any premiums and adjustments related to hedging instruments. For further details related to the interest rate derivative contracts, please see Note 16, Financial Instruments, to the Consolidated Financial Statements.

Revolving Credit Facilities Agreement

On December 12, 2014, Shire entered into a $2,100.0 million revolving credit facilities agreement (the "RCF") with a number of financial institutions. Shire is an original borrower and original guarantor under the RCF. On January 15, 2016, SAIIDAC became additional guarantor to the RCF and on December 1, 2016, Baxalta became additional guarantor to the RCF. Shire has agreed to act as guarantor for any of its subsidiaries that become additional borrowers under the RCF. As of December 31, 2016, the Company utilized $450.0 million of the RCF.

The RCF, which terminates on December 12, 2021, may be applied towards financing the general corporate purposes of Shire. The RCF incorporates a $250.0 million U.S. Dollar and Euro swingline facility operating as a sub-limit thereof.

Interest on any loans made under the RCF is payable on the last day of each interest period, which may be one week or one, two, three or six months at the election of Shire, or as otherwise agreed with the lenders. The interest rate for the RCF is: LIBOR (or, in relation to any revolving loan in Euro, EURIBOR); plus 0.30 percent per annum subject to change depending upon (i) the prevailing ratio of Net Debt to EBITDA (each as defined in the RCF) in respect of the most recently completed financial year or financial half year and (ii) the occurrence and continuation of an event of default in respect of the financial covenants or the failure to provide a compliance certificate.

Shire shall also pay (i) a commitment fee equal to 35 percent of the applicable margin on available commitments under the RCF for the availability period applicable thereto and (ii) a utilization fee equal to (a) 0.10 percent per year of the aggregate of all outstanding loans up to an aggregate base currency amount equal to $700.0 million, (b) 0.15 percent per year of the amount by which the aggregate base currency amount of all outstanding loans exceeds $700.0 million but is equal to or less than $1,400.0 million and (c) 0.30 percent per year of the amount by which the aggregate base currency amount of all outstanding loans exceeds $1,400.0 million.

The RCF includes customary representations and warranties, covenants and events of default, including requirements that Shire's (i) ratio of Net Debt to EBITDA in respect of the most recently-ended 12-month relevant period (each as defined in the RCF) must not, at any time, exceed 3.5:1 except that, following an acquisition fulfilling certain criteria, Shire may elect to increase this ratio to (a) 5.5:1 for the relevant period in which the acquisition was completed (b) 5.0:1 in respect of the first relevant period following the relevant period in which the acquisition was completed and (c) 4.5:1 in respect of the second relevant period following the relevant period in which the acquisition was completed and (ii) ratio of EBITDA to Net Interest for the most recently-ended 12-month relevant period (each as defined in the RCF) must not be less than 4.0:1. Shire elected to increase the Net Debt to EBITDA ratio in connection with the period ending June 30, 2016, following the completion of the acquisition of Baxalta during the period. Consequently, the applicable ratio for the period ending December 31, 2016 is 5.0:1.

The RCF restricts, subject to certain exceptions, Shire's ability to incur additional financial indebtedness, grant security over its assets or provide loans/grant credit. Further, any lender may require mandatory prepayment of its participation if there is a change of control of Shire, subject to certain exceptions for schemes of arrangement and analogous schemes.

Events of default under the RCF include, subject to customary grace periods and materiality thresholds: (i) non-payment of any amounts due under the finance documents (as defined in the RCF), (ii) failure to satisfy any financial covenants, (iii) material misrepresentation in any of the finance documents, (iv) failure to pay, or certain other defaults, under other financial indebtedness, (v) certain insolvency events or proceedings, (vi) material adverse changes in the business, operations, assets or financial condition of Shire as a whole, (vii) if it becomes unlawful for Shire (or any successor parent company) or any of their respective subsidiaries that are parties to the RCF to perform their obligations thereunder or (viii) if Shire (or any successor parent company) or any subsidiary thereof which is a party to the RCF repudiates such agreement or other finance document, among others.

Term Loan Facilities Agreement

January 2016 Facilities Agreement

On January 11, 2016, Shire (as original guarantor and original borrower), entered into an $18.0 billion bridge facilities agreement with various financial institutions (the "January 2016 Facilities Agreement").The January 2016 Facilities Agreement comprised two credit facilities: (i) a $13.0 billion term loan facility originally maturing on January 11, 2017 ("January 2016 Facility A") and (ii) a $5.0 billion revolving loan facility originally maturing on January 11, 2017 ("January 2016 Facility B"). On April 1, 2016, SAIIDAC became additional borrower and additional guarantor to the January 2016 Facilities Agreement.

18. Borrowings and Capital Lease Obligations (continued)
The January 2016 Facility A was utilized to finance the cash consideration payable in respect of the acquisition of Baxalta on June 3, 2016 in the amount of $12,390.0 million. The net proceeds from the issuance of the SAIIDAC Notes were used to fully repay the amounts outstanding under the January 2016 Facility A in September 2016. The January 2016 Facility B was canceled effective July 11, 2016, in accordance with its terms.

November 2015 Facilities Agreement
On November 2, 2015, Shire (as original guarantor and original borrower) entered into a $5.6 billion facilities agreement with various financial institutions (the "November 2015 Facilities Agreement"). The November 2015 Facilities Agreement comprises three credit facilities: (i) a $1.0 billion term loan facility of which, following the exercise of the one year extension option in the amount of $400.0 million, $600.0 million matured and was repaid on November 2, 2016 and $400.0 million matures on November 2, 2017 ("November 2015 Facility A"), (ii) a $2.2 billion amortizing term loan facility which matures on November 2, 2017 ("November 2015 Facility B") and (iii) a $2.4 billion amortizing term loan facility which matures on November 2, 2018 ("November 2015 Facility C").

On January 15, 2016, SAIIDAC became additional borrower and additional guarantor to the November 2015 Facilities Agreement and on December 1, 2016, Baxalta became an additional guarantor to the November 2015 Facilities Agreement. As of December 31, 2016, the November 2015 Facilities Agreement was fully utilized by SAIIDAC as borrower in the amount of $5.0 billion to finance the cash consideration payable and certain costs related to the acquisition of Dyax. On January 30, 2017, SAIIDAC made its first repayment installment of $400.0 million of November 2015 Facility B in accordance with the terms of the agreement.

Interest on any loans made under the November 2015 Facilities Agreement is payable on the last day of each interest period, which may be one week or one, two, three or six months, or as otherwise agreed with the lenders. The interest rate applicable is LIBOR plus, in the case of the November 2015 Facility A, 0.55 percent per annum, in the case of the November 2015 Facility B, 0.65 percent per annum and, in the case of the November 2015 Facility C, 0.75 percent per annum, in each case subject to change depending on (i) the prevailing ratio of Net Debt to EBITDA (each as defined in the November 2015 Facilities Agreement) in respect of the most recently completed financial year or financial half year and (ii) the occurrence and continuation of an event of default in respect of the financial covenants or failure to provide a compliance certificate.

The November 2015 Facilities Agreement includes customary representations and warranties, covenants and events of default, including requirements that Shire's (i) ratio of Net Debt to EBITDA in respect of the most recently ended 12-month relevant period, (each as defined in the November 2015 Facilities Agreement), must not, at any time, exceed 3.5:1, except that following an acquisition fulfilling certain criteria, Shire may elect to increase this ratio to (a) 5.5:1 for the relevant period in which the acquisition was completed, (b) 5.0:1 in respect of the first relevant period following the relevant period in which the acquisition was completed, Shire has elected to increase this ratio in connection with the period ended June 30, 2016, following the completion of the acquisition of Baxalta during the period and (c) 4.5:1 in respect of the second relevant period following the relevant period in which the acquisition was completed, Shire has elected to increase this ratio in connection with the period ending June 30, 2016, following the completion of the acquisition of Baxalta during the period and (ii) ratio of EBITDA to Net Interest in respect of the most recently ended 12 month relevant period, (each as defined in the November 2015 Facilities Agreement), must not be less than 4.0:1.

The November 2015 Facilities Agreement restricts, subject to certain exceptions, Shire's ability to incur additional financial indebtedness, grant security over its assets or provide loans/grant credit. Further, any lender may require mandatory prepayment of its participation if there is a change of control of Shire, subject to certain exceptions for schemes of arrangement and analogous schemes.

Events of default under the November 2015 Facilities Agreement include, subject to customary grace periods and materiality thresholds: (i) non-payment of any amounts due under the finance documents (as defined in the November 2015 Facilities Agreement), (ii) failure to satisfy any financial covenants, (iii) material misrepresentation in any of the finance documents, (iv) failure to pay, or certain other defaults, under other financial indebtedness, (v) certain insolvency events or proceedings, (vi) material adverse changes in the business, operations, assets or financial condition of Shire as a whole, (vii) if it becomes unlawful for Shire (or any successor parent company) or any of their respective subsidiaries that are parties to the November 2015 Facilities Agreement to perform their obligations thereunder or (viii) if Shire (or any successor parent company) or any subsidiary thereof which is a party to the November 2015 Facilities Agreement repudiates the November 2015 Facilities Agreement or any other finance document, among others.

January 2015 Facility Agreement
On January 11, 2015, Shire entered into an $850.0 million term facility agreement with various financial institutions (the "January 2015 Facility Agreement") with an original maturity date of January 10, 2016. The maturity date was subsequently extended to July 11, 2016 in line with the provisions within the January 2015 Facility Agreement allowing the maturity date to be extended twice, at Shire's option, by six months on each occasion.

The January 2015 Facility Agreement was used to finance Shire's acquisition of NPS Pharma (including certain related costs). On September 28, 2015, the Company reduced the January 2015 Facility Agreement by $100.0 million. In January 2016 and at various points thereafter, the Company canceled parts of the January 2015 Facilities Agreement. On February 22, 2016, the Company repaid the remaining balance of $100.0 million of the January 2015 Facilities Agreement in full.

Capital lease obligations
As of December 31, 2016, capital lease obligations predominantly related to the obligations assumed as part of the Baxalta acquisition. These leases are primarily related to office and manufacturing facilities. As of December 31, 2016, the total capital lease obligations, including current portions, were $353.6 million.

Short-term uncommitted lines of credit ("Credit lines")
Shire has access to various Credit lines from a number of banks which are available to be utilized from time to time to provide short-term cash management flexibility. These Credit lines can be withdrawn by the banks at any time. The Credit lines are not relied upon for core liquidity. As of December 31, 2016, these Credit lines were not utilized.

19. Retirement and Other Benefit Programs

The Company sponsored various pension and other post-employment benefit ("OPEB") plans in the United States and other countries during 2016. The Company did not report any pension or OPEB obligations as of December 31, 2015.

Reconciliation of Pension and OPEB Plan Obligations and Funded Status

The benefit plan information is for the year ended December 31, 2016.

	U.S. pensions $'M	International pensions $'M	OPEB $'M
Benefit obligations			
Beginning of period	–	–	–
Assumption of benefit obligations from Baxalta	441.6	503.8	23.5
Service cost	13.0	18.6	0.8
Interest cost	11.1	3.2	0.6
Participant contributions	–	3.2	–
Actuarial (gain)/loss	(10.6)	(29.8)	0.1
Benefit payments	(1.6)	(9.1)	–
Settlements	–	(3.2)	–
Curtailments	(73.4)	–	–
Foreign exchange	–	(18.3)	–
Other	4.0	113.0	–
End of Period	384.1	581.4	25.0
Fair value of plan assets			
Beginning of period	–	–	–
Assumption of plan assets from Baxalta	218.0	140.5	–
Actual return on plan assets	8.3	2.0	–
Employer contributions	0.4	12.3	–
Participant contributions	–	3.2	–
Benefit payments	(1.6)	(9.1)	–
Settlements	–	(3.2)	–
Foreign exchange	–	(3.8)	–
Other	3.3	56.0	–
End of period	228.4	197.9	–
Funded status at December 31, 2016	(155.7)	(383.5)	(25.0)
Amounts recognized in the Consolidated Balance Sheets			
Other current liabilities	(0.6)	(8.8)	(0.2)
Other non-current liabilities	(155.1)	(374.7)	(24.8)
Net liability recognized at December 31, 2016	(155.7)	(383.5)	(25.0)

Curtailments represent the adoption of an amendment to the company's U.S. pension plans which eliminates the estimate of future compensation levels beyond the December 31, 2017 effective date.

Other primarily represents the recognition of an additional defined benefit plan in Switzerland.

Accumulated Benefit Obligation Information

The pension obligation represents the projected benefit obligation ("PBO") as of December 31, 2016. The PBO incorporates assumptions relating to future compensation levels. The accumulated benefit obligation ("ABO") is the same as the PBO except that it does not include assumptions relating to future compensation levels. The ABO for all the U.S. pension plans was $373.2 million as of December 31, 2016. The ABO for the International pension plans was $457.9 million as of December 31, 2016.

The funded status figures and ABO disclosed above reflect all of the company's pension plans. The following ABO and plan asset information includes only those individual plans that have an ABO in excess of plan assets as of December 31, 2016.

Year ended December 31	2016 $'M
U.S.	
ABO	**373.2**
Fair value of plan assets	**228.4**
International	
ABO	**437.5**
Fair value of plan assets	**176.2**

Expected Net Pension and OPEB Plan Payments for the Next 10 Years

	U.S. pensions $'M	International pensions $'M	OPEB $'M
2017	3.6	21.1	0.2
2018	5.7	18.6	0.3
2019	7.6	19.9	0.5
2020	9.7	20.1	0.6
2021	11.7	22.7	0.7
2022 through 2026	85.3	124.1	4.6
Total expected benefit payments for next 10 years	123.6	226.5	6.9

The expected net benefit payments reflect the Company's share of the total net benefits expected to be paid from the plans' assets (for funded plans) or from the Company's assets (for unfunded plans) as of December 31, 2016. The federal subsidies relating to the Medicare Prescription Drug, Improvement and Modernization Act are not expected to be significant.

Amounts Recognized in AOCI

The pension and OPEB plans' gains or losses not yet recognized in net periodic benefit cost are recognized on a net of tax basis in AOCI and will be amortized from AOCI to net periodic benefit cost in the future.

The Company had net pre-tax gains included in AOCI as of December 31, 2016 of $14.0 million related to its U.S. pension plans and net pre-tax losses included in AOCI as of December 31, 2016 of $10.3 million and $0.1 million related to its International plans and OPEB plan, respectively. Refer to Note 20, Accumulated Other Comprehensive Loss, for the net of tax balances included in AOCI as of December 31, 2016. The Company does not expect to amortize a significant amount of AOCI to net periodic benefit cost in 2017.

19. Retirement and Other Benefit Programs (continued)

Following is a summary of the net of tax amounts recorded in OCI relating to the pension and OPEB plans during 2016:

	U.S. pensions $'M	International pensions $'M	OPEB $'M
Gain (loss) arising during the year, net of tax expense of $30.9 million for U.S. plans and $3.8 million for international plans	52.5	(14.2)	–
Reclassification of gain to income statement, net of tax benefit of $25.9 million for U.S. plans	(43.5)		–
Pension and other employee benefits gain (loss), net of tax	9.0	(14.2)	–

Gain (loss) arising during the year includes a loss of $34.6 million, net of tax, related to the recognition of a defined benefit plan in Switzerland.

The reclassification of gain to income statement represents the recognition of the curtailment gain associated with the U.S. pension plans as further described above.

Net Periodic Benefit Cost

The net periodic benefit cost is from June 3, 2016, the date the Company assumed the obligations from Baxalta, through December 31, 2016:

	June 3, 2016 through December 31, 2016		
	U.S. pensions $'M	International pensions $'M	OPEB $'M
Net periodic benefit cost			
Service cost	13.0	18.6	0.8
Interest cost	11.1	3.2	0.6
Expected return on plan assets	(8.9)	(3.9)	–
Curtailment and other	(69.4)	20.0	–
Net periodic benefit cost	(54.2)	37.9	1.4

Curtailment and other relates to the recognition of a curtailment gain of $69.4 million associated with the U.S. pension plans as described above and a loss of $20.0 million for the recognition of a defined benefit plan in Switzerland.

Weighted-Average Assumptions Used in Determining Benefit Obligations at the Measurement Date

The following weighted-average assumptions were used in calculating the December 31, 2016 measurement date benefit obligations.

	U.S. pensions %	International pensions %	OPEB %
Discount rate	4.2	1.0	4.3
Rate of compensation increase	3.8	2.9	n/a
Annual rate of increase in the per-capita cost	n/a	n/a	6.3
Rate decreased to	n/a	n/a	5.0
by the year ended	n/a	n/a	2022

Weighted-Average Assumptions Used in Determining Net Periodic Benefit Cost

The following weighted-average assumptions were used in determining net periodic benefit cost for 2016.

	U.S. pensions %	International pensions %	OPEB %
Discount rate	4.1	1.0	4.2
Expected return on plan assets	7.0	4.5	n/a
Rate of compensation increase	3.8	3.2	n/a
Annual rate of increase in the per-capita cost	n/a	n/a	6.5
Rate decreased to	n/a	n/a	5.0
by the year ended	n/a	n/a	2022

The Company establishes the expected return on plan assets assumption based primarily on a review of historical compound average asset returns, both Company-specific and the broad market (and considering the Company's asset allocations), an analysis of current market and economic information and future expectations.

The effect of a one percent change in the assumed healthcare cost trend rate would not have a significant impact on the OPEB plan benefit obligation as of December 31, 2016 or the plan's service and interest cost during 2016.

Pension Plan Assets

A committee of members of senior management is responsible for supervising, monitoring and evaluating the invested assets of the Company's funded pension plans. The committee abides by policies and procedures relating to investment goals, targeted asset allocations, risk management practices, allowable and prohibited investment holdings, diversification, use of derivatives, the relationship between plan assets and benefit obligations, and other relevant factors and considerations. In the United States, Goldman Sachs Asset Management acts as an outsourced chief investment officer ("oCIO") to perform the day-to-day management of pension assets.

The policies and procedures include the following:

- Ability to pay all benefits when due;
- Targeted long-term performance expectations relative to applicable market indices, such as Standard & Poor's, Russell, MSCI EAFE, and other indices;
- Targeted asset allocation percentage ranges (summarized below), and periodic reviews of these allocations;
- Specified investment holding and transaction prohibitions (for example, private placements or other restricted securities, securities that are not traded in a sufficiently active market, short sales, certain derivatives, commodities and margin transactions);
- Specified portfolio percentage limits on holdings in a single corporate or other entity (generally 5 percent, except for holdings in U.S. government or agency securities);
- Specified average credit quality for the fixed-income securities portfolio (at least A- by Standard & Poor's or A3 by Moody's);
- Specified portfolio percentage limits on foreign holdings; and
- Periodic monitoring of oCIO performance and adherence to policies.

Plan assets are invested using a total return investment approach whereby a mix of equity securities, debt securities and other investments are used to preserve asset values, diversify risk and exceed the planned benchmark investment return. Investment strategies and asset allocations are based on consideration of plan liabilities, the plans' funded status and other factors, such as the plans' demographics and liability durations. Investment performance is reviewed on a quarterly basis and asset allocations are reviewed at least annually.

Plan assets are managed in a balanced equity and fixed income portfolio. The target allocations for plan assets are 75 percent in an equity portfolio and 25 percent in a fixed income portfolio. The policy includes an allocation range based on each individual investment type within the major portfolios that allows for a variance from the target allocations of approximately 5 percent. The equity portfolio may include common stock of U.S. and international companies, common/collective trust funds, mutual funds, hedge funds and real asset investments. The fixed income portfolio may include cash, money market funds with an original maturity of three months or less, U.S. and foreign government and governmental agency issues, common/collective trust funds, corporate bonds, municipal securities, derivative contracts and asset-backed securities.

While the committee provides oversight over plan assets for U.S. and international plans, the summary above is specific to the plans in the U.S. The plan assets for international plans are managed and allocated by the entities in each country, with input and oversight provided by the committee.

The following pension assets are recorded at fair value on a recurring basis using quoted prices in active markets for identical assets (Level 1); significant other observable inputs (Level 2); and significant unobservable inputs (Level 3). Investments that are measured at fair value using the net asset value per share or its equivalent as a practical expedient are not classified in the fair value hierarchy.

U.S. pension plan assets

	Balance as of December 31, 2016 $'M	Level 1 $'M	Level 2 $'M	Level 3 $'M
Assets				
Fixed income				
Cash equivalents	**5.7**	–	–	–
Collective trust funds	**46.4**	–	–	–
Mutual fund	**11.4**	–	–	–
Equity				
Collective trust funds	**100.4**	–	–	–
Mutual fund	**53.4**	16.5	–	–
Hedge funds	**11.1**	–	–	–
Fair value of pension plan assets	**228.4**	16.5	–	–

International pension plan assets

	Balance as of December 31, 2016 $'M	Level 1 $'M	Level 2 $'M	Level 3 $'M
Assets				
Fixed income				
Cash and cash equivalents	**6.2**	6.2	–	–
Government agency issues	**0.6**	0.6	–	–
Corporate bonds	**21.1**	21.1	–	–
Mutual funds	**24.4**	24.4	–	–
Equity				
Common stock:				
Large cap	**19.9**	19.9	–	–
Mid cap	**1.6**	1.6	–	–
Total common stock	**21.5**	21.5	–	–
Mutual funds	**40.6**	40.6	–	–
Real estate funds*	**12.1**	8.4	–	–
Other holdings	**71.4**	–	71.4	–
Fair value of pension plan assets	**197.9**	122.8	71.4	–

The assets and liabilities of the Company's pension plans are valued using the following valuation methods:

Investment category	Valuation methodology
Cash and cash equivalents	These largely consist of a short-term investment fund, U.S. Dollars and foreign currency. The fair value of the short-term investment fund is based on the net asset value
Government agency issues	Values are based on quoted prices in an active market
Corporate bonds	Values are based on the valuation date in an active market
Common stock	Values are based on the closing prices on the valuation date in an active market
Mutual funds	Values are based on the net asset value of the units held in the respective fund which are obtained from active markets or as reported by the fund managers
Collective trust funds and hedge funds	Values are based on the net asset value of the units held at year end
Real estate funds	The value of these assets are either determined by the net asset value of the units held in the respective fund which are obtained from active markets or based on the net asset value of the underlying assets of the fund provided by the fund manager
Other holdings	These primarily consist of insurance contracts whose value is based on the underlying assets and other holdings valued primarily based on reputable pricing vendors that typically use pricing matrices or models

19. Retirement and Other Benefit Programs (continued)

Expected Pension and OPEB Plan Funding

The Company's funding policy for its pension plans is to contribute amounts sufficient to meet legal funding requirements, plus any additional amounts that the Company may determine to be appropriate considering the funded status of the plans, tax deductibility, the cash flows generated by the Company, and other factors. Volatility in the global financial markets could have an unfavorable impact on future funding requirements. The Company has no obligation to fund its principal plans in the U.S. in 2017. The Company did not make any significant voluntary contributions to its U.S. Qualified plan from the June 3, 2016 acquisition date through December 31, 2016. During 2017, the Company expects to make cash contributions to its pension plans of at least $11.0 million, primarily related to its international plans, and expects to have net cash outflows relating to its OPEB plan of less than $1.0 million. The Company continually reassesses the amount and timing of any discretionary contributions, which could be significant in any period.

The table below details the funded status percentage of the Company's pension plans as of December 31, 2016, including certain plans that are unfunded in accordance with the guidelines of the Company's funding policy outlined above.

	United States		International		
	Qualified plan $'M	Non-qualified plan $'M	Funded plans $'M	Unfunded plans $'M	Total $'M
Fair value of plan assets	228.4	n/a	197.9	n/a	426.3
PBO	352.8	31.3	413.7	167.7	965.5
Funded status percentage	65%	n/a	48%	n/a	44%

U.S. Defined Contribution Plans

In addition to benefits provided under the pension and OPEB plans described above, the Company provides benefits under defined contribution plans. The Company's most significant defined contribution plans are in the United States. The Company recognized expenses related to U.S. defined contribution plans of $68.1 million, $38.9 million and $34.3 million during 2016, 2015 and 2014, respectively.

20. Accumulated Other Comprehensive Loss

The changes in Accumulated other comprehensive loss ("AOCL"), net of their related tax effects, in the years ended December 31, 2016 are shown below:

	Foreign currency translation adjustment $'M	Pension and other employee benefits $'M	Unrealized holding gain/(loss) on available-for-sale securities $'M	Hedging activities $'M	Accumulated other comprehensive loss $'M
As of January 1, 2016	(182.1)	–	(1.7)	–	(183.8)
Current period change:					
Other comprehensive (loss)/income before reclassification	(1,323.3)	38.3	8.3	9.9	(1,266.8)
Amounts reclassified from AOCL	–	(43.5)	–	(3.5)	(47.0)
Net current period other comprehensive (loss)/income	(1,323.3)	(5.2)	8.3	6.4	(1,313.8)
As of December 31, 2016	(1,505.4)	(5.2)	6.6	6.4	(1,497.6)

The following is a summary of the amounts reclassified from AOCL to net income during the fiscal year ended December 31, 2016:

	Amounts reclassified from AOCL	
	2016 $'M	Location of impact in Statements of Operations
Pension and employee benefits		
Curtailment gain	**69.4**	Integration and acquisition costs
	69.4	Total before tax
	(25.9)	Tax expense
	43.5	Net of tax
Losses on hedging activities		
Foreign exchange contracts	**4.9**	Cost of sales
	4.9	Total before tax
	(1.4)	Tax expense
	3.5	Net of tax
Total reclassifications for the period	**47.0**	Total net of tax

The changes in Accumulated other comprehensive loss, net of their related tax effects, in the year ended December 31, 2015 are shown below:

	Foreign currency translation adjustment $'M	Pension and other employee benefits $'M	Unrealized holding gain/(loss) on available-for-sale securities $'M	Hedging activities $'M	Accumulated other comprehensive loss $'M
As of January 1, 2015	(25.7)	–	(5.8)	–	(31.5)
Current period change:					
Net current period other comprehensive (loss)/income	(156.4)	–	4.1	–	(152.3)
As of December 31, 2015	(182.1)	–	(1.7)	–	(183.8)

The amounts reclassified out of Accumulated other comprehensive loss and into the Statements of Operations for the fiscal year ended December 31, 2015 were immaterial.

21. Earnings Per Share

The following table reconciles net income and the weighted average Ordinary Shares outstanding for basic and diluted earnings per share for the periods presented:

Years ended December 31	**2016 $'M**	2015 $'M	2014 $'M
Income from continuing operations, net of taxes	**603.5**	1,337.5	3,282.8
(Loss)/gain from discontinued operations	**(276.1)**	(34.1)	122.7
Numerator for basic and diluted earnings per share	**327.4**	1,303.4	3,405.5
Weighted average number of shares:			
Basic	**770.1**	590.4	586.7
Effect of dilutive shares:			
Share-based awards to employees	**6.1**	2.7	4.6
Diluted	**776.2**	593.1	591.3
Earnings per Ordinary Share — basic			
Earnings from continuing operations	**0.78**	2.27	5.60
(Loss)/gain from discontinued operations	**(0.35)**	(0.06)	0.21
Earnings per Ordinary Share — basic	**0.43**	2.21	5.81
Earnings per Ordinary Share — diluted			
Earnings from continuing operations	**0.77**	2.26	5.55
(Loss)/gain from discontinued operations	**(0.35)**	(0.06)	0.21
Earnings per Ordinary Share — diluted	**0.42**	2.20	5.76

21. Earnings Per Share (continued)

Weighted average number of basic shares excludes shares purchased by the Employee Benefit Trust and those under the shares buy-back program, which are both presented by Shire as treasury stock. Share-based awards to employees are calculated using the treasury method.

The share equivalents not included in the calculation of the diluted weighted average number of shares are shown below:

Years ended December 31	2016 No. of shares M's	2015 No. of shares M's	2014 No. of shares M's
Share-based awards to employees	4.1	3.4	0.3

Certain stock options have been excluded from the calculation of diluted EPS because (a) their exercise prices exceeded Shire's average share price during the calculation period or (b) the required performance conditions were not satisfied as of the balance sheet date.

22. Taxation

The components of pre-tax income from continuing operations are as follows:

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Ireland	214.3	(11.4)	1,472.0
United States	(75.3)	975.8	1,025.9
Rest of the world	347.1	421.4	838.3
	486.1	1,385.8	3,336.2

The provision for income taxes on continuing operations by location of the taxing jurisdiction for the years ended December 31, 2016, 2015 and 2014 consisted of the following:

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Current income taxes:			
Ireland	5.2	0.8	–
U.S. federal tax	318.6	191.7	291.8
U.S. state and local taxes	30.2	17.3	25.3
Rest of the world	68.9	17.8	(290.9)
Total current taxes	422.9	227.6	26.2
Deferred taxes:			
Ireland	18.2	(38.8)	–
U.S. federal tax	(433.8)	(151.2)	39.7
U.S. state and local taxes	(74.1)	(1.7)	(2.9)
Rest of the world	(59.3)	10.2	(6.9)
Total deferred taxes	(549.0)	(181.5)	29.9
Total income taxes	(126.1)	46.1	56.1

The Company determines the amount of income tax expense or benefit allocable to continuing operations using the incremental approach. The amount of income tax attributed to discontinued operations is disclosed in Note 8, Results of Discontinued Operations.

The operating results associated with the DERMAGRAFT business have been classified as discontinued operations for all periods presented.

The reconciliation of income from continuing operations before income taxes and equity in earnings/(losses) of equity method investees at the statutory tax rate to the provision for income taxes is shown in the table below:

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Income from continuing operations before income taxes and equity in (losses)/ earnings of equity method investees (in millions)	486.1	1,385.8	3,336.2
	%	%	%
Statutory tax rate[1]	25.0	25.0	25.0
U.S. R&D credit	(25.9)	(7.7)	(2.5)
Intra-group items[2]	(44.4)	(18.6)	(6.3)
Other permanent items	4.5	1.1	(0.2)
U.S. Domestic Manufacturing Deduction	(4.0)	(1.6)	(0.5)
Acquisition related Costs	8.5	1.1	0.7
Irish Treasury Operations	(8.6)	0.6	0.7
Change in valuation allowance	7.9	1.0	0.8
Difference in taxation rates[3]	13.0	7.3	3.4
Change in provisions for uncertain tax positions	(1.5)	(0.4)	0.2
Prior year adjustment	1.0	(1.6)	0.1
Change in fair value of contingent consideration	3.7	(3.8)	0.3
Change in tax rates	(5.1)	0.9	0.5
Receipt of break fee	–	–	(12.3)
Settlement with Canadian revenue authorities	–	–	(7.0)
Other	–	–	(1.2)
Provision for income taxes on continuing operations	(25.9)	3.3	1.7

[1] In addition to being subject to the Irish corporation tax rate of 25 percent in 2016, the Company is also subject to income tax in other territories in which the Company operates, including: Canada (15 percent); France (33.3 percent); Germany (15 percent); Italy (27.5 percent); Japan (23.9 percent); Luxembourg (21.0 percent); the Netherlands (25 percent); Belgium (33.99 percent); Singapore (17 percent); Spain (28 percent); Sweden (22 percent); Switzerland (8.5 percent); United Kingdom (20 percent) and the U.S. (35 percent). The rates quoted represent the statutory federal income tax rates in each territory, and do not include any state taxes or equivalents or surtaxes or other taxes charged in individual territories, and do not purport to represent the effective tax rate for the Company in each territory.

[2] Intra-group items principally relate to the effect of intra-territory eliminations, the pre-tax effect of which has been eliminated in arriving at the Company's consolidated income from continuing operations before income taxes, noncontrolling interests and equity in earnings/(losses) of equity method investees. The Company's intra-group items primarily arise from its acquisition of third parties that result in income and expense being received and taxed in different jurisdictions at various tax rates.

[3] The expense from the difference in taxation rates reflects the impact of the higher income tax rates in the United States offset by the impact of lower foreign jurisdiction income tax rates.

As detailed in the income tax rate reconciliation above, the Company's effective tax rate differs from the Irish statutory rate each year due to foreign taxes that are different than the Irish statutory rate and certain operations that are subject to tax incentives. In addition, the effective tax rate can be impacted each period by certain discrete factors and events, which, in 2016,

included items related to the Baxalta acquisition, primarily the reversal of deferred tax liabilities (including in higher tax territories) for inventory and intangible asset amortization, as well as acquisition and integration costs. These same items are also causing the significant reduction in the U.S. pre-tax book income that is evident in the components of pre-tax income table above.

Provisions for uncertain tax positions

The Company files income tax returns in the Republic of Ireland, the U.S. (both federal and state) and various other jurisdictions (see footnote 1 to the table above for major jurisdictions). With few exceptions, the Company is no longer subject to income tax examinations by tax authorities for years before 2012, although the Company is contesting certain matters pertaining to 2011 and 2012. Tax authorities in various jurisdictions are in the process of auditing the Company's tax returns for fiscal periods primarily after 2011, with the earliest being 2007; these tax audits cover primarily transfer pricing, but may include other areas.

In respect of the receipt of the break fee from AbbVie in 2014, the Company has obtained advice that the break fee should not be taxable in Ireland. The Company has therefore concluded that no tax liability should arise and did not recognize a tax charge in the income statement in 2014. The relevant tax return was submitted on September 23, 2015.

While tax audits remain open, the Company also considers it reasonably possible that issues may be raised by tax authorities resulting in increases to the balance of unrecognized tax benefits, however, an estimate of such an increase cannot be made.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

Years ended December 31	**2016 $'M**	2015 $'M	2014 $'M
Balance as of January 1	**216.3**	207.8	355.2
Increases based on tax positions related to the current year	**34.3**	27.0	20.3
Decreases based on tax positions taken in the current year	**–**	–	–
Increases for tax positions taken in prior years	**0.5**	3.9	64.2
Decreases for tax positions taken in prior years	**(17.8)**	(30.6)	(211.0)
Acquisition related items	**29.5**	17.9	–
Decreases resulting from settlements with the taxing authorities	**(24.4)**	(1.2)	(9.4)
Decreases as a result of expiration of the statute of limitations	**(2.4)**	(4.4)	(0.6)
Foreign currency translation adjustments[1]	**0.3**	(4.1)	(10.9)
Balance as of December 31[2]	**236.3**	216.3	207.8

[1] Foreign currency translation adjustments are recognized within Other Comprehensive Income.
[2] As of December 31, 2016, approximately $227 million (2015: $207 million, 2014: $181 million) of which would affect the effective rate if recognized.

The Company considers it reasonably possible that certain audits currently being conducted could be concluded in the next 12 months, and as a result the total amount of unrecognized tax benefits recorded as of December 31, 2016 could decrease by up to approximately $50.0 million. As of the balance sheet date, the Company believes that its reserves for uncertain tax positions are adequate to cover the resolution of these audits. However, the resolution of these audits could have a significant impact on the financial statements if the settlement differs from the amount reserved.

The Company recognizes interest and penalties accrued related to unrecognized tax positions within income taxes. During the years ended December 31, 2016, 2015 and 2014, the Company recognized a charge/(credit) to income taxes of $4.2 million, $0.8 million and $(103.1) million in interest and penalties and the Company had a liability of $30.8 million, $26.5 million and $25.8 million for the payment of interest and penalties accrued as of December 31, 2016, 2015 and 2014, respectively.

As part of Baxalta's separation from Baxter, a tax sharing agreement was entered into, effective on the date of separation, which employs a tracing approach to determine which company is liable for certain pre-separation income tax items. If a liability arises and is attributable to the former Baxalta business, the liability would be allocated to Baxalta. If the liability arises and is attributable to Baxter's Medical Device, Renal or Biosurgery businesses, it would be allocated to Baxter. The table above only reflects pre-acquisition liabilities for Baxalta for which it was the primary obligor.

Deferred taxes

The significant components of deferred tax assets and liabilities and their balance sheet classifications, as of December 31, are as follows:

Years ended December 31	**2016 $'M**	2015 $'M
Deferred tax assets:		
Deferred revenue	**16.8**	2.4
Inventory & warranty provisions	**88.7**	36.1
Losses carried forward (including tax credits)[1]	**1,907.3**	980.3
Provisions for sales deductions and doubtful accounts	**191.6**	178.0
Intangible assets	**79.7**	5.9
Share-based compensation	**137.5**	40.6
Excess of tax value over book value of assets	**14.2**	0.6
Accruals and provisions	**448.6**	130.4
Other	**78.5**	19.3
Gross deferred tax assets	**2,962.9**	1,393.6
Less: valuation allowance	**(569.4)**	(416.1)
	2,393.5	977.5
Deferred tax liabilities:		
Intangible assets	**(9,073.4)**	(2,850.6)
Excess of book value over tax value in inventory	**(150.3)**	(10.3)
Excess of book value over tax value of assets and investments	**(1,304.2)**	(153.9)
Other	**(91.6)**	(47.6)
Net deferred tax liabilities	**(8,226.0)**	(2,084.9)
Balance sheet classifications:		
Deferred tax assets — non-current	**96.7**	121.0
Deferred tax liabilities — non-current	**(8,322.7)**	(2,205.9)
	(8,226.0)	(2,084.9)

[1] Losses carried forward excludes $38.9 million of deferred tax assets as of December 31, 2016 (2015: $30.4 million), related to net operating losses that result from excess stock-based compensation and for which any benefit realized will be recorded to stockholders' equity.

22. Taxation (continued)

As of December 31, 2016, the Company had a valuation allowance of $569.4 million (2015: $416.1 million) to reduce its deferred tax assets to estimated realizable value. These valuation allowances related primarily to operating losses, capital losses and tax-credit carry-forwards in Switzerland (2016: $176.8 million; 2015: $131.5 million); U.S. (2016: $155.1 million; 2015: $125.9 million); Ireland (2016: $22.4 million; 2015: $22.2 million); and other foreign tax jurisdictions (2016: $215.1 million; 2015: $136.5 million).

Management is required to exercise judgment in determining whether deferred tax assets will more likely than not be realized. A valuation allowance is established where there is an expectation that on the balance of probabilities management considers it is more likely than not that the relevant deferred tax assets will not be realized. In assessing the need for a valuation allowance, management weighs all available positive and negative evidence including cumulative losses in recent years, projections of future taxable income, carry forward and carry back potential under relevant tax law, expiration period of tax attributes, taxable temporary differences, and prudent and feasible tax-planning strategies.

The net increase in valuation allowances of $153.3 million includes (i) increases of $166.4 million relating to operating losses in various jurisdictions for which management considers that there is insufficient positive evidence related to the factors described above to overcome negative evidence, such as cumulative losses and expiration periods and therefore it is more likely than not that the relevant deferred tax assets will not be realized in full, and (ii) decreases of $13.1 million primarily related to U.S. state tax losses, which based on the assessment of factors described above, now provides sufficient positive evidence to support the losses are more likely than not to be realized.

As of December 31, 2016, based upon a consideration of the factors described above, management believes it is more likely than not that the Company will realize the benefits of these deductible differences, net of the valuation allowances. However, the amount of the deferred tax asset considered realizable could be adjusted in the future if these factors are revised in future periods.

The approximate tax effect of NOLs, capital losses and tax credit carry-forwards as of December 31, are as follows:

Years ended December 31	2016 $'M	2015 $'M
U.S. federal tax	**687.1**	149.3
U.S. state tax	**170.7**	77.2
Republic of Ireland	**45.1**	61.2
Foreign tax jurisdictions	**614.9**	434.9
R&D and other tax credits	**389.5**	257.7
	1,907.3	980.3

The approximate gross value of net operating losses ("NOLs") and capital losses at December 31, 2016 is $10,843.1 million (2015: $5,562.3 million). The tax effected NOLs, capital losses and tax credit carry-forwards shown above have the following expiration dates:

Year ended December 31	2016 $'M
Within 1 year	**0.3**
Within 1 to 2 years	**2.6**
Within 2 to 3 years	**45.5**
Within 3 to 4 years	**12.8**
Within 4 to 5 years	**52.6**
Within 5 to 6 years	**55.3**
After 6 years	**1,269.6**
Indefinitely	**468.6**

The Company does not provide for deferred taxes on the excess of the financial reporting over the tax basis of investments in foreign subsidiaries that are essentially permanent in duration. As of December 31, 2016, that excess totaled $16.6 billion (2015: $11.3 billion). As part of the acquisition of Baxalta, the Company determined that $1.5 billion of Baxalta's pre-acquisition earnings incurred outside of the U.S. are not permanently reinvested and has recorded an associated deferred tax liability of $503.0 million on these earnings as part of the business combination accounting for the acquisition. The determination of additional deferred taxes on the Company's permanently reinvested earnings that have not been provided is not practicable.

23. Segment Reporting

Shire comprises a single operating and reportable segment engaged in the research, development, licensing, manufacturing, marketing, distribution and sale of innovative specialist medicines to meet significant unmet patient needs. This is consistent with how the financial information is viewed for the purposes of evaluating performance, allocating resources, and planning and forecasting future periods and how the operations are managed by the Executive Committee (Shire's chief operating decision-maker).

This segment is supported by several key functions: a Pipeline Committee, an In-line Committee, a Technical Operations group and a Corporate group. The Pipeline Committee consists of R&D and Corporate Development and is responsible for prioritizing the activities towards progressing and acquiring development programs across a variety of therapeutic areas. The Technical Operations group is responsible for the Company's global supply chain. The In-line Committee focuses on commercializing marketed products and support of the development of the Company's pipeline candidates. The business is also supported by a simplified, centralized corporate function group. None of these functional groups meets all of the criteria to be considered an individual operating segment.

Geographic information

Revenues (based on the geographic location from which the sale originated):

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Ireland	**41.6**	14.1	18.5
United States	**7,666.9**	4,659.2	4,174.1
Rest of the world	**3,688.1**	1,743.4	1,829.5
Total revenues	**11,396.6**	6,416.7	6,022.1

Long-lived assets comprise all non-current assets, (excluding goodwill and intangible assets, deferred contingent consideration assets, deferred tax assets, investments and financial instruments) based on their relevant geographic location:

Years ended December 31	2016 $'M	2015 $'M
Ireland	**41.2**	1.7
United States	**6,449.4**	751.3
Rest of the world	**84.0**	82.2
Total	**6,574.6**	835.2

Material customers

In the periods set out below, certain customers accounted for greater than 10 percent of the Company's Product sales:

Years ended December 31	2016 $'M	2016 % Product sales	2015 $'M	2015 % Product sales	2014 $'M	2014 % Product sales
AmerisourceBergen Corp	**1,695.3**	16	1,048.3	17	759.2	13
McKesson Corp.	**1,336.7**	12	1,044.1	17	1,021.0	18
Cardinal Health Inc.	**1,052.2**	10	796.9	13	979.9	17

Amounts outstanding in respect of these material customers were as follows:

Years ended December 31	2016 $'M	2015 $'M
AmerisourceBergen Corp	**427.2**	171.5
McKesson Corp.	**312.9**	193.1
Cardinal Health Inc.	**278.4**	181.7

In the periods set out below, revenues by major product were as follows:

Years ended December 31	2016 $'M	2015 $'M	2014 $'M
Product sales:			
HEMOPHILIA	**1,789.0**	–	–
INHIBITOR THERAPIES	**451.8**	–	–
Hematology total	**2,240.8**	–	–
CINRYZE	**680.2**	617.7	503.0
ELAPRASE	**589.0**	552.6	592.8
FIRAZYR	**578.5**	445.0	364.2
REPLAGAL	**452.4**	441.2	500.4
VPRIV	**345.7**	342.4	366.7
KALBITOR	**52.2**	–	–
Genetic Diseases total	**2,698.0**	2,398.9	2,327.1
VYVANSE	**2,013.9**	1,722.2	1,449.0
ADDERALL XR	**363.8**	362.8	383.2
Other Neuroscience	**112.8**	115.4	372.3
Neuroscience total	**2,490.5**	2,200.4	2,204.5
IMMUNOGLOBULIN THERAPIES	**1,143.9**	–	–
BIO THERAPEUTICS	**372.2**	–	–
Immunology total	**1,516.1**	–	–
LIALDA/MEZAVANT	**792.1**	684.4	633.8
PENTASA	**309.4**	305.8	289.7
GATTEX/REVESTIVE	**219.4**	141.7	–
NATPARA	**85.3**	24.4	–
Other Internal Medicine	**349.3**	344.3	375.3
Internal Medicine total	**1,755.5**	1,500.6	1,298.8
Oncology total	**130.5**	–	–
Ophthalmology Total	**54.4**	–	–
Total Product sales	**10,885.8**	6,099.9	5,830.4

24. Receipt of Break Fee

On July 18, 2014, the Boards of AbbVie and Shire announced that they had agreed the terms of a recommended combination of Shire with AbbVie, subject to a number of conditions including approval by shareholders and regulators. On the same date, Shire and AbbVie entered into a co-operation agreement in connection with the recommended combination. On October 16, 2014, the Board of AbbVie confirmed that it had withdrawn its recommendation of its offer for Shire as a result of the anticipated impact of a U.S. Treasury Notice on the benefits that AbbVie expected from its offer. As AbbVie's offer was conditional on the approval of its stockholders, and given their Board's decision to change its recommendation and to advise AbbVie's stockholders to vote against the offer, there was no realistic prospect of satisfying this condition. Accordingly, Shire's Board agreed with AbbVie to terminate the cooperation agreement on October 20, 2014. The Company entered into a termination agreement with AbbVie, pursuant to which AbbVie paid the break fee due under the cooperation agreement of approximately $1,635.4 million. The Company has obtained advice that the break fee should not be taxable in Ireland. The Company has therefore concluded that no tax liability should arise and has not recognized a tax charge in the income statement in 2014. The relevant tax return was submitted on September 23, 2015.

25. Commitments and Contingencies

Leases

Future minimum lease payments under operating leases as of December 31, 2016 are presented below:

	Operating leases $'M
2017	155.5
2018	117.2
2019	98.7
2020	89.2
2021	82.7
Thereafter	441.9
	985.2

The Company leases land, facilities, motor vehicles and certain equipment under operating leases expiring through 2032. Lease and rental expense amounted to $100.8 million, $40.7 million and $32.9 million for the year ended December 31, 2016, 2015 and 2014, respectively, which is predominately included in SG&A expenses in the Company's Consolidated Statement of Operations.

Letters of credit and guarantees

As of December 31, 2016 and 2015, the Company had irrevocable standby letters of credit and guarantees with various banks and insurance companies totaling $139.7 million and $48.0 million (being the contractual amounts), respectively, providing security for the Company's performance of various obligations. These obligations are primarily in respect of the recoverability of insurance claims, lease obligations and supply commitments.

Commitments

(i) Clinical testing

As of December 31, 2016, the Company had committed to pay approximately $1,037.4 million (December 31, 2015: $490.0 million) to contract vendors for administering and executing clinical trials. The timing of these payments is dependent upon actual services performed by the organizations as determined by patient enrollment levels and related activities.

(ii) Contract manufacturing

As of December 31, 2016, the Company had committed to pay approximately $528.9 million (December 31, 2015: $325.0 million) in respect of contract manufacturing. The Company expects to pay $220.4 million of these commitments in 2017.

(iii) Other purchasing commitments

As of December 31, 2016, the Company had committed to pay approximately $1,745.4 million (December 31, 2015: $485.0 million) for future purchases of goods and services, predominantly relating to active pharmaceutical ingredients sourcing. The Company expects to pay $436.6 million of these commitments in 2017.

(iv) Investment commitments

As of December 31, 2016, the Company had outstanding commitments to subscribe for interests in companies and partnerships for amounts totaling $76.4 million (December 31, 2015: $22.0 million) which may all be payable in 2017, depending on the timing of capital calls. The investment commitments include additional funding to certain VIEs of which Shire is not the primary beneficiary.

(v) Capital commitments

As of December 31, 2016, the Company had committed to spend $100.5 million (December 31, 2015: $60.0 million) on capital projects.

26. Legal and Other Proceedings

The Company expenses legal costs when incurred.

The Company recognizes loss contingency provisions for probable losses when management is able to reasonably estimate the loss. When the estimated loss lies within a range, the Company records a loss contingency provision based on its best estimate of the probable loss. If no particular amount within that range is a better estimate than any other amount, the minimum amount is recorded. Estimates of losses may be developed before the ultimate loss is known, and are therefore refined each accounting period as additional information becomes known. An outcome that deviates from the Company's estimate may result in an additional expense or release in a future accounting period. As of December 31, 2016, provision for litigation losses, insurance claims and other disputes totaled $415.0 million (December 31, 2015: $9.9 million).

The Company's principal pending legal and other proceedings are disclosed below. The outcomes of these proceedings are not always predictable and can be affected by various factors. For those legal and other proceedings for which it is considered at least reasonably possible that a loss has been incurred, the Company discloses the possible loss or range of possible loss in excess of the recorded loss contingency provision, if any, where such excess is both material and estimable.

VYVANSE

In May and June 2011, Shire was notified that six separate Abbreviated New Drug Applications ("ANDAs") were submitted under the Hatch-Waxman Act seeking permission to market generic versions of all approved strengths of VYVANSE. The notices were from Sandoz, Inc. ("Sandoz"); Amneal Pharmaceuticals LLC ("Amneal"); Watson Laboratories, Inc.; Roxane Laboratories, Inc. ("Roxane"); Mylan Pharmaceuticals, Inc. ("Mylan"); and Actavis Elizabeth LLC and Actavis Inc. (collectively, "Actavis"). Since filing suit against these ANDA filers, along with API suppliers Johnson Matthey Inc. and Johnson Matthey

Pharmaceuticals Materials (collectively, "Johnson Matthey"), Shire has been engaged in a consolidated patent infringement litigation in the U.S. District Court for the District of New Jersey against the aforementioned parties (except Watson, who withdrew their ANDA).

On June 23, 2014, the U.S. District Court for the District of New Jersey granted Shire's summary judgment motion holding that 18 claims of the patents-in-suit were both infringed and valid. On September 24, 2015, the U.S. Court of Appeals of the Federal Circuit ("CAFC") affirmed that ruling against all of the ANDA filers and remanded the case to the trial court for further proceedings. The CAFC ruling overturned the infringement ruling against Johnson Matthey and the case against Johnson Matthey has been dismissed. Following remand to the U.S. District Court for the District of New Jersey, the case has been fully resolved as a result of the Stipulation of Dismissal and Final Judgment entered by the court on August 30, 2016 in which the court imposed an injunction preventing all of the ANDA filers (Sandoz, Roxane, Amneal, Actavis and Mylan) from launching generic versions of VYVANSE until the expiration of these patents in 2023.

In March, April and May 2016, Shire received Notices of Allegation ("NOA") from Apotex Inc. ("Apotex") informing Shire that Apotex filed an Abbreviated New Drug Submission ("ANDS") with Health Canada seeking approval to market a generic version of VYVANSE in Canada. Within the requisite 45 days, Shire filed for orders of prohibition and, as a result, a 24-month stay of approval of the ANDS has been put into effect. Apotex has withdrawn the first two NOAs. On July 4, 2016, Apotex filed a Statement of Claim in Federal Court seeking a judicial declaration of invalidity and noninfringement of Shire's Canadian patent relating to VYVANSE which Shire is actively defending.

On April 14, 2016, Shire prevailed in upholding its European patent for ELVANSE. Shire initially prevailed in an opposition to its patent lodged by Johnson Matthey plc, Generics UK Limited (trading as Mylan) and Hexal AG and on April 14, 2016 Shire prevailed in the appeal. The decision by the appeals board of the European Patent Office is final and cannot be further appealed.

LIALDA

In May 2010, Shire was notified that Zydus Pharmaceuticals U.S.A., Inc. ("Zydus") had submitted an ANDA under the Hatch-Waxman Act seeking permission to market a generic version of LIALDA. Within the requisite 45-day period, Shire filed a lawsuit in the U.S. District Court for the District of Delaware against Zydus and Cadila Healthcare Limited, doing business as Zydus Cadila. A Markman hearing took place on January 29, 2015 and a Markman ruling was issued on July 28, 2015. A trial took place between March 28, 2016 and April 1, 2016. On September 16, 2016, the court issued its ruling finding that the proposed generic product would not infringe the asserted claims. Shire has appealed the ruling to the CAFC.

In February 2012, Shire was notified that Osmotica Pharmaceutical Corporation ("Osmotica") had submitted an ANDA under the Hatch-Waxman Act seeking permission to market a generic version of LIALDA. Within the requisite 45-day period, Shire filed a lawsuit in the U.S. District Court for the Northern District of Georgia against Osmotica. A Markman hearing took place on August 22, 2013 and a Markman ruling was issued on September 25, 2014. The court issued an Order on February 27, 2015 in which all dates in the scheduling order have been stayed.

In March 2012, Shire was notified that Watson Laboratories Inc.-Florida had submitted an ANDA under the Hatch-Waxman Act seeking permission to market a generic version of LIALDA. Within the requisite 45-day period, Shire filed a lawsuit in the U.S. District Court for the Southern District of Florida against Watson Laboratories Inc.-Florida and Watson Pharmaceuticals, Inc., Watson Pharma, Inc. and Watson Laboratories, Inc. (collectively, "Watson") were subsequently added as defendants. A trial took place in April 2013 and on May 9, 2013 the trial court issued a decision finding that the proposed generic product infringes the patent-in-suit and that the patent is not invalid. Watson appealed the trial court's ruling to the CAFC and a hearing took place on December 2, 2013. The ruling of the CAFC was issued on March 28, 2014 overruling the trial court on the interpretation of two claim terms and remanding the case for further proceedings. Shire petitioned the Supreme Court for a writ of certiorari which was granted on January 26, 2015. The Supreme Court also vacated the CAFC decision and remanded the case to the CAFC for further consideration in light of the Supreme Court's recent decision in Teva v. Sandoz. On June 3, 2015, the CAFC reaffirmed their previous decision to reverse the District Court's claims construction and remanded the case to the U.S. District Court for the Southern District of Florida. A trial was held on January 25-27, 2016. A ruling was issued on March 28, 2016 upholding the validity of the patent and finding that Watson's proposed ANDA product infringes the patent-in-suit. Watson appealed the ruling to the CAFC and oral argument took place on October 5, 2016. The CAFC issued a ruling on February 10, 2017 reversing the trial court's ruling of infringement and remanding the case to the lower court for entry of a ruling of non-infringement.

In April 2012, Shire was notified that Mylan had submitted an ANDA under the Hatch-Waxman Act seeking permission to market a generic version of LIALDA. Within the requisite 45 day period, Shire filed a lawsuit in the U.S. District Court for the Middle District of Florida against Mylan. A Markman hearing took place on December 22, 2014. A Markman ruling was issued on March 23, 2015. Following a four-day bench trial in September 2016 in the U.S. District Court for the Middle District of Florida, the court handed down a ruling that Mylan's proposed generic version of LIALDA infringes claims 1 and 3 of the Orange Book listed patent for LIALDA. In connection with this finding of infringement, the court also entered an injunction prohibiting Mylan from making, using, selling, offering for sale and/or importing their proposed ANDA product before the expiration of the patent (June 8, 2020) and requiring that the approval date for their ANDA be on or after the expiration of the patent.

In March 2015, Shire was notified that Amneal had submitted an ANDA under the Hatch-Waxman Act seeking permission to market a generic version of LIALDA. Within the requisite 45 day period, Shire filed a lawsuit in the U.S. District Court for the District of New Jersey against Amneal, Amneal Pharmaceuticals of New York, LLC and Amneal Pharmaceuticals Co. India Pvt. Ltd. A Markman hearing took place on July 25, 2016. A Markman ruling was issued on August 2, 2016. No trial date has been set.

In September 2015, Shire was notified that Lupin Ltd. had submitted an ANDA under the Hatch-Waxman Act seeking permission to market a generic version of LIALDA. Within the requisite 45 day period, Shire filed a lawsuit in the U.S. District Court for the District of Maryland against Lupin Ltd., Lupin Pharmaceuticals Inc., Lupin Inc. and Lupin Atlantis Holdings SA. A Markman hearing originally scheduled to take place on November 10, 2016, was canceled and has not yet been rescheduled. No trial date has been set.

26. Legal and Other Proceedings (continued)

On October 7, 2015 the Patent Trial and Appeals Board ("PTAB") of the United States Patent Office instituted an inter partes review ("IPR") of U.S. Patent 6,773,720 which is the patent-in-suit in the litigations referred to above. The IPR process is designed to re-assess the patentability of the claims of the patent. A decision from the PTAB was issued on October 5, 2016 upholding the validity of the patent in view of the challenges put forward in the IPR.

DERMAGRAFT

The Department of Justice, including the U.S. Attorney's Office for the Middle District of Florida, Tampa Division and the U.S. Attorney's Office for Washington, DC, is conducting civil and criminal investigations into the sales and marketing practices of Advanced BioHealing Inc. ("ABH") relating to DERMAGRAFT, which Shire acquired in June 2011. Following the disposal of the DERMAGRAFT business in January 2014, Shire retained certain legacy liabilities including any liability that may arise from this investigation.

Over the several years, Shire has been cooperating fully with these investigations and engaged in discussions with the Department of Justice about a resolution. In August 2016, Shire announced that it reached an agreement with the Department of Justice on a proposal for a civil settlement in the amount of $350.0 million plus interest. Shire established a reserve for the expected settlement, $340.0 million in the second quarter of 2016 and an additional $10.0 million in the third quarter of 2016.

Shire entered into a final settlement agreement with the Department of Justice, announced in January 2017, in the amount of $350.0 million, plus interest. Shire paid $345.5 million of the settlement amount in January 2017 and anticipates the remaining payment will be made in the second quarter of 2017. The agreement resolves the civil investigations conducted by the Department of Justice, including multiple U.S. Attorney's Offices and relevant federal and state agencies.

The agreement also resolves the federal government's claims under the federal False Claims Act and the DERMAGRAFT Medicaid-related claims for states that opt into the settlement. Some states with DERMAGRAFT Medicaid-related claims might elect to opt out of the final settlement and those states' claims would remain unresolved.

Under the terms of Shire's merger agreement with ABH, $37.5 million was held in escrow at the close of the transaction as an indemnity against potential breaches of representations and warranties on the part of ABH. After the civil settlement with the DOJ had been finalized, in January 2017, Shire made a formal demand upon ABH's former equityholders to return the entire amount held in escrow to Shire. In February 2017, Shire and ABH's equityholders entered into a settlement agreement, pursuant to which ABH's equityholders agreed to release the full $37.5 million escrow to Shire and Shire will release the claims against ABH equityholders upon receipt of the entire amount held in escrow.

VANCOCIN

On April 6, 2012, ViroPharma Incorporated ("ViroPharma") received a notification that the United States Federal Trade Commission ("FTC") was conducting an investigation into whether ViroPharma had engaged in unfair methods of competition with respect to VANCOCIN which Shire acquired in January 2014. Following the divestiture of VANCOCIN in August 2014, Shire retained certain liabilities including any potential liabilities related to the VANCOCIN citizen petition.

On August 3, 2012, and September 8, 2014, ViroPharma and Shire respectively received Civil Investigative Demands from the FTC requesting additional information related to this matter. Shire fully cooperated with the FTC's investigation.

On February 7, 2017, the FTC filed a Complaint against Shire alleging that ViroPharma engaged in conduct in violation of U.S. antitrust laws arising from a citizen petition ViroPharma filed in 2006 related to Food & Drug Administration's policy for evaluating bioequivalence for generic versions of VANCOCIN. The complaint seeks equitable relief, including an injunction and disgorgement.

At this time, Shire is unable to predict the outcome or duration of this case.

ELAPRASE

On September 24, 2014, Shire's Brazilian affiliate, Shire Farmaceutica Brasil Ltda, was served with a lawsuit brought by the State of Sao Paulo and in which the Brazilian Public Attorney's office has intervened alleging that Shire is obligated to provide certain medical care including ELAPRASE for an indefinite period at no cost to patients who participated in ELAPRASE clinical trials in Brazil, and seeking recoupment to the Brazilian government for amounts paid on behalf of these patients to date, and moral damages associated with these claims.

On May 6, 2016, the trial court judge ruled on the case and dismissed all the claims under the class action, which was appealed. On February 20, 2017, the Court of Appeals in Sao Paulo issued the final decision on merit in favor of Shire and dismissed all the claims under the class action. The final decision can be appealed through the Superior Court of Justice or through the Supreme Court; however, the likelihood of one of those courts accepting the appeal is remote.

27. Shareholders' Equity

Authorized common stock

The authorized stock of Shire plc as of December 31, 2016, was 1,500,000,000 Ordinary Shares and 2 subscriber Ordinary Shares.

Dividends

Under Jersey law, Shire plc is entitled to fund payments of dividends from any source (other than a capital redemption reserve or nominal capital account) subject to the Directors authorizing the distribution making a solvency statement in the prescribed statutory form. As of December 31, 2016, Shire plc's distributable reserves were approximately $4.4 billion.

Treasury stock

The Company records the purchase of its own shares by the EBT and under the share buy-back program as a reduction of shareholders' equity based on the price paid for the shares. As of December 31, 2016, the EBT held 0.5 million Ordinary Shares (2015: 0.6 million; 2014: 0.7 million) and 0.2 million ADSs (2015: 0.2 million; 2014: 0.3 million) and shares held under the share buy-back program were 8.0 million Ordinary Shares (2015: 8.5 million; 2014: 9.0 million). During the years ended December 31, 2016 and 2015 the Company did not purchase any shares either through the EBT or under any share buy-back program.

Income Access Share Arrangements

Shire has put into place income access share arrangements which enable ordinary shareholders, other than ADS holders, to choose whether they receive their dividends from Shire plc, a company tax resident in the Republic of Ireland, or from Shire Biopharmaceuticals Holdings ("Old Shire"), a Shire group company tax resident in the UK.

Old Shire has issued one income access share to the Income Access Trust (the "IAS Trust"), which is held by the trustee of the IAS Trust (the "Trustee"). The mechanics of the arrangements are as follows:

(i) If a dividend is announced or declared by Shire plc on its Ordinary Shares, an amount is paid by Old Shire by way of a dividend on the income access share to the Trustee, and such amount is paid by the Trustee to ordinary shareholders who have elected to receive dividends under these arrangements. The dividend which would otherwise be payable by Shire plc to its ordinary shareholders will be reduced by an amount equal to the amount paid to its ordinary shareholders by the Trustee.

(ii) If the dividend paid on the income access share and on-paid by the Trustee to ordinary shareholders is less than the total amount of the dividend announced or declared by Shire plc on its Ordinary Shares, Shire plc will be obliged to pay a dividend on the relevant Ordinary Shares equivalent to the amount of the shortfall. In such a case, any dividend paid on the Ordinary Shares will generally be subject to Irish withholding tax at the rate of 20 percent or such lower rate as may be applicable under exemptions from withholding tax contained in Irish law.

(iii) An ordinary shareholder is entitled to make an income access share election such that he/she will receive his/her dividends (which would otherwise be payable by Shire plc) under these arrangements from Old Shire. This can be done by submitting an IAS arrangement election form containing information on the participating shareholders pursuant to Shire plc's Articles of Association.

The ADS Depositary has made an election on behalf of all holders of ADSs such that they will receive dividends from Old Shire under the income access share arrangements. Dividends paid by Old Shire under the income access share arrangements will not, under current legislation, be subject to any UK or Irish withholding taxes. If a holder of ADSs does not wish to receive dividends from Old Shire under the income access share arrangements, he/she must withdraw his/her Ordinary Shares from the ADS program prior to the dividend record date set by the ADS Depositary and request delivery of the Shire plc Ordinary Shares. This will enable him/her to receive dividends from Shire plc.

It is the expectation, although there can be no certainty, that Old Shire will distribute dividends on the income access share to the Trustee for the benefit of all ordinary shareholders who make an income access share election in an amount equal to what would have been such ordinary shareholders' entitlement to dividends from Shire plc in the absence of the income access share election. If any dividend paid on the income access share and or paid to the ordinary shareholders is less than such ordinary shareholders' entitlement to dividends from Shire plc in the absence of the income access share election, the dividend on the income access share will be allocated pro rata among the ordinary shareholders and Shire plc will pay the balance to these ordinary shareholders by way of dividend. In such circumstances, there will be no grossing up by Shire plc in respect of, and Old Shire and Shire plc will not compensate those ordinary shareholders for, any adverse consequences including any Irish withholding tax consequences.

Shire will be able to suspend or terminate these arrangements at any time, in which case the full Shire plc dividend will be paid directly by Shire plc to those ordinary shareholders (including the Depositary) who have made an income access share election. In such circumstances, there will be no grossing up by Shire plc in respect of, and Old Shire and Shire plc will not compensate those ordinary shareholders for, any adverse consequences including any Irish withholding tax consequences.

In the year ended December 31, 2016, Old Shire paid dividends totaling $150.6 million (2015: $127.7 million; 2014: $112.8 million) on the income access share to the Trustee in an amount equal to the dividend ordinary shareholders would have received from Shire plc.

28. Share-based Compensation Plans

The following table shows the total share-based compensation expense (see below for types of share-based awards) included in the Consolidated Statements of Operations:

Years ended December 31	**2016 $'M**	2015 $'M	2014 $'M
Cost of product sales	**23.3**	7.6	8.5
Research and development	**46.9**	28.6	22.2
Selling, general and administrative	**67.1**	37.4	35.9
Integration and acquisitions costs	**181.2**	–	–
Reorganization costs	**–**	26.7	30.4
Total	**318.5**	100.3	97.0
Less tax	**(85.3)**	(28.4)	(23.8)
	233.2	71.9	73.2

As of December 31, 2016, the Company incurred total expense of $223.1 million (2015: $nil, 2014: $nil) related to replacement and other awards held by Baxalta employees as further described below. This includes integration related expenses of $171.0 million due to the acceleration of unrecognized expense associated with certain employees impacted by the integration.

There were no capitalized share-based compensation costs as of December 31, 2016, 2015 and 2014.

As of December 31, 2016, $244.2 million (2015: $115.3 million, 2014: $83.1 million) of total unrecognized compensation cost relating to non-vested awards is expected to be recognized over a period of three years.

Share-based compensation plans

Prior to February 28, 2015, the Company granted stock-settled share appreciation rights ("SARs") and performance share awards ("PSAs") over Ordinary Shares and ADSs to Executive Directors and employees under the Shire Portfolio Share Plan ("PSP") (Parts A and B). The SARs and PSAs granted under the PSP (Parts A and B) to Executive Directors are exercisable subject to performance and service criteria. Substantially all SARs and PSAs granted to employees are exercisable subject only to service criteria.

The principal terms and conditions of SARs and PSAs under the PSP (Parts A and B) are as follows: (i) the contractual life of SARs is seven years, (ii) the vesting period of SARs and PSAs granted to employees below the level of Executive Vice President allows for graded vesting over three years, and (iii) awards granted to the level of Executive Director and Executive Vice President cliff vest after three years, of which awards to the level of Executive Director contain performance conditions based on growth in Non GAAP adjusted return on invested capital ("Adjusted ROIC") and Non GAAP earnings before interest, taxation, depreciation and amortization ("Non GAAP EBITDA"). In 2014, the Company granted PSAs under the PSP to employees at Executive Vice President level and to a select group of senior employees, which are exercisable subject to performance and service criteria. These PSAs cliff vest after three years and contain performance conditions as explained above.

28. Share-based Compensation Plans (continued)

Since February 28, 2015, the Company has granted awards under the Shire Long-Term Incentive Plan 2015 ("LTIP"). Under the LTIP, the Company grants stock-settled share appreciation rights ("SARs"), restricted stock units ("RSUs") and performance share units ("PSUs") over Ordinary Shares and ADSs to Executive Directors and employees. The PSUs granted under the LTIP and SARs granted to Executive Directors are exercisable subject to performance and service criteria. RSUs granted under the LTIP and SARs granted to all other employees are exercisable subject only to service criteria.

The principal terms and conditions of SARs, RSUs and PSUs granted under the LTIP are as follows: (i) the contractual life of SARs is seven years, (ii) the vesting period of SARs and RSUs granted to employees below the level of Executive Vice President allows for graded vesting, and (iii) all SARs granted to Executive Directors and employees at Executive Vice President level and all PSUs granted cliff vest after three years and, with the exception of SARs granted to employees at Executive Vice President level, contain performance conditions based on Product sales and Non GAAP EBITDA targets; a Non GAAP Adjusted ROIC underpin is also used at the end of the three year performance period to assess the underlying performance of the Company before determining the final vesting levels for awards with performance conditions. In addition, a further two year holding period will apply to all awards granted to Executive Directors post vesting.

The Company also operates a Global Employee Stock Purchase Plan and UK/Irish Sharesave Plans.

Replacement Awards Issued to Baxalta Employees

In connection with the acquisition of Baxalta and pursuant to the merger agreement associated with the acquisition, outstanding Baxalta equity awards held by Baxalta employees or employees of Baxter were canceled and exchanged for Shire equity awards. The outstanding Baxalta equity awards consisted primarily of stock options and RSUs and hence were replaced with Shire's stock options and RSUs. The replacement Shire awards generally have the same terms and conditions (including vesting) as the former Baxalta awards for which they were exchanged.

The value of the replacement share-based awards granted was designed to generally preserve both the intrinsic value and the fair value of the award immediately prior to the acquisition. Following the acquisition, the Company records share-based compensation expense associated with the acquisition-date fair value of acquired Baxalta employees' replacement options and RSUs that is attributable to post-acquisition service requirements, as well as share-based compensation expense for post-acquisition service requirements associated with certain remaining unvested Baxter share-based awards held by the acquired Baxalta employees. The portions of the acquisition-date fair values of the awards that are attributable to post-combination service are recognized over the remaining service period of the awards.

The following awards were outstanding as of December 31, 2016:

	Compensation type	Number of awards	Expiration period from date of issue	Vesting period
Stock-settled SARs	SARs	10,646,207	7 years	3 years graded vesting and/or 3 years cliff vesting subject to performance criteria for Executive Directors only
UK/Irish Sharesave Plans	Stock options	119,300	6 months after vesting	3 or 5 years
Global Employee Stock Purchase Plan	Stock options	411,900	On vesting date	1 to 5 years
Baxalta Replacement Options	Stock options	10,692,426	10 years	3 years graded vesting
Stock-settled SARs and stock options	Stock-settled SARs and stock options	**21,869,833**		
RSUs, PSUs and PSAs	RSUs, PSUs and PSAs	2,346,511	3 years	3 years graded vesting, 3 years cliff vesting subject to performance criteria for Executive Directors and certain senior employees only
Baxalta Replacement RSUs	RSU	1,630,146	3 years	3 years graded vesting
RSUs/PSUs and PSAs		**3,976,657**		

Stock-settled SARs and stock options

SARs under LTIP and PSP (Part A)

Stock-settled share appreciation rights ("SARs") granted to Executive Directors, are exercisable subject to service and performance criteria.

In respect of any award made to Executive Directors under the LTIP, performance criteria are based on Product sales and Non GAAP EBITDA targets, with a Non GAAP Adjusted ROIC underpin. In respect of any award made to Executive Directors under the PSP (Part A), performance criteria are based on growth in Non GAAP Adjusted ROIC and Non GAAP EBITDA. These performance measures are an important measure of the Company's ability to meet the strategic objective to grow value for all of its stakeholders.

Awards granted to employees below Executive Director level are not subject to performance conditions and are only subject to service conditions.

Once awards have vested, participants will have until the seventh anniversary of the date of grant to exercise their awards.

UK/Irish Sharesave Plans ("Sharesave Plans")

Options granted under the Sharesave Plans are granted with an exercise price equal to 80 percent and 75 percent of the mid-market price on the day before invitations are issued to UK and Ireland employees, respectively. Employees may enter into three or five year savings contracts. No performance conditions apply.

Shire Global Employee Stock Purchase Plan ("Stock Purchase Plan")

Under the Stock Purchase Plan, options are granted with an exercise price equal to 85 percent of the fair market value of a share on the enrollment date (the first day of the offering period) or the exercise date (the last day of the offering period), whichever is the lower. Employees agree to save for a period up to 12 months. No performance conditions apply.

Baxalta Replacement Options

The replacement stock options were issued consistent with the vesting conditions of the replaced award (as explained above). Replacement stock options had contractual terms of 10 years from the initial grant date. The majority of stock options outstanding vested in one-third increments over a three year period, although certain awards cliff vest or have longer or shorter service periods. The fair value on the acquisition date attributable to post-combination service, adjusted for estimated forfeitures, is recognized as expense on a straight-line basis over the remaining vesting period.

A summary of the status of the Company's SARs and stock options including replacement awards as of December 31, 2016 and of the related activity during the period then ended is presented below:

Year ended December 31, 2016	Weighted average exercise price £	Number of shares	Intrinsic value £'M
Outstanding as of beginning of period	52.02	7,796,496	
Granted	42.37	6,506,762	
Exercised	39.83	(4,717,106)	
Baxalta Replacement Options	34.30	13,328,592	
Forfeited	48.49	(1,044,911)	
Outstanding as of end of period	38.98	21,869,833	76.6
Exercisable as of end of period	34.55	11,035,437	66.0

Excluded from the table above are replacement stock options issued to Baxter employees as part of the acquisition of Baxalta. The Company issued 8.8 million stock options to Baxter employees on June 3, 2016, out of which 7.7 million and 6.9 million were outstanding and exercisable, respectively, as of December 31, 2016.

The weighted average grant date fair value of SARs and stock options granted in the year ended December 31, 2016 was £8.25 (2015: £10.36; 2014: £6.19).

SARs and stock options including Baxalta Replacement Options, outstanding as of December 31, 2016 have the following characteristics:

Number of awards outstanding	Exercise prices £	Weighted Average remaining contractual term (Years)	Weighted average exercise price of awards outstanding £	Number of awards exercisable	Weighted average exercise price of awards exercisable £
3,433,225	14.59-28.00	3.0	25.37	3,422,480	25.38
10,704,846	28.01-40.00	7.3	35.56	6,161,513	34.91
7,731,762	40.01-70.48	5.7	49.77	1,451,444	54.67
21,869,833				11,035,437	

28. Share-based Compensation Plans (continued)

RSUs, PSUs and PSAs

RSUs and PSUs under LTIP and PSAs under PSP (Part B)

PSUs and PSAs granted to Executive Directors and PSUs granted to certain senior employees are exercisable subject to certain performance and service criteria.

RSUs and PSAs granted to employees below Executive Director are not subject to performance criteria and are only subject to service conditions.

The performance criteria for PSUs granted under the LTIP is based on Product sales and Non GAAP EBITDA targets, typically with a Non GAAP Adjusted ROIC underpin. The performance criteria for PSAs under the PSP (Part B) is based on growth in Non GAAP Adjusted ROIC and Non GAAP EBITDA.

Baxalta Replacement RSUs

The replacement RSUs were issued consistent with the vesting conditions of the replaced award (as explained above) and generally continue to vest in one-third increments over a three-year period. The fair value on the acquisition date attributable to post-combination service, adjusted for estimated forfeitures, is recognized as expense on a straight-line basis over the remaining vesting period.

A summary of the status of the Company's RSUs, PSUs and PSAs as of December 31, 2016 and of the related activity during the period then ended is presented below:

RSUs, PSUs and PSAs	Number of shares	Weighted average grant date fair value	Weighted average remaining life
Outstanding as of beginning of period	**1,791,930**	40.06	
Granted	**1,663,070**	42.28	
Exercised	**(2,470,179)**	37.52	
Baxalta Replacement RSUs	**3,294,150**	39.28	
Forfeited	**(302,314)**	48.47	
Outstanding as of end of period	**3,976,657**	41.31	3.8
Exercisable as of end of period	**–**	–	n/a

Excluded from the table above are replacement RSUs issued to Baxter employees as part of the acquisition of Baxalta. The Company issued 0.5 million RSUs to Baxter employees on June 3, 2016, out of which 0.3 million were outstanding as of December 31, 2016.

Exercises of share-based awards

The total intrinsic values of share-based awards exercised, including those held by Baxter employees, for the years ended December 31, 2016, 2015 and 2014 were $214.6 million, $198.8 million and $200.8 million, respectively. The total cash received as a result of share option exercises for the period ended December 31, 2016, 2015 and 2014 was approximately $129.0 million, $16.6 million and $17.4 million, respectively. In connection with these exercises, the tax benefit credited to additional paid-in capital for the years ended December 31, 2016, 2015 and 2014 was $8.8 million, $31.6 million and $39.6 million, respectively.

The Company will settle future awards with either newly listed Ordinary Shares or with shares held in the EBT. The number of shares that the EBT will purchase in 2017 is dependent on the number of awards granted and exercised during the year and Shire plc's share price. As of December 31, 2016, the EBT held 0.5 million Ordinary Shares and 0.2 million ADSs.

Valuation methodologies

The Company estimates the fair value of its share-based awards using a Black-Scholes valuation model. Key input assumptions used to estimate the fair value of share-based awards include the grant price of the award, the expected stock-based award term, volatility of the Company's share price, the risk-free rate and the Company's dividend yield. The Company believes that the valuation technique and the approach utilized to develop the underlying assumptions are appropriate in estimating the fair values of Shire's stock-based awards. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the Company.

The fair value of share awards granted was estimated using the following assumptions:

Years ended December 31	2016	2015	2014
Risk-free interest rate	**0.29-1.6%**	0.6-1.8%	0.3-1.8%
Expected dividend yield	**0.3-0.5%**	0.2-0.4%	0.2-0.4%
Expected life	**1-4 years**	1-4 years	1-4 years
Volatility	**26-29%**	23-26%	23-27%
Forfeiture rate	**5-7%**	5-7%	5-7%

The following assumptions were used to value share-based awards:

- risk-free interest rate — for awards granted over ADSs, the U.S. Federal Reserve treasury constant maturities rate with a term consistent with the expected life of the award is used. For awards granted over Ordinary Shares, the yield on UK government bonds with a term consistent with the expected life of the award is used;
- expected dividend yield — measured as the average annualized dividend estimated to be paid by the Company over the expected life of the award as a percentage of the share price at the grant date;
- expected life — estimated based on the contractual term of the awards and the effects of employees' expected exercise and post-vesting employment termination behavior;
- expected volatility — measured using historical daily price changes of the Company's share price over the respective expected life of the share-based awards at the date of the award; and
- forfeiture rate — estimated using historical trends of the number of awards forfeited prior to vesting.

29. Agreements and Transactions with Baxter

In connection with Baxalta's separation from Baxter on July 1, 2015, Baxalta and Baxter entered into several separation-related agreements that provided a framework for Baxalta's relationship with Baxter after the separation. As a result of the acquisition of Baxalta, the Company became party to the separation-related agreements with Baxter. These agreements, among others, included a manufacturing and supply agreement, a transition services agreement, an international commercial operations agreement and tax matters agreement.

Under the terms of the manufacturing and supply agreement, the Company manufactures certain products and materials and sells them to Baxter at an agreed-upon price reflecting the Company's cost plus a mark-up for certain products and materials. The Company reported revenues associated with the manufacturing and supply agreement with Baxter of approximately $81 million from the June 3, 2016 acquisition date through December 31, 2016.

Under the terms of the transition services agreement, the Company and Baxter provide various services to each other on an interim, transitional basis. The services provided by Baxter to the Company include certain finance, information technology, human resources, quality, supply chain and other administrative services and functions, and are generally provided on a cost-plus basis. The services generally extend for approximately two years following the July 1, 2015 separation except for certain information technology services that may extend for three years following the July 1, 2015 separation. The Company reported SG&A expenses associated with the transition services agreement with Baxter of approximately $54 million from the June 3, 2016 acquisition date through December 31, 2016.

For a certain portion of Baxalta's non-U.S. operations, the legal transfer of net assets from Baxter had not occurred by the June 3, 2016 acquisition date due to the time required to transfer marketing authorizations and other regulatory requirements in each of these countries. Under the terms of the international commercial operations agreement with Baxter, the Company is responsible for the business activities conducted by Baxter on its behalf, and is subject to the risks and entitled to the benefits generated by these operations and assets. As a result, the related assets and liabilities and results of operations are reported in the Company's Consolidated Financial Statements following the acquisition of Baxalta. The Company reported net sales related to these operations of $101 million from the June 3, 2016 acquisition date through December 31, 2016. As of December 31, 2016, the assets and liabilities of these operations consisted of inventories of $11 million, which are reported in Inventories on the Consolidated Balance Sheet, other assets of $50 million, which are reported as Prepaid expenses and other current assets, and liabilities of $3 million, which are reported in Other current liabilities. The majority of these operations have been transferred to the Company as of December 31, 2016 and the remaining are expected to transfer in 2017 or 2018.

The tax matters agreement governs Baxter and Baxalta's and now the Company's respective rights, responsibilities and obligations after the distribution with respect to taxes for any tax period ending on or before the distribution date, as well as tax periods beginning before and ending after the distribution date. In addition, the tax matters agreement addresses the allocation of liability for taxes that were incurred as a result of restructuring activities undertaken to effectuate the distribution and provides for Baxalta to indemnify Baxter against any tax liabilities resulting from Baxalta's action or inaction that causes the merger-related transactions to be taxable. The net tax-related indemnification amount reported by the Company as of December 31, 2016 was $26 million.

As of December 31, 2016, the Company had total amounts due from or to Baxter of $189 million reported in prepaid expenses and other current assets, $34 million reported in Other non-current assets, $72 million reported in Other current liabilities and $92 million reported in Other non-current liabilities. These balances include the net tax-related indemnification liabilities and assets and liabilities of certain operations that have not transferred to the Company.

30. Auditor remuneration

The Audit, Compliance & Risk Committee reviews the scope and results of the audit and non-audit services, including tax advisory and compliance services, provided by the Company's Independent Registered Public Accountants, Deloitte LLP, and the cost effectiveness and the independence and objectivity of the Registered Public Accountants. In recognition of the importance of maintaining the independence of Deloitte LLP, a process for pre-approval has been in place since July 1, 2002 and has continued through to the end of the period covered by this Annual Report.

The following table provides an analysis of the amount paid to the Company's Independent Registered Public Accountants, Deloitte LLP, all fees having been pre-approved by the Audit, Compliance & Risk Committee.

Years ended December 31	**2016 $'M**	2015 $'M
Audit fees	**14.7**	4.7
Audit related fees[1]	**1.0**	0.4
Tax fees[2]	**0.3**	0.1
All other fees[3]	**18.9**	3.9
Total fees	**34.9**	9.1

[1] Audit related fees consisted of audit work only the Independent Registered Public Accountant can reasonably be expected to perform, such as statutory audits or procedures relating to regulatory filings.

[2] Tax fees consisted principally of assistance with matters related to compliance and advice in various tax jurisdictions.

[3] All other fees include $14.5 million of fees related to the continuation of projects already under way at Baxalta prior to its acquisition by the Company. A comprehensive review and reorganization of these services was performed following the acquisition date to ensure the continued independence of Deloitte LLP as auditors for the Company. All other fees also include $4.4 million of services provided to support the transaction and facilitate regulatory reporting related to the acquisition of Baxalta as this transaction qualified as a Class One Transaction. In the year to December 31, 2015 All other fees includes reporting accountant fees of $3.9 million, in connection with Shire's proposed combination with Baxalta.

31. List of subsidiaries

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Shire Albania Sh.p.k.	Albania	Ordinary ALL100.00	Rr: Sami Frasheri, Kompleksi T.I.D, Shk. B, Floor 1, 10 000 Tirana, Albania
Baxalta Argentina S.A.U.	Argentina	ARS 1.00 Ordinary	Entre Rios 1632. Olivos. Buenos Aires. Argentina.
Shire Human Genetic Therapies S.A.	Argentina	ARS 1.00 Ordinary	Calle Olga Cossettini 263 — 3º piso — UF 21, Dique IV — Puerto Madero — C1107CCF, Buenos Aires, Argentina
Baxalta Australia Pty. Ltd.	Australia	NPV Shares	1 Baxter Drive, Old Toongabbie NSW 2146, Australia
Farboud Pty Ltd	Australia	AUD 1.00 Ordinary	Avaya House, 6th Floor, 123 Epping Road, North Ryde, Sydney, NSW 2113, Australia
Fibrotech Therapeutics Pty Ltd	Australia	AUD Ordinary	Avaya House, 6th Floor, 123 Epping Road, North Ryde, Sydney, NSW 2113, Australia
Shire Australia Pty Limited	Australia	AUD Ordinary — no par value	Avaya House, 6th Floor, 123 Epping Road, North Ryde, Sydney, NSW 2113, Australia
Viropharma Pty Ltd	Australia	AUD Ordinary — no par value	Suites 3 and 4, 25 Terminus Street, Castle Hill, NSW 2154, Australia
Baxalta Innovations GmbH	Austria	€36,336,417.08	Industriestrasse 67, 1221 Vienna, Austria
Baxalta Osterreich GmbH	Austria	€35,000	Industriestrasse 67, 1221 Vienna, Austria
Baxter AG	Austria	€1	Industriestrasse 67, 1221 Vienna, Austria
Shire Austria GmbH	Austria	€35,000.00 Equity Interest	Kärntner Ring 5-7, 1010, Vienna, Austria
Shire Intellectual Property 2 SRL	Barbados	US$1.00 Common	Chancery House, High Street, Bridgetown, Barbados
Shire Intellectual Property SRL	Barbados	US$1.00 Common	Chancery House, High Street, Bridgetown, Barbados
Baxalta Belgium Manufacturing S.A.	Belgium	€2.43622	7860 Lessines, Boulevard René Branquart 80, Belgium
Baxalta Belgium SPRL	Belgium	€0.77173	7860 Lessines, Boulevard René Branquart 80, Belgium
Baxalta Services Europe SPRL	Belgium	€18.55	7860 Lessines, Boulevard René Branquart 80, Belgium
Shire Belgium BVBA	Belgium	€1.00 Ordinary	Rue Montoyer 47, 1000 Brussels, Belgium
Shire Services BVBA	Belgium	€1.00 Ordinary	Rue Montoyer 47, 1000 Brussels, Belgium
Shire Holdings Limited	Bermuda	£1.00 Ordinary	H.P. House, 21 Laffan Street, Hamilton HM 09, Bermuda
Viropharma Holdings Limited	Bermuda	US$1.00 Ordinary	Canon's Court, 22 Victoria Street, Hamilton, 12, Bermuda
Baxalta Brasil Biociência Ltda.	Brazil	BRL$ 1.01 Ordinary	Rua Henri Dunant, 1383, Tower B, 12th floor, suite 1202, Santo Amaro, Zip Code 04709-110, São Paulo, Brazil
Shire Farmacêutica Brasil Ltda	Brazil	BRL1.00 Ordinary	Headquarters Rochaverá Corporate Towers, Avenida das Nações Unidas, 14.171– Torre A, 5º andar — conj. 501, 502, 503 e 504, CEP, 04794-000 — São Paulo — SP, Brazil
Baxalta Bulgaria EOOD	Bulgaria	BGN лв375,001 Common	45 Bulgaria Blvd., Triaditza District, Stolichna Municipality, Sofia Region, 1404 Sofia, Bulgaria
Shire Bulgaria EOOD	Bulgaria	Ordinary BGL 1.00	51B Bulgaria blvd., floor 4, 1404 Sofia, Triaditza district, Stolichna Municipality, Sofia City Region, Bulgaria
Baxalta Canada Corporation	Canada	CAD Common — nil par value	7125 Mississauga Road, Ontario L5N 0C2, Canada
NPS Holdings Company	Canada	CAD Common — nil par value	1959 Upper Water Street, Suite 800 Po Box 997, Halifax, NS B3J 2X2, Canada
NPS Pharma Canada Inc.	Canada	CAD Common — nil par value	1959 Upper Water St., Suite 800, P.O. Box 997, Halifax, NS B3J 2X2, Canada
Shire IP Services Corporation	Canada	CAD Common — no par value	1959 Upper Water Street, Suite 900, P.O. Box 997, Halifax, NS B3J 2X2, Canada
Shire Pharma Canada ULC	Canada	CAD Class A Common — no par value	1000 Cathedral Place, 925 West Georgia Street, Vancouver, BC BC V6C 3L2, Canada
Shire 2005 Investments Limited	Cayman Islands	£1.00 Ordinary	Maples Corporate Services Limited, PO Box 309G/T, Ugland House, South Church Street, George Town, Grand Cayman, KY1 1104, Cayman Islands
Shire Finance Limited	Cayman Islands	US$1.00 Founder	Maples Corporate Services Limited, PO Box 309G/T, Ugland House, South Church Street, George Town, Grand Cayman, KY1 1104, Cayman Islands
Baxalta Chile SpA	Chile	Common — no par value	Avenida Mexico 715, Santiago, Chile
Shire Chile SpA	Chile	Chilean Peso Ordinary No Par Value	Miraflores 222, piso 28, comuna de Santiago, Chile
Baxalta BioScience (Shanghai) Co. Ltd.	China	Equity Interest	Room 1706, 17/F, Building 1, No. 18 Taigu Road, China (Shanghai) Pilot Free Trade Zone

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Baxalta Hong Kong Limited	China	Ordinary Shares — no par value	1401 Hutchison House, 10 Harcourt Road, Hong Kong
Shire (Shanghai) Pharmaceuticals Consultancy Co., Ltd.	China	€140,000.00 Equity Interest	Room 5120, 51st Floor, Raffles Centre, 268 XiZang Road, HuangPu District, Shanghai, China
Baxalta Colombia S.A.S.	Colombia	COP $1.000 Common	Avenida Calle 82 No. 10 50 P 5. Bogotá, Colombia
Shire Colombia S.A.S.	Colombia	COP1,000.00 Common	Carrera 11A n° 94 45 Oficina 702, Bogota, Colombia
Baxalta BioScience Costa Rica S.R.L.	Costa Rica	CRC100.00 Ordinary	3er piso, Centro Corporativo Internacional Paseo Colon San Jose, Costa Rica
Shire društvo s ograničenom odgovornošć u za trgovinu i usluge	Croatia	HRK20,000.00 Ordinary	Ljudevita Gaja 35, 10 000 Zagreb, Croatia
SG Biotech Limited******	Cyprus	Class A shares EUR 1.00 — 51.00%	Dimikritou, 15 Panaretos Eliana Complex Flat/Office 104, Potamos. Gemasogeias, 4041, Limassol, Cyprus
		Class B shares EUR 1.00 — 49.00%	
Baxalta Czech spol. S.R.O.	Czech Republic	CZK Kč1,000 capital	Karla Englise 3201/6, Smichov, 15000 Prague 5, Czech Republic
Shire Czech S.R.O.	Czech Republic	CZK1,000.00 Ordinary	U Centre, Dejvice, Evropska 136/810, Prague 6, 160 12, Czech Republic
Baxalta Denmark A/S	Denmark	DKK kr1,000 Common	Tobaksvejen 2A, Søborg, Gladsaxe, 2860, Denmark
Shire Denmark ApS	Denmark	DKK1,000.00 Ordinary	Havneholmen 29, 1561, Copenhagen V, Denmark
Baxalta-Ecuador S.A.	Ecuador	U.S.D $1.00 Common	Av. Amazonas N26-117, Quito — Ecuador
Baxalta Estonia OU	Estonia	€2, 501 Common	Mediq Eesti OÜ, Kungla 2, 76505 Saue, TALLINN, Estonia
Baxalta Finland Oy	Finland	Ordinary no par value	Tammasaarenkatu 7, 00180 PL 119 Helsinki, Finland
Shire Finland Oy	Finland	€1.00 Ordinary	c/o BDO Oy, Vattuniemenranta 2, Helsinki, 00210, Finland
Baxalta France S.A.S.	France	€1 Common	Immeuble Pacific, 11-13 cours Valmy, 92800 Puteaux, France
Shire France S.A.S.	France	€15.00 Ordinary	112 avenue Kléber, 75116 Paris, France
Baxalta Deutschland GmbH	Germany	€1,00	Edisonstrasse 2, 85716 Unterschleißheim, Germany
Jerini Ophthalmic Holding GmbH	Germany	€ Ordinary	Friedrichstrasse 149, 10117, Berlin, Germany
Shire Central & Eastern Europe GmbH	Germany	€ Ordinary	Friedrichstrasse 149, 10117, Berlin, Germany
Shire Deutschland GmbH	Germany	€25,565.60 Common Stock	Friedrichstrasse 149, 10117, Berlin, Germany
Shire Deutschland Investments GmbH	Germany	€ Ordinary no par value	Friedrichstrasse 149, 10117, Berlin, Germany
Shire Orphan Therapies GmbH	Germany	€1.00 Ordinary	Friedrichstrasse 149, 10117, Berlin, Germany
SuppreMol GmbH	Germany	€1.00 Ordinary	Am Klopferspitz 19a, 82152 Martinsried, Germany
Baxalta BioScience Greece Single Member LLC	Greece	€10.00 Common	47 M. Antypa Str., Irakleion, Greece
Shire Hellas Pharmaceuticals Import Export and Marketing S.A.	Greece	€100.00 Ordinary	38 Vasilleos Konstantinou Avenue and Aminta Street (1/F), Athens, 116.35, Greece
Baxalta Guatemala, Sociedad Anónima	Guatemala	Quetzales Q100 Common	16 Calle 0-55, Zona 10 Edificio Torre Internacional Nivel 9 Guatemala, Guatemala
Baxalta Hungary Limited Liability Company	Hungary	Equity Interest	1138 Budapest, Népfürdő utca 22
Shire Hungary Kft	Hungary	Equity Interest	Kőér utca 2/A. C. ép., Budapest, 1103, Hungary
Baxalta BioScience India Private Limited	India	INR 10 Equity shares	Plot No.183, Sector No.5, IMT Manesar, Gurgaon 122050, Haryana, India
Baxalta Ireland Financing Limited	Ireland	€1.00 Ordinary	Unit 7 Deansgrange Business Park, Deansgrange, Blackrock, Co. Dublin, Ireland
Navillus Insurance Company DAC	Ireland	U.S.D$10.00 Ordinary	Third Floor, The Metropolitan Building, James Joyce Street, Dublin 1, Ireland
NPS Pharma Holdings Limited	Ireland	€1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
NPS Pharma International Limited	Ireland	€1.00 Ordinary	70 Sir John Rogerson's Quay, Dublin 2, Ireland
Pharma International Insurance Designated Activity Company (DAC)	Ireland	US$1.00 Ordinary	3rd Floor, The Metropolitan Building, James Joyce Street, Dublin 1, Republic of Ireland
Shire Acquisitions Investments Ireland Designated Activity Company (DAC)	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Biopharmaceuticals Ireland Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Holdings Ireland U.C.	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland

31. List of subsidiaries (continued)

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Shire Holdings Ireland No.2 Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Holdings Ireland No.3 Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Intellectual Property Ireland Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Ireland Finance Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Ireland Finance Trading Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Ireland Investment Limited	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Ireland Premacure Investment U.C.	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceutical Holdings Ireland Limited*	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceutical Investment Trading Ireland U.C.	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceutical Investments 2008 U.C.	Ireland	US$0.0002 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceutical Services Ireland Limited	Ireland	€1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceuticals Finance Ireland Unlimited Company	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceuticals International U.C.	Ireland	US$1.00 A Ordinary — 20%	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
		US$1.00 B Ordinary — 20%	
		US$1.00 C Ordinary — 20%	
		US$1.00 D Ordinary — 20%	
		US$1.00 Preferred — 20%	
Shire Pharmaceuticals Investments 2007 U.C.	Ireland	US$1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceuticals Ireland Limited	Ireland	€1.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire Pharmaceutical Israel Ltd	Israel	Ordinary ILS NPV	58 Harakevet, Tel Aviv, Israel
Baxalta Italy Holding S.r.l.	Italy	€26,477,967.00	Rome (RM), 00144 Piazzale dell'Industria No. 20, Italia
Baxalta Italy S.r.l.	Italy	€1,668,778.00	Rome (RM), 00144 Piazzale dell'Industria No. 20, Italia
Baxter Manufacturing S.p.A.	Italy	€25.00 Common	Rome (RM), 00144 Piazzale dell'Industria No. 20, Italia
		€25.00 Treasury	
Shire Italia S.p.A.	Italy	€0.51 Ordinary	4th Floor, via Mike Bongiorno n.13, 20124 Milano, Italy
Baxalta Japan Limited	Japan	No par value Common	1-23-1 Toranomon, Minato-ku, Tokyo 105-6320, Japan
Shire Japan K.K.	Japan	JPY Ordinary	Tekko Building 21st Floor, 1-8-2 Marunouchi, Chiyoda-ku, Tokyo 100-0005
Shire Biopharmaceuticals Holdings Ireland Limited	Jersey	CHF1,000.00 Ordinary	22 Grenville Street, St Helier, JE4 8PX, Jersey
Shire Jersey Limited	Jersey	£1.00 Ordinary	23 Grenville Street, St Helier, JE4 8PX, Jersey
Baxalta Kazakhstan LLP	Kazakhstan	Members	Medeuskij District, 105 Dostyk Ave., 3rd floor, Office 300, Almaty, Republic of Kazakhstan 050051
Baxalta Korea Ltd.	Korea, Republic of	KRW5,000.00 Common	20th FL, 47, Jong-ro, Jongno-gu, Seoul, Korea (Gongpyeong-dong, Standard Chartered Bank Building)
Shire Pharma Korea Yuhan Hoesa	Korea, Republic of	KRW10,000.00 Ordinary	Yeoksam-dong, 16th Floor, 134 Tehaeran-ro, Gangnam-gu, Seoul, Republic of Korea
Baxalta Lithuania U.A.B.	Lithuania	€100 Ordinary	Jogailos g. 9, Vilnius, LT-01116 Lithuania
Shire Holdings Europe No.2 S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Holdings Luxembourg S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Luxembourg Finance S.à.r.l.	Luxembourg	US$1.00 Mandatory Redeemable Preference — <0.01%	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
		US$1.00 Ordinary — >99.99%	

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Shire Luxembourg Intellectual Property No.2 S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Luxembourg Intellectual Property No.3 S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Luxembourg Intellectual Property S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Luxembourg S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Pharmaceuticals International Finance S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Shire Sweden Holdings S.à.r.l.	Luxembourg	US$1.00 Ordinary	1, rue Hildegard von Bingen, L-1282, Grand-Duchy of Luxembourg, Luxembourg
Baxalta Malaysia SDN. BHD.	Malaysia	RM1.00 Ordinary	Level 21, Suite 21.01, The Gardens South Tower, Mid Valley City, Lingkaran Syed Putra, 59200 Kuala Lumpur.
Baxalta Mexico S. de R.L. de C.V.	Mexico	Equity Interest	Avenida Presidente Masarik 111 — Piso 4, Del. Miguel Hidalgo Mexico, D.F. 11570, Mexico
Baxalta S. de R.L. de C.V.	Mexico	Equity Interest	Avenida Presidente Masarik 111 — Piso 4, Del. Miguel Hidalgo Mexico, D.F. 11570, Mexico
Shire Pharmaceuticals Mexico SA de CV	Mexico	MXN1.00 Ordinary — 0.23%	Paseo de Tamarindo # 90, Torre 1 Piso 7, Colonia Bosques de Las Lomas, Delegacion Cuajimalpa CP05120, Mexico DF
		MXN1.00 Variable Capital — 99.77%	
Baxalta Holding B.V.	Netherlands	€ 0.01	Kobaltweg 49, 3542 CE Utrecht, The Netherlands
Baxalta Investments B.V.	Netherlands	€ 0.01	Kobaltweg 49, 3542 CE Utrecht, The Netherlands
Baxalta Netherlands B.V.	Netherlands	€ 0.01	Kobaltweg 49, 3542 CE Utrecht, The Netherlands
Baxalta Netherlands Holding B.V.	Netherlands	€ 0.01	Kobaltweg 49, 3542 CE Utrecht, The Netherlands
Baxalta Netherlands Investment B.V.	Netherlands	€ 0.01	Kobaltweg 49, 3542 CE Utrecht, The Netherlands
Shire Holdings Europe B.V.	Netherlands	€100.00 Ordinary	5 Riverwalk, Citywest Business Campus, Dublin 24, Ireland
Shire International Licensing B.V.	Netherlands	€100.00 Ordinary	Toren 6, Level C, World Trade Centre, Strawinskylaan 659, 1077 XX, Amsterdam, Netherlands
Shire Licensing V.O.F.	Netherlands	Members not shares	Strawinskylaan 659, 1077 XX Amsterdam, Netherlands
Tanaud International B.V.	Netherlands	€450.00 Ordinary	Prins Bernardplein 200, 1097 JB, Amsterdam, Netherlands
Baxalta New Zealand Limited	New Zealand	Ordinary no par value	33 Vestey Drive, Mount Wellington, Auckland, 1060, New Zealand
Shire New Zealand Limited	New Zealand	NZD1.00 Ordinary	Crowe Horwath, Level 29, 188 Quay Street, Auckland Central, Auckland, 1010, NZ, New Zealand
Baxalta Norway AS	Norway	NOK kr150 Ordinary	Gjerdrumsvei 11, 0484 Oslo, Norway
Shire Norway AS	Norway	NOK1,000.00 Ordinary	c/o BDO Accounting AS, PO Box 1704, Vika, Oslo, N-0121, Norway
Baxalta Panama S.A.	Panama	U.S.D $1.00 Common	P.H. Torres De Las Américas, Torre C, Nivel 27, Oficina 2703 C-2704C, Panama
Baxalta Poland sp. Z o.o	Poland	PLN zł50 Common	Pl. Pisudskiego 1, 00-078 Warsaw, Poland
Shire Polska Sp. Z o.o	Poland	PLN100.00 Ordinary	ul. Postępu 12, 02-676 Warsaw, Poland
Baxalta Portugal, Unipessoal, Ltda.	Portugal	€300.001 Ordinary	Sintra Business Park, Zona Industrial da Abrunheira, Edificio 10, 2710-089 Sintra, Portugal
Shire Pharmaceuticals Portugal, Lda	Portugal	€ Ordinary	Avenida da República, 50, 10º, Nossa Senhora de Fátima, 1069 211, Lisboa, Portugal
Shire ViroPharma Incorporated	Puerto Rico	US$0.01 Ordinary	Oriental Street, 254 Munoz Rivera Avenue P-1 Floor, Hato Reym, San Juan, 00918, Puerto Rico
Baxalta S.R.L.	Romania	Ordinary RON10.01	90 Calea 13 Septembrie, 7th floor, room no. 7.14, 5th District, Bucharest, Romania
Shire Romania SRL	Romania	Ordinary RON10.00	Bucureşti Sectorul 1, Calea Floreasca nr. 169A, CORP A, Etaj 4, BIROUL NR. 2090, Romania
SG Biotech Joint Stock Company*******	Russian Federation	Ordinary RUR1.00	Office 26, 18 Vladimirskaya Street, Volginsky Village, Petushinsky District, Vladimirsky Region, 601125, Russian Federation
Shire Rus Limited Liability Company	Russian Federation	Partnership Interest	Office 1017 — 1020, Floor 10, 3 Smolenskaya Square, 121099, Moscow, Russian Federation

31. List of subsidiaries (continued)

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Shire doo Beograd	Serbia	RSD1,111.99 Equity Interest	Uskočka 8/IV, 11 000 Belgrade, Serbia
Baxalta Singapore Pte. Ltd.	Singapore	Ordinary no par value	8 Marina Boulevard, #15-01, Marina Bay Finance Centre, Tower 1 Singapore 018981
Shire Singapore Pte. Ltd.	Singapore	SGD1.00 Ordinary	21 Merchant Road, #04-01 Royal Merukh S.E.A. Building, Singapore, 058267, Singapore
Baxalta Slovakia s.r.o.	Slovakia	Participation Interest	Palisády 36, 811 06 Bratislava, Slovak Republic.
Shire Slovakia s.r.o.	Slovakia	€5,000 Equity Interest	Zochova 6-8, mestská časť Staré Mesto 811 03, Bratislava, Slovakia
Baxalta Biofarmacevtska druzba d.o.o	Slovenia	Capital contribution	Zelezna cesta 18, 1000 Ljubljana, Slovenia
Shire Pharmaceuticals South Africa (Pty) Ltd	South Africa	Ordinary ZAR NPV	Mazars House, 54 Glenhove Road, Melrose Estate, Johannesburg, 2196 — South Africa
Baxalta Spain S.L.	Spain	€0.01 Ordinary	Parque Empresarial San Fernando de Henares, Edificio Londres, San Fernando de Henares, 28830 Madrid
Shire Pharmaceuticals Iberica S.L.	Spain	€10.00 Ordinary	4th Floor, Edificio Partenon, Avenida del Partenon 16-18, 28042, Madrid, Spain
Baxalta Sweden AB	Sweden	SEK kr1.00	c/o Baxter Sweden AB Box 63, 164 94 Kista Sweden
DuoCort Pharma AB	Sweden	SEK100.00 Ordinary	Vasagatan 7, 6 tr, SE — 111 20 Stockholm, Sweden
Premacure AB	Sweden	SEK1.00 Ordinary	Vasagatan 7, 6 tr, SE — 111 20 Stockholm, Sweden
Premacure Uppsala AB	Sweden	SEK1.00 Ordinary	Vasagatan 7, 6 tr, SE — 111 20 Stockholm, Sweden
Shire Human Genetic Therapies AB	Sweden	SEK10.00 Common	Vasagatan 7, 6 tr, SE — 111 20 Stockholm, Sweden
Shire Sweden AB	Sweden	SEK100.00 Ordinary	Vasagatan 7, 6 tr, SE — 111 20 Stockholm, Sweden
ViroPharma AB	Sweden	SEK1.00 Ordinary	Vasagatan 7, 6 tr, SE — 111 20 Stockholm, Sweden
Baxalta Export Services GmbH	Switzerland	CHF 100.00 Quota	Thurgauerstrasse 130, 8152 Glattpark (Opfikon), Switzerland
Baxalta GmbH	Switzerland	CHF 20.00 Ordinary Quota	Thurgauerstrasse 130, 8152 Glattpark (Opfikon), Switzerland
Baxalta Manufacturing S.à.r.l.	Switzerland	CHF 2,000,000.00 Quota	Route de Pierre-à-Bot 111, 2000 Neuchâtel, Switzerland
Baxalta Recombinant S.à.r.l.	Switzerland	CHF 100.00 Quota	Route de Pierre-à-Bot 111, 2000 Neuchâtel, Switzerland
Baxalta Schweiz AG	Switzerland	CHF 100.00 Quota	Thurgauerstrasse 130, 8152 Glattpark (Opfikon), Switzerland
SG Biotech S.à.r.l.*****	Switzerland	CHF 100.00 Quota	c/o Shire Orphan and Rare Diseases GmbH, Zahlerweg 10, 6300 Zug, Switzerland
Shire International Finance GmbH	Switzerland	CHF100.00 Quota	Zahlerweg 10, CH-6300, Zug, Switzerland
Shire International GmbH	Switzerland	CHF1,000.00 Ordinary	Zahlerweg 10, CH-6300, Zug, Switzerland
Shire Orphan and Rare Diseases GmbH	Switzerland	CHF100.00 Quotas	Zahlerweg 10, CH-6300, Zug, Switzerland
Shire Switzerland GmbH	Switzerland	CHF100.00 Ordinary	Zahlerweg 10, CH-6300, Zug, Switzerland
Baxalta Biopharmaceutical Ltd.	Taiwan	NT $1000.00 Common	15F., No. 216, Sec. 2, Dunhua S. Rd., Da-an Dist., Taipei 106, Taiwan (R.O.C.)
Taiwan Shire Limited Company	Taiwan	TWD5,000,000.00 Equity Interest	18F, No.460, Sec. 4 Xinyi Rd., Taipei City, Taiwan 110, Taiwan
Baxalta (Thailand) Limited	Thailand	THB 100 Ordinary	1550 Thanapoom Tower, 11th Floor, New Petchburi Road, Makkasan Sub-district, Ratchatewi District, Bangkok 10400
Baxalta Tunisia S.à.r.l.	Tunisia	DT 100.00 Common	21, Avenue Jugurtha Mutuelleville, 1002 Tunis Belvédère, Tunis
Eczacibasi Baxalta Hastane Urunleri Sanayi ve Ticaret A.S.****	Turkey	Group A shares TL 1.00 — 50.00%	Ayazağa Mah. Kemerburgaz Cad. No: 23 Sarıyer, Istanbul, Turkey
		Group B shares TL 1.00 — 50.00%	
Shire Ilac Ticaret Limited Sirketi	Turkey	TRL25.00 Ordinary	18th Floor, APA GIZ Plaza, Büyükdere Caddesi, No 191, 34330 Levent, Istanbul, Turkey
Baxalta Ukraine LLC	Ukraine	UAH Equity Interest	29 Berezniakivska St., Kyiv 02098, Ukraine
Shire Ukraine LLC	Ukraine	UAH Equity Interest	TC Gulliver, Sportyvna Square, 1a, Kiev, 01023, Ukraine
Auralis Limited	United Kingdom	£0.01 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Baxalta UK Holdco Limited	United Kingdom	£1.00 Ordinary	20 Kingston Road, Staines, UK, TW18 4LG
Baxalta UK Investments Limited	United Kingdom	£1.00 Ordinary	20 Kingston Road, Staines, UK, TW18 4LG
Baxalta UK Limited	United Kingdom	£1.00 Ordinary	20 Kingston Road, Staines, UK, TW18 4LG
Dyax Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Lumena Pharma UK Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Monmouth Pharmaceuticals Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
NPS Pharma UK Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Rybar Laboratories Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Biopharmaceuticals Holdings	United Kingdom	£0.05 Income Access — <0.01%	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
		£0.05 Ordinary — >99.99%	
		£0.05 Preferred Share — <0.01%	
		£0.05 Voting Share — <0.01%	
Shire Europe Finance	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Europe Limited	United Kingdom	US$1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Global Finance	United Kingdom	US$1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Holdings Europe Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Holdings UK Canada Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Holdings UK Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Human Genetic Therapies Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Human Genetic Therapies U.K. Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Investments & Finance (U.K.) Company	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Pharmaceutical Contracts Limited	United Kingdom	£0.01 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Pharmaceutical Development Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Pharmaceuticals Group	United Kingdom	£0.0001 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Pharmaceuticals Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire Pharmaceuticals Services Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire UK Investments Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Shire U.S. Investments	United Kingdom	US$1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Sigma-Tau Pharma Limited	United Kingdom	£1.00 Ordinary	20 Kingston Road, Staines, UK, TW18 4LG
Sparkleflame Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
The Endocrine Centre Limited	United Kingdom	£1.00 Ordinary	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
Viropharma Limited	United Kingdom	£1.00 Ordinary — 0.001%	Hampshire International Business Park, Chineham, Basingstoke, Hampshire, RG24 8EP
		£1.00 Redeemable Preference — 99.999%	
AesRX, LLC	United States	US$ — no par value	1209 Orange Street Wilmington, DE 19801

31. List of subsidiaries (continued)

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Amsterdam Newco, Inc	United States	Common Stock US$0.01	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Armagen Technologies, inc***	United States	Series A preferred stock	26679 Agoura Rd #100, Calabasas, CA 91302, U.S.A.
Baxalta Export Corporation	United States	US$0.01 Ordinary	1209 Orange Street Wilmington, DE 19801
Baxalta Holdings LLC	United States	US$ — no par value	1200 Lakeside Drive, Bannockburn, IL 60015 U.S.A.
Baxalta Incorporated	United States	US$0.01 Ordinary	The Corporation Trust Company 1209 Orange Street, Corporation Trust Center Wilmington DE 19801 U.S.A.
Baxalta Mexico Holding LLC	United States	US$ — no par value	1209 Orange Street Wilmington, DE 19801, U.S.A.
Baxalta Singapore Holding LLC	United States	US$ — no par value	1209 Orange Street Wilmington, DE 19801, U.S.A.
Baxalta U.S. Inc.	United States	US$0.01 Ordinary	1200 Lakeside Drive, Bannockburn, IL 60015 U.S.A.
Baxalta World Trade LLC	United States	US$ — no par value	1209 Orange Street Wilmington, DE 19801, U.S.A.
Baxalta Worldwide LLC	United States	US$ — no par value	1209 Orange Street Wilmington, DE 19801, U.S.A.
BearTracks, Inc.	United States	US$0.001 Ordinary	1209 Orange Street Wilmington, DE 19801, U.S.A.
Bikam Pharmaceuticals, Inc.	United States	US$0.01 Ordinary	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
BioLife Plasma LLC	United States	US$ — no par value	1209 Orange Street Wilmington, DE 19801, U.S.A.
BioLife Plasma Services LP	United States	Partnership Interest	1200 Lakeside Drive, Bannockburn, IL 60015 U.S.A.
Cinacalcet Royalty Sub LLC	United States	US$10.00 Equity Interest	1209 Orange Street, Wilmington DE 19801, U.S.A.
Dyax Corp.	United States	Common Stock US$0.01	Corporation Trust Company, 1209 Orange Street, Corporation Trust Center, Wilmington DE 19801, U.S.A.
FerroKin BioSciences, Inc.	United States	US$0.01 Ordinary	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Foresight Biotherapeutics, Inc.	United States	US$0.01 Common Stock	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
JPT Peptide Technologies Inc	United States	US$1.00 Common Stock	C T Corporation System 4701 Cox Road — Suite 285 Henrico County Glen Allen, Virginia 23060-6802
Knight Newco 1, Inc.	United States	US$0.01 Common	1209 Orange Street, Wilmington DE 19801, U.S.A.
Laboratorios Baxalta S.A.	United States	US$0.01 Ordinary	1209 Orange Street Wilmington, DE 19801
Lotus Tissue Repair Inc	United States	US$0.001 Common — 29.641%	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
		US$0.001 Preferred — 70.359%	
Lumena Pharmaceuticals LLC	United States	US$ Ordinary — no par value	1209 Orange Street, Wilmington DE 19801, U.S.A.
Meritage Pharma, Inc.	United States	US$0.001 Common Stock	300 Shire Way, Lexington, MA 02421 U.S.A.
NPS Pharma Holdings U.S., Inc.	United States	US$0.0001 Common	1209 Orange Street, Wilmington DE 19801, U.S.A.
NPS Services, L.C.	United States	Partnership Interest	The Corporation Trust Company of Nevada, 701 S. Carson Street, Suite 200, Carson City NV 89701, U.S.A.
Rare Disease Charitable Foundation	United States	Charitable Foundation	C T Corporation System 116 Pine Street — Suite 320 Dauphin County Harrisburg, Pennsylvania 17101
SARcode Bioscience Inc.	United States	US$0.01 Ordinary	The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire Brandywine LLC	United States	US$1.00 Ordinary	The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire Development LLC	United States	US$ Common — nil par value	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
Shire Executive Services LLC	United States	US$ — no par value	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
Shire Holdings U.S. AG	United States	US$0.01 Common stock	The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire Human Genetic Therapies Securities Corporation	United States	US$0.01 Ordinary	The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, U.S.A.

Name	Country	Share class and proportion of authorized nominal value represented (if not 100%)	Address
Shire Human Genetic Therapies, Inc.	United States	US$0.01 Common Stock	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Shire Incorporated	United States	US$ Common — no par value	The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire Invicta U.S. Inc	United States	US$0.01 common stock	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Shire LLC	United States	US$ — no par value	C T Corporation System 306 West Main Street — Suite 512 Franklin County Frankfort, Kentucky 40601
Shire North American Group Inc.	United States	US$0.01 Common Stock	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
Shire Orphan Therapies LLC	United States	US$0.001 Common Stock	1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire Pharmaceutical Development U.S. Inc	United States	US$0.01 Common Stock	CSC — Lawyers Incorporating Service Company, 11 E Chase Street, Baltimore MD 21202, U.S.A.
Shire Pharmaceuticals LLC	United States	US$ Common — no par value	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Shire Properties U.S.	United States	Partnership Interest	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
Shire Regenerative Medicine LLC*	United States	US$0.01 Common	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Shire Regulatory Inc	United States	US$ Common — no par value	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
Shire Supplies U.S. LLC	United States	Partnership Interest	Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington DE 19808, U.S.A.
Shire U.S. Holdings LLC	United States	US$0.01 Ordinary	The Corporation Trust Company, Corporation Trust Centre, 1209 Orange Street, Wilmington, New Castle County DE 19801, U.S.A.
Shire U.S. Inc	United States	US$ Common — no par value	The Corporation Trust Company 1209 Orange Street — Corporation Trust Center New Castle County Wilmington, Delaware 19801
Shire U.S. Investment Inc	United States	US$1.00 Common	1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire U.S. Manufacturing Inc	United States	US$1.00 Common	CSC — Lawyers Incorporating Service Company, 11 E Chase Street, Baltimore MD 21202, U.S.A.
Shire ViroPharma Incorporated	United States	US$0.01 Common	1209 Orange Street, Wilmington DE 19801, U.S.A.
Shire-NPS Pharmaceuticals, Inc.	United States	US$0.01 Common Stock	The Corporation Trust Center 1209 Orange Street, The City of Wilmington, County of New Castle, U.S.A.
VCO Incorporated	United States	US$0.01 Ordinary	1209 Orange Street, Wilmington, DE 19801, U.S.A.
Viropharma Biologics Inc	United States	US$0.01 Ordinary	1209 Orange Street, Wilmington, DE 19801, U.S.A.
Viropharma Holdings LLC	United States	Sole member	1209 Orange Street, Wilmington, DE 19801, U.S.A.
VPDE Incorporated	United States	US$0.01 Ordinary	1105 N. Market Street, Suite 1300, Wilmington, DE 19801, U.S.A.
VPINT Incorporated	United States	US$0.01 Ordinary	1105 N. Market Street, Suite 1300, Wilmington, DE 19801, U.S.A.
Shire Pharmaceuticals Investments (British Virgin Islands) Limited	Virgin Islands, British	US$1.00 Ordinary — 97.708%	Romasco Place, Wickhams Cay 1, P. O. Box 3140, Road Town, Tortola, VG1110, Virgin Islands, British
		US$1.00 Preference — 2.292%	

With the exception of those entities indicated, all subsidiary undertakings of Shire plc are 100% indirectly beneficially owned.
All subsidiary undertakings are consolidated in the consolidated financial statements of Shire plc.
*these entities are 100% directly beneficially owned
**this entity is 96% indirectly beneficially owned
***this entity is 22.13% indirectly beneficially owned
****this entity is 50.00% indirectly beneficially owned
*****this entity is 51.00% indirectly beneficially owned
******this entity is 26.01% indirectly beneficially owned
*******this entity is 13.26% indirectly beneficially owned

31. List of subsidiaries (continued)

Company Name	Location of Branch/Representative Office
Baxalta Export Services GmbH	Algeria
Shire (Shanghai) Pharmaceuticals Consultancy Co. Ltd.	China
Baxalta Export Services GmbH	Egypt
Baxalta UK Limited	Ireland
Shire Holdings Europe B.V.	Ireland
Shire Luxembourg Intellectual Property No.2 S.à.r.l.	Ireland
Shire Luxembourg Intellectual Property No.3 S.à.r.l.	Ireland
Shire Luxembourg Intellectual Property S.à.r.l.	Ireland
Shire Biopharmaceuticals Holdings Ireland Limited	Ireland
Shire plc	Ireland
Baxalta GmbH	Norway
Shire Pharmaceuticals Ireland Limited	Norway
Baxalta World Trade LLC	Puerto Rico
Shire društvo s ograničenom odgovornošću za trgovinu i usluge	Romania
Shire Pharmaceuticals Contracts Limited	Russia
Baxalta Export Services GmbH	Saudi Arabia
Baxalta Manufacturing S.à.r.l.	Singapore
Shire Sweden Holdings S.à.r.l.	Sweden
Shire Pharmaceuticals Ireland Limited	Switzerland
Baxalta Export Services GmbH	United Arab Emirates
Shire Services BVBA	United Kingdom
Shire Holdings Ireland UC	United Kingdom
Shire Holdings Limited	United Kingdom
Shire Pharmaceuticals Investments 2007 UC	United Kingdom
Baxalta Singapore Pte Ltd	Vietnam

Other financial information

Non GAAP Measures

This Annual Report contains financial measures not prepared in accordance with US GAAP. These measures are referred to as "Non GAAP" measures and include: Non GAAP operating income; Non GAAP net income; Non GAAP diluted earnings per ADS; Non GAAP cash generation; Non GAAP free cash flow, Non GAAP net debt, Non GAAP EBITDA and Non GAAP EBITDA margin (excluding royalties and other revenues and cost of sales related to contract manufacturing revenues).

The Non GAAP measures exclude the impact of certain specified items that are highly variable, difficult to predict, and of a size that may substantially impact Shire's operations. Upfront and milestone payments related to in-licensing and acquired products that have been expensed as R&D are also excluded as specified items as they are generally uncertain and often result in a different payment and expense recognition pattern than ongoing internal R&D activities. Intangible asset amortization has been excluded from certain measures to facilitate an evaluation of current and past operating performance, particularly in terms of cash returns, and is similar to how management internally assesses performance. The Non GAAP financial measures are presented in this Annual Report as Shire's management believes that they will provide investors with an additional analysis of Shire's results of operations, particularly in evaluating performance from one period to another.

Shire's management uses Non GAAP financial measures to make operating decisions as they facilitate additional internal comparisons of Shire's performance to historical results and to competitor's results, and provides them to investors as a supplement to Shire's reported results to provide additional insight into Shire's operating performance. Shire's Remuneration Committee uses certain key Non GAAP measures when assessing the performance and compensation of employees, including Shire's executive directors.

The Non GAAP financial measures used by Shire may be calculated different from, and therefore may not be comparable to, similarly titled measures used by other companies — refer to the section "Non GAAP Financial Measure Descriptions" below for additional information. In addition, these Non GAAP financial measures should not be considered in isolation as a substitute for, or as superior to, financial measures calculated in accordance with US GAAP, and Shire's financial results calculated in accordance with US GAAP and reconciliations to those financial statements should be carefully evaluated.

Non GAAP Financial Measure Descriptions

Where applicable the following items, including their tax effect, have been excluded when calculating Non GAAP earnings:

Amortization and asset impairments:

- Intangible asset amortization and impairment charges; and
- Other than temporary impairment of investments.

Acquisitions and integration activities:

- Up-front payments and milestones in respect of in-licensed and acquired products;
- Costs associated with acquisitions, including transaction costs, fair value adjustments on contingent consideration and acquired inventory;
- Costs associated with the integration of companies; and
- Noncontrolling interests in consolidated variable interest entities.

Divestments, reorganizations and discontinued operations:

- Gains and losses on the sale of non-core assets;
- Costs associated with restructuring and reorganization activities;
- Termination costs; and
- Income/(losses) from discontinued operations.

Legal and litigation costs:

- Net legal costs related to the settlement of litigation, government investigations and other disputes (excluding internal legal team costs).

Additionally, in any given period Shire may have significant, unusual or non-recurring gains or losses which it may exclude from its Non GAAP earnings for that period. When applicable, these items would be fully disclosed and incorporated into the required reconciliations from US GAAP to Non GAAP measures.

Depreciation, which is included in Cost of product sales, R&D and SG&A costs in our US GAAP results, has been separately disclosed for presentational purposes.

Cash generation represents net cash provided by operating activities, excluding up-front and milestone payments for in-licensed and acquired products, tax and interest payments.

Free cash flow represents net cash provided by operating activities, excluding up-front and milestone payments for in-licensed and acquired products, but including capital expenditure in the ordinary course of business.

Non GAAP net debt represents cash and cash equivalents less short and long term borrowings, capital leases and other debt.

A reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP is presented on pages 186 to 187.

Average exchange rates used by Shire for the three months ended December 31, 2016 were $1.26:£1.00 and $1.09:€1.00 (2015: $1.52:£1.00 and $1.09:€1.00). Average exchange rates used by Shire for the twelve months ended December 31, 2016 were $1.36:£1.00 and $1.11:€1.00 (2015: $1.53:£1.00 and $1.11:€1.00).

Non GAAP Adjusted ROIC reflects the definition used by the Company in its corporate scorecard. This definition aims to measure true underlying economic performance of the Company, by making a number of adjustments to ROIC as derived from the Company's Non GAAP financial results including:

- Adding back to Non GAAP operating income all R&D expenses and operating lease costs incurred in the period;
- Capitalizing on the Group's balance sheet historical, cumulative R&D, in process R&D and intangible asset impairment charges and operating lease costs which previously have been expensed;
- Deducting from Non GAAP operating income and amortization charge for the above capitalized costs based on the estimated commercial lives of the relevant products;
- Excluding the income statement and balance sheet impact of non-operating assets (such as surplus cash and non-strategic investments); and
- Taxing the resulting adjusted operating income at the underlying Non GAAP effective tax rate.

Non GAAP reconciliations (unaudited)

Reconciliation of US GAAP net income to Non GAAP EBITDA and Non GAAP Operating income:

12 months ended December 31	2016 $'M	2015 $'M
US GAAP Net income	**327.4**	1,303.4
Add back/(deduct):		
Loss from discontinued operations, net of tax	**276.1**	34.1
Equity in losses of equity method investees, net of taxes	**8.7**	2.2
Income taxes	**(126.1)**	46.1
Other expense, net	**476.8**	33.7
US GAAP Operating income from continuing operations	**962.9**	1,419.5
Add back/(deduct) Non GAAP adjustments:		
Acquisition and integration activities	**2,111.9**	70.9
Amortization of acquired intangible assets	**1,173.4**	498.7
Depreciation	**292.9**	138.5
Divestments and reorganizations	**123.8**	83.2
Legal and litigation costs	**16.3**	9.5
Impairment of intangible assets	**8.9**	643.7
Other Non GAAP adjustments	**20.0**	60.1
Non GAAP EBITDA	**4,710.1**	2,924.1
Depreciation	**(292.9)**	(138.5)
Non GAAP Operating income	**4,417.2**	2,785.6
Net income margin[1]	**3%**	20%
Non GAAP EBITDA margin[2]	**39%**	43%

[1] Net income as a percentage of total revenues.
[2] Non GAAP EBITDA as a percentage of product sales, excluding royalties and other revenues, and cost of contract manufacturing revenues.

Reconciliation of US GAAP product sales to Non GAAP Gross Margin:

12 months ended December 31	2016 $'M	2015 $'M
US GAAP Product Sales	**10,885.8**	6,099.9
(Deduct)/add back:		
Cost of sales (US GAAP)	**(3,816.5)**	(969.0)
Cost of contract manufacturing revenue	**98.1**	–
Amortization of inventory fair value step-up	**1,118.0**	31.1
Inventory write-down relating to U.S. manufacturing site closure	**18.9**	–
One -time employee related costs	**10.0**	7.1
Depreciation	**160.8**	46.1
Non GAAP Gross Margin	**8,475.1**	5,215.2
Non GAAP Gross Margin %[1]	**77.9%**	85.5%

[1] Non GAAP Gross Margin as a percentage of product sales.

Reconciliation of US GAAP diluted earnings per ADS to Non GAAP diluted earnings per ADS:

12 months ended December 31	2016 $'M	2015 $'M
US GAAP diluted earnings per ADS	**1.27**	6.59
Amortization and asset impairments	**4.57**	5.78
Acquisition and integration costs	**8.52**	0.36
Divestments, reorganizations and discontinued operations	**1.95**	0.62
Legal and litigation costs	**0.06**	0.04
Other Non GAAP adjustments	**0.08**	0.3
Tax effect of adjustments above	**(3.35)**	(2.01)
Non GAAP diluted earnings per ADS	**13.10**	11.68

Reconciliation of US GAAP net cash provided by operating activities to Non GAAP cash generation:

12 months ended December 31	2016 $'M	2015 $'M
Net cash provided by operating activities	**2,658.9**	2,337
Tax and interest payments, net	**715.5**	85.2
Up front payments for in-licensed products	**90.0**	–
Non GAAP cash generation	**3,464.4**	2,422.2

Reconciliation of US GAAP net cash provided by operating activities to Non GAAP free cash flow:

12 months ended December 31	2016 $'M	2015 $'M
Net cash provided by operating activities	**2,658.9**	2,337.0
Capital expenditure	**(646.4)**	(114.7)
Up front payments for in-licensed products	**90.0**	–
Non GAAP free cash flow	**2,102.5**	2,222.3

Non GAAP net debt comprises::

12 months ended December 31	2016 $'M	2015 $'M
Cash and cash equivalents	**528.8**	135.5
Long term borrowings (excluding capital leases)	**(19,552.6)**	(69.9)
Short term borrowings (excluding capital leases)	**(3,061.6)**	(1,511.5)
Capital leases and other debt	**(353.6)**	(13.4)
Non GAAP net debt	**(22,439.0)**	(1,459.3)

Shareholder information

E-communications

Shire offers shareholders the ability to access shareholder documents, such as its Annual Reports and Notices of AGMs, by way of e-communications as an alternative to receiving paper copies through the post.

To register for e-communications, simply log onto www.shareview.co.uk and follow the online instructions. To start, you will require your shareholder reference number which you will find on your share certificate or dividend confirmation statement. Following registration, you will need to alter your mailing preference to e-communications and confirm your email address. Shareholders who do not elect to receive documents or notifications via e-communications will continue to receive paper copies.

Shareholder security

Many companies have become aware that their shareholders have received unsolicited phone calls or correspondence concerning investment matters. These are typically from overseas based "brokers" who target U.K. shareholders, offering to sell them what often turn out to be worthless or high risk shares in U.S. or U.K. investments.

Shareholders are advised to be very wary of any unsolicited advice, offers to buy shares at a discount or offers of free company reports. If you receive any unsolicited investment advice:

- make sure you get the name of the person and organization
- check that they are properly authorized by the FCA before getting involved by visiting www.fca.org.uk/register/
- report the matter to the FCA either by calling 0800 111 6768 or by completing an online form at: www.fca.org.uk/consumers/scams/report-scam/share-fraud-form

If you deal with an unauthorized firm, you will not be eligible to receive payment under the Financial Services Compensation Scheme.

Details of any share dealing facilities that the Company endorses will be included in Company mailings.

More detailed information on this or similar activity can be found on the FCA website: www.fca.org.uk/consumers/scams

This warning has been issued by the Financial Conduct Authority and endorsed by the Institute of Chartered Secretaries and Administrators.

Financial calendar (subject to change)

Second interim dividend payment	April 2017
Annual General Meeting	April 2017
First quarter results announcement	May 2017
Second quarter results announcement	August 2017
First interim dividend payment	October 2017
Third quarter results announcement	October 2017
Annual results announcement	February 2018
Second interim dividend payment	April 2018

Dividends

Shareholders are able to choose how they receive their dividends:

- directly into their bank account*; or
- by check.

* Shire preferred option.

The quickest and most efficient way to receive your dividends is to have them paid directly into your bank account. Those selecting this payment method receive a dividend confirmation statement with each payment. To change how you receive your dividends, either log on to www.shareview.co.uk or contact Equiniti.

Income Access Share arrangements

Holders of Ordinary Shares are reminded that, in order to receive U.K. sourced dividends via Shire's Income Access Share arrangements ("IAS Arrangements"), they need to submit a valid IAS Arrangements election form to the Company's Registrar, Equiniti. Holders of Ordinary Shares are advised that:

- any previous elections made using versions of the IAS Arrangements election form in use prior to February 16, 2016, and any elections deemed to have been made prior to April 28, 2016, are no longer valid
- if they do not elect, or have not elected using the newly formatted IAS Arrangements election forms published on or after February 16, 2016, to receive U.K. sourced dividends via Shire's IAS Arrangements, their dividends will be Irish sourced and therefore incur Irish dividend withholding tax, subject to applicable exemptions

Internet links to the newly formatted IAS Arrangements election forms can be found at: http://investors.shire.com/shareholder-information/shareholder-forms.aspx

ShareGift

Shareholders with a small number of shares, the value of which makes it uneconomical to sell, may wish to consider donating them to the charity ShareGift (registered charity no. 1052686). Donated shares are aggregated and sold by ShareGift, the proceeds being passed on to a wide range of charities.

Find out more about ShareGift:

Website: www.sharegift.org
Email: help@sharegift.org
Tel: +44 (0)20 7930 3737

Offices

Registered Office
22 Grenville Street
St Helier
JE4 8PX
Jersey
Registered in Jersey (No. 99854)

Group Headquarters
5 Riverwalk
Citywest Business Campus
Dublin 24
Republic of Ireland
Tel: +353 1429 7700
Fax: +353 1429 7701

International Operational Headquarters
Zahlerweg 10
CH-6300
Zug
Switzerland
Tel: +41 412 884000
Fax: +41 412 884001

U.S. Operational Headquarters
300 Shire Way
Lexington
Massachusetts 02421
U.S.A.
Tel: +1 781 482 9222

Website

www.shire.com

Investor Relations

Email: investorrelations@shire.com

Ian Karp
Head of U.S. Investor Relations
Tel: +1 781-482-9018
Email: ikarp@shire.com

Robert Coates
Head of International Investor Relations
Tel: +44 1256 894874
Email: rcoates@shire.com

Registrar

All administrative inquiries relating to shareholdings should be addressed to Equiniti, clearly stating the registered shareholder's name and address.

Equiniti
Shire Shareholder Services
Equiniti (Jersey) Limited
c/o Equiniti Limited
Aspect House
Spencer Road
Lancing
BN99 6DA
U.K.

Shareholder helpline
Overseas:
Tel: +44 121 415 7593

U.K.:
Tel: 0371 384 2553

Lines are open Monday to Friday 8:30 am to 5:30 pm (U.K. time) excluding U.K. Bank Holidays.

American Depositary Shares

The Company's American Depositary Shares ("ADSs"), each representing three Ordinary Shares, are listed on the NASDAQ Global Select Market under the symbol "SHPG".

The Company files reports and other documents with the Securities and Exchange Commission ("SEC") that are available for inspection and copying at the SEC's public reference facilities or can be obtained by writing to the Company Secretary.

Citibank, N.A. is the depository for Shire ADSs. All inquiries concerning ADS records, certificates or the transfer of Ordinary Shares into ADSs should be addressed to:

Citibank shareholder services
P.O. Box 43077
Providence, Rhode Island
02940-3077
U.S.A.

General inquiries
Toll free in U.S.:
1-877-Citi-ADR (248-4237)

From outside the U.S.:
1-781-575-4555

E-mail: citibank@shareholders-online.com

Cautionary statements

Statements included herein that are not historical facts, including without limitation statements concerning future strategy, plans, objectives, expectations and intentions, the anticipated timing of clinical trials and approvals for, and the commercial potential of, In-line or pipeline products, are forward-looking statements. Such forward-looking statements involve a number of risks and uncertainties and are subject to change at any time. In the event such risks or uncertainties materialize, Shire's results could be materially adversely affected. The risks and uncertainties include, but are not limited to, the following:

- Shire's products may not be a commercial success;
- increased pricing pressures and limits on patient access as a result of governmental regulations and market developments may affect Shire's future revenues, financial condition and results of operations;
- Shire conducts its own manufacturing operations for certain of its products and is reliant on third-party contract manufacturers to manufacture other products and to provide goods and services. Some of Shire's products or ingredients are only available from a single approved source for manufacture. Any disruption to the supply chain for any of Shire's products may result in Shire being unable to continue marketing or developing a product or may result in Shire being unable to do so on a commercially viable basis for some period of time;
- the manufacture of Shire's products is subject to extensive oversight by various regulatory agencies. Regulatory approvals or interventions associated with changes to manufacturing sites, ingredients or manufacturing processes could lead to significant delays, an increase in operating costs, lost product sales, an interruption of research activities or the delay of new product launches;
- certain of Shire's therapies involve lengthy and complex processes, which may prevent Shire from timely responding to market forces and effectively managing its production capacity;
- Shire has a portfolio of products in various stages of research and development. The successful development of these products is highly uncertain and requires significant expenditures and time, and there is no guarantee that these products will receive regulatory approval;
- the actions of certain customers could affect Shire's ability to sell or market products profitably. Fluctuations in buying or distribution patterns by such customers can adversely affect Shire's revenues, financial conditions or results of operations;
- Shire's products and product candidates face substantial competition in the product markets in which it operates, including competition from generics;
- adverse outcomes in legal matters, tax audits and other disputes, including Shire's ability to enforce and defend patents and other intellectual property rights required for its business, could have a material adverse effect on the combined company's revenues, financial condition or results of operations;
- inability to successfully compete for highly qualified personnel from other companies and organizations;
- failure to achieve the strategic objectives with respect to Shire's acquisition of NPS Pharmaceuticals, Inc., Dyax Corp. ("Dyax") or Baxalta Inc. ("Baxalta") may adversely affect Shire's financial condition and results of operations;
- Shire's growth strategy depends in part upon its ability to expand its product portfolio through external collaborations, which, if unsuccessful, may adversely affect the development and sale of its products;
- a slowdown of global economic growth, or economic instability of countries in which Shire does business, as well as changes in foreign currency exchange rates and interest rates, that adversely impact the availability and cost of credit and customer purchasing and payment patterns, including the collectability of customer accounts receivable;
- failure of a marketed product to work effectively or if such a product is the cause of adverse side effects could result in damage to the Shire's reputation, the withdrawal of the product and legal action against Shire;
- investigations or enforcement action by regulatory authorities or law enforcement agencies relating to Shire's activities in the highly regulated markets in which it operates may result in significant legal costs and the payment of substantial compensation or fines;
- Shire is dependent on information technology and its systems and infrastructure face certain risks, including from service disruptions, the loss of sensitive or confidential information, cyber-attacks and other security breaches or data leakages that could have a material adverse effect on Shire's revenues, financial condition or results of operations;
- Shire incurred substantial additional indebtedness to finance the Baxalta acquisition, which may decrease its business flexibility and increase borrowing costs;
- difficulties in integrating Dyax or Baxalta into Shire may lead to the combined company not being able to realize the expected operating efficiencies, cost savings, revenue enhancements, synergies, or other benefits at the time anticipated or at all; and
- a further list and description of risks, uncertainties and other matters can be found on pages 55 to 65 of this Annual Report.

All forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by this cautionary statement. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof. Except to the extent otherwise required by applicable law, we do not undertake any obligation to update or revise forward-looking statements, whether as a result of new information, future events or otherwise.

Shire plc
Report and financial statements

For the year ended December 31, 2016

Contents

Company Information

Directors

Dominic Blakemore
Olivier Bohuon
William Burns
Ian Clark
Gail Fosler
Dr Steven Gillis
Dr David Ginsburg
Susan Kilsby
Sara Mathew
Anne Minto OBE
Dr Flemming Ornskov
Jeffrey Poulton
Albert Stroucken

Secretary

Bill Mordan

Registered office

22 Grenville Street
St Helier
Jersey
JE4 8PX
Channel Islands

Corporate headquarters

5 Riverwalk
Citywest Business Campus
Dublin 24
Republic of Ireland

Auditor

Deloitte LLP
London
United Kingdom

Directors' report

For the year ended December 31, 2016

The Directors present their annual report and the audited financial statements for the year ended December 31, 2016.

Principal activity and business review

Shire plc (the "Company") and its subsidiaries (collectively referred to as either "Shire", or the "Group") is the leading global biotechnology company focused on serving people with rare diseases.

The Company is the ultimate parent of the Group and its principal activity is that of a holding company.

The Group has grown both organically and through acquisition, completing a series of major transactions that have brought therapeutic, geographic and pipeline growth and diversification. The Group will continue to conduct its own research and development ("R&D") focused on rare diseases, as well as evaluate companies, products and pipeline opportunities that offer a strategic fit and have the potential to deliver value to all of the Group's stakeholders: patients, physicians, policy makers, payers, partners, investors and employees.

The principal legislation under which the Company operates is the Companies (Jersey) Law 1991 and regulations made thereunder. The Ordinary Shares of the Company are listed on the London Stock Exchange in the UK, and American Depositary Shares ("ADS"), representing three Ordinary Shares of the Company, (evidenced by an American Depositary Receipt issued by Shire's Depositary, Citibank, N.A.) are listed on the NASDAQ Global Select Market in the U.S.A.

Business review

The Business review of the Group can be found in the consolidated financial statements and Annual Report and Accounts of the Company for the year to December 31, 2016, prepared in accordance with United Kingdom Listing Authority requirements (the "Shire Annual Report"); in the Chairman's review on pages 4 and 5; the Chief Executive Officer's review on pages 6 to 9; and the Review of our Business on pages 43 to 53. The Shire Annual Report also provides a description of the principal risks and uncertainties facing the Company and the Group, as well as the Group's risk management objectives and policies that are in place to assist in mitigating the potential impact.

During the year, the Company continued in its capacity as the parent company for the Group in the management of its subsidiaries.

On January 22, 2016, Shire acquired Dyax Corp in an all-cash transaction valued at approximately $5.9 billion, comprised of $37.30 in cash per Dyax share. Dyax shareholders may receive additional value through a non-tradable contingent value right (CVR) that will pay $4.00 in cash per Dyax share upon approval of DX-2930 for HAE, representing a potential additional $645.9 million in aggregate contingent consideration.

Additionally, on June 3, 2016, the Group completed its acquisition of Baxalta Inc, ("Baxalta") for $32.4 billion, representing the preliminary fair value of purchase consideration. The Group's Consolidated Financial Statements include the results of Baxalta from the date of acquisition. For further details regarding the acquisition, please refer to Note 4 of the consolidated financial statements, Business Combinations. As part of this, Shire plc acquired 611.34 Ordinary Shares in Baxalta in exchange for 305,213,250 Ordinary Shares in the company, for total consideration of $19.4 billion.

The Company is tax resident in the Republic of Ireland.

Key performance indicators

The Company's key performance indicators are the same as the Group's. For details of the Group's key performance indicators see page 16 in the Shire Annual Report.

Income Access Share arrangements

In 2008, Shire put in place and continues to operate Income Access Share ("IAS") arrangements enabling shareholders to choose whether they receive their dividends from the company, which is tax resident in the Republic of Ireland, or from a company tax resident in the UK. Further details of the IAS arrangements can be found in Note 27 of the Shire Annual Report.

Results and dividends

A loss on ordinary activities before taxation of $173.3 million was recorded for the year ended December 31, 2016 (year ended December 31, 2015: loss before tax of $91.5 million). The increase in the loss is primarily due to an increase of $44 million in interest payable on loans made within the Group and $18 million of unwinding discount on provisions.

The net assets of the Company increased from $12,075.8 million for the year ended December 31, 2015 to $31,666.1 million for the year ended December 31, 2016, primarily as a result of a share issue made in the year and credits to shareholders' funds in respect of share based compensation awards held by employees in other group companies partially offset by the loss recorded in the year.

Dividends paid and dividend policy

The Company paid dividends amounting to $20.7 million in the year (2015: $6.8 million). In accordance with IAS arrangements, Shire Biopharmaceuticals Holdings paid dividends totaling $150.6 million (2015: $127.6 million) to those shareholders who choose to receive their dividends from a company tax resident in the UK.

A first interim dividend for the six months to June 30, 2016 of 4.63 cents (3.51 pence) per Ordinary Share, equivalent to 13.89 cents per ADS, was paid in October 2016. The Board has resolved to pay a second interim dividend of 25.70 cents (20.64 pence) per Ordinary Share equivalent to 77.10 cents per ADS for the six months to December 31, 2016.

This is consistent with Shire's stated policy of paying a dividend semi-annually, set in U.S. cents per Ordinary Share. Typically, the first interim payment each year will be higher than the previous year's first interim U.S.D. dividend. Dividend growth for the full year will be reviewed by the Board when the second interim dividend is determined.

Liquidity, cash flow and going concern

The Company and the Group's business activities, together with the factors likely to affect its future development, performance and position are set out in the Chairman's review, Chief Executive Officer's review and Financial review. The financial position of the Company and the Group, its cash flows, liquidity position and borrowing facilities are described in the Liquidity and capital resources section of the Financial review of the Shire Annual Report and also see Note 15. The Financial review also includes information in respect of the Group's objectives, policies and processes for managing capital; its financial risk management objectives; details of its hedging activity; and its exposures to credit risk and liquidity risk.

The Company's funding requirements depend on a number of factors, including the timing and extent of its development programs; corporate, business and product acquisitions; the level

of resources required for the expansion of certain manufacturing and marketing capabilities as the product base expands; increases in accounts receivable and inventory which may arise with any increase in product sales; competitive and technological developments; the timing and cost of obtaining required regulatory approvals for new products; the timing and quantum of milestone payments on business combinations, in-licenses and collaborative projects; the timing and quantum of tax and dividend payments; the timing and quantum of purchases by the Employee Benefit Trust ("EBT") of Shire shares in the market to satisfy awards granted under Shire's employee share plans; and the amount of cash generated from sales of Shire's products and royalty receipts.

An important part of the Group's business strategy is to protect its products and technologies through the use of patents, proprietary technologies and trademarks, to the extent available. The Company intends to defend its intellectual property and as a result may need cash for funding the cost of litigation.

The Company finances its activities through cash generated from operating activities; credit facilities; private and public offerings of equity and debt securities; and the proceeds of asset or investment disposals. The Group's balance sheet includes $528.8 million of cash and cash equivalents as of December 31, 2016.

The Group has a revolving credit facility ("RCF") of $2,100 million, which matures in 2021, $450 million of which was utilized as of December 31, 2016. The RCF incorporates a $250 million U.S. Dollar and Euro swingline facility operating as a sub-limit thereof.

On September 23, 2016, Shire Acquisitions Investments Ireland Designated Activity Company ("SAIIDAC"), a wholly owned subsidiary of the Company, issued senior notes guaranteed by Shire plc, with a total aggregate principal amount of $12.1 billion. On December 1, 2016, Baxalta guaranteed the outstanding notes issued by SAIIDAC.

In addition, in connection with the acquisition of Baxalta, on June 3, 2016, Shire plc guaranteed senior notes issued by Baxalta totaling $5.0 billion and originally assumed $336.0 million of capital lease obligations. The details of these senior notes are presented in Note 18, Borrowings and Capital Lease Obligations, of the Shire Annual Report.

Further in connection with the acquisitions of Dyax and Baxalta, respectively, the Group entered into a $5.6 billion term loan facility in November 2015 and an $18.0 billion bridge loan in January 2016. The November 2015 term loan facility was fully utilized as of December 31, 2016 in the amount of $5.6 billion. The bridge loan was fully repaid and canceled subsequent to the issuance of $12.1 billion senior notes on September 23, 2016. The details of these facility agreements are presented in Note 18, Borrowings and Capital Lease Obligations, of the Shire Annual Report.

In addition, the Group also has access to certain short-term uncommitted lines of credit which are available to utilize from time to time to provide short-term cash management flexibility. As of December 31, 2016, these lines of credit were not utilized.

The Company may also engage in financing activities from time to time, including accessing the debt or equity capital markets.

The Directors have a reasonable expectation that the Company and the Group has adequate resources to continue in operational existence for the foreseeable future. Accordingly the Directors continue to adopt the going concern basis of accounting in preparing the financial statements. Further details regarding the adoption of the going concern basis can be found in the accounting policies in the notes to the financial statements.

Directors

The Directors who served during the year and up to the date of signing these financial statements are shown below:

Dominic Blakemore	
Olivier Bohuon	
William Burns	
Ian Clark	(appointed January 03, 2017)
Gail Fosler	(appointed June 03, 2016)
Dr Steven Gillis	
Dr David Ginsburg	
David Kappler	(resigned April 28, 2016)
Susan Kilsby	
Sara Mathew	
Anne Minto OBE	
Dr Flemming Ornskov	
Jeffrey Poulton	
Albert Stroucken	(appointed June 03, 2016)

Payment of creditors

The Company is non-trading and accordingly has no trade creditors.

Directors' liability insurance and indemnification

In the year under review, the Group maintained an insurance policy for its Directors and Officers in respect of liabilities arising out of any act, error or omission whilst acting in their capacity as Directors or Officers. Qualifying third-party indemnity provisions were also in place during the year under review for the benefit of Directors in relation to certain losses and liabilities which they may potentially incur to third-parties in the course of their duties. These remain in force at the date of this report.

Auditor

Each of the persons who is a Director at the date of approval of this report confirms that:

- so far as the Director is aware, there is no relevant audit information of which the Company's auditor is unaware; and
- the Director has taken all the steps that he/she ought to have taken as a Director in order to make himself/herself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

Deloitte LLP have expressed their willingness to continue in office as auditor and a resolution to reappoint them will be proposed at the forthcoming Annual General Meeting.

Approved by the Board of Directors and signed on its behalf by:

Bill Mordan
General Counsel and Company Secretary
February 22, 2017

Directors' responsibilities in the preparation of the financial statements

for the year ended December 31, 2016

The directors are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have elected to prepare the financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards 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 company and of the profit or loss of the company for that period. In preparing these financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgments and accounting estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping proper accounting records that are sufficient to show and explain the company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the financial statements comply with the Companies (Jersey) Law 1991. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility statement

We confirm that to the best of our knowledge:

- the financial statements, prepared in accordance with United Kingdom Generally Accepted Accounting Practice, 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 strategic report includes a fair review of the development and performance of the business and the position of the company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face; and
- the annual report and financial statements, taken as a whole, are fair, balanced and understandable and provide the information necessary for shareholders to assess the company's performance, business model and strategy.

Approved by the Board of Directors and signed on its behalf by:

Flemming Ornskov, MD, MPH
Chief Executive Officer
February 22, 2017

Jeffrey Poulton
Chief Financial Officer
February 22, 2017

Independent auditor's report to the members of Shire plc

for the year ended December 31, 2016

Opinion on financial statements of Shire plc

In our opinion the financial statements:

- **give a true and fair view of the state of the Company's affairs as at 31 December 2016 and of its loss for the year then ended;**
- **have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland"; and**
- **have been properly prepared in accordance with the Companies (Jersey) Law 1991.**

The financial statements that we have audited comprise:

- the statement of comprehensive income;
- the statement of financial position;
- the statement of changes in equity;
- the statement of cash flows; and
- the related notes 1 to 18.

The financial reporting framework that has been applied in their preparation is applicable Jersey law and United Kingdom Generally Accepted Accounting Practice — Financial Reporting Standard 102 ("FRS102").

Summary of our audit approach

Key risks	The key risk that we identified in the current year was the Company's investment in subsidiaries. This was also identified as a risk in the prior year.
Materiality	The materiality that we used in the current year was $50 million, determined as 0.2 percent of net assets.
Scoping	Audit work to respond to the risks of material misstatement was performed directly by the audit engagement team.

Going concern and the Directors' assessment of the principal risks that would threaten the solvency or liquidity of the Company

We have reviewed the Directors' statement regarding the appropriateness of the going concern basis of accounting contained within the notes to the financial statements and the Directors' statement on the longer-term viability of the Group contained within the Corporate Governance statement, on page 70.

We are required to state whether we have anything material to add or draw attention to in relation to:

- the Directors' confirmation on page 194 that they have carried out a robust assessment of the principal risks facing the Company, including those that would threaten its business model, future performance, solvency or liquidity;
- the disclosures on pages 54 to 65 that describe those risks and explain how they are being managed or mitigated;
- the Directors' statement in the notes to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the company's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements; and
- the Directors' explanation on page 75 as to how they have assessed the prospects of the company, 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 company 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 confirm that we have nothing material to add or draw attention to in respect of these matters.

We agreed with the Directors' adoption of the going concern basis of accounting and we did not identify any such material uncertainties. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Company's ability to continue as a going concern.

Independence

We are required to comply with the Financial Reporting Council's Ethical Standards for Auditors and we confirm that we are independent of the Company and we have fulfilled our other ethical responsibilities in accordance with those standards. We also confirm we have not provided any of the prohibited non-audit services referred to in those standards.

We confirm that we are independent of the entity and we have fulfilled our other ethical responsibilities in accordance with those standards. We also confirm we have not provided any of the prohibited non-audit services referred to in those standards.

Our assessment of risks of material misstatement

The assessed risks of material misstatement described below are those that had the greatest effect on our audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team.

Investment in Subsidiaries

Risk description	There is a risk related to the size of the Company's investments of $38.4 billion (2015: $16.7 billion) in Shire Pharmaceutical Holdings Ireland Limited, Shire Regenerative Medicine Inc, Dyax Corp and Baxalta Inc which are disclosed in note 9.
How the scope of our audit responded to the risk	We have challenged the Directors' impairment analysis and have considered the valuation of the Company's subsidiaries against other indicators of value, such as the overall market capitalisation of the Shire group.

This matter was 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 this matter.

Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

Company materiality	$50 million (2015: $30 million)
Basis for determining materiality	We have reconsidered materiality in the current year, and have determined materiality for the Company to be $50 million (2015: $30 million). This represents 0.2 percent (2015: 0.2 percent) of the net assets of the Company.
Rationale for the benchmark applied	We consider net assets the key benchmark used by members of the Company in assessing financial performance.

We agreed with the Audit, Compliance & Risk Committee (the "ACR Committee") that we would report to the ACR Committee all audit differences in excess of $2.5 million (2015: $1.5 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the ACR Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

Matters on which we are required to report by exception

Adequacy of explanations received and accounting records

Under the Companies (Jersey) Law 1991 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
- proper accounting records have not been kept by the parent company, or proper returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

Our duty to read other information in the Annual Report

Under International Standards on Auditing (UK and Ireland), we are required to report to you if, in our opinion, information in the annual report is:

- materially inconsistent with the information in the audited financial statements; or
- apparently materially incorrect based on, or materially inconsistent with, our knowledge of the company acquired in the course of performing our audit; or
- otherwise misleading.

In particular, we are required to consider whether we have identified any inconsistencies between our knowledge acquired during the audit and the directors' statement that they consider the annual report is fair, balanced and understandable and whether the annual report appropriately discloses those matters that we communicated to the ACR committee which we consider should have been disclosed.

We confirm that we have not identified any such inconsistencies or misleading statements.

Respective responsibilities of directors and auditor

As explained more fully in the Directors' Responsibilities Statement, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). We also comply with International Standard on Quality Control 1 (UK and Ireland). Our audit methodology and tools aim to ensure that our quality control procedures are effective, understood and applied. Our quality controls and systems include our dedicated professional standards review team and independent partner reviews.

This report is made solely to the Company's members, as a body, in accordance with Article 113A of the Companies (Jersey) Law 1991. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an Auditor's report and/or those further matters we have expressly agreed to report to them on in our engagement letter and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the financial statements. Our audit was scoped by obtaining an understanding of the entity and its environment, including internal control, and assessing the risks of material misstatement. Audit work to respond to the risks of material misstatement was performed directly by the audit engagement team. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

John Adam
For and on behalf of Deloitte LLP
Chartered Accountants and Recognised Auditors
London, United Kingdom
February 22, 2017

Statement of comprehensive income

for the year ended December 31, 2016

	Note	2016 $'M	2015 $'M
Turnover		–	–
Administrative expenses		(58.8)	(28.6)
Operating loss		(58.8)	(28.6)
Interest receivable	2	–	0.3
Interest payable and similar charges	3	(114.5)	(63.2)
Loss on ordinary activities before taxation	4	(173.3)	(91.5)
Taxation	7	–	–
Loss on ordinary activities after taxation and loss for the year		(173.3)	(91.5)
Other comprehensive income		–	–
Total comprehensive income for the year attributable to equity shareholders of the company		(173.3)	(91.5)

Statement of financial position

as at December 31, 2016

	Note	2016 $'M	2015 $'M
Fixed assets			
Investments	9	**38,361.5**	16,704.8
Current assets			
Debtors	10	**246.7**	86.6
Current liabilities			
Creditors: amounts falling due within one year	11	**(6,318.6)**	(4,715.6)
Net current liabilities		**(6,071.9)**	(4,629.0)
Total assets less current liabilities		**32,289.6**	12,075.8
Provisions for liabilities and charges	13	**(623.5)**	–
Net assets		**31,666.1**	12,075.8
Capital and reserves			
Called-up share capital	14	**81.3**	58.9
Share premium account		**26,531.5**	7,088.1
Share-based payments		**919.3**	608.2
Own shares held	14	**(243.5)**	(260.5)
Profit and loss account		**4,377.5**	4,581.1
Total equity		**31,666.1**	12,075.8

The accompanying notes are an integral part of these Financial Statements

Approved by the Board of Directors and signed on its behalf by:

Jeffrey Poulton
Chief Financial Officer
February 22, 2017

Statement of changes in equity

for the year ended December 31, 2015	Note	Share capital $'M	Share premium $'M	Share-based payments $'M	Own shares held $'M	Profit & loss account $'M	Total $'M
Balance at January 1, 2015		58.7	7,071.7	512.4	(275.6)	4,690.1	12,057.3
Loss for the year and total comprehensive income		–	–	–	–	(91.5)	(91.5)
Transactions with owners in their capacity as owners:							
Dividends	8	–	–	–	–	(6.8)	(6.8)
Issue of shares on options exercised	14	0.2	16.4	–	–	–	16.6
Transfer of Treasury Shares for new share issue		–	–	–	15.1	(15.1)	–
Share-based payments		–	–	–	–	4.4	4.4
Capital contribution relating to share based payments		–	–	95.8	–	–	95.8
Total transactions with owners in their capacity as owners		0.2	16.4	95.8	15.1	(17.5)	110.0
Balance at December 31, 2015		58.9	7,088.1	608.2	(260.5)	4,581.1	12,075.8

for the year ended December 31, 2016	Note	Share capital $'M	Share premium $'M	Share-based payments $'M	Own shares held $'M	Profit & loss account $'M	Total $'M
Balance at January 1, 2016		**58.9**	**7,088.1**	**608.2**	**(260.5)**	**4,581.1**	**12,075.8**
Loss for the year and total comprehensive income		**–**	**–**	**–**	**–**	**(173.3)**	**(173.3)**
Transactions with owners in their capacity as owners:							
Dividends	8	**–**	**–**	**–**	**–**	**(20.7)**	**(20.7)**
Issue of shares	14	**22.4**	**19,443.4**	**–**	**–**	**–**	**19,465.8**
Transfer of Treasury Shares for new share issue		**–**	**–**	**–**	**17.0**	**(17.0)**	**–**
Share-based payments		**–**	**–**	**–**	**–**	**7.4**	**7.4**
Capital contribution relating to share based payments		**–**	**–**	**311.1**	**–**	**–**	**311.1**
Total transactions with owners in their capacity as owners		**22.4**	**19,443.4**	**311.1**	**17.0**	**(30.3)**	**19,763.6**
Balance at December 31, 2016		**81.3**	**26,531.5**	**919.3**	**(243.5)**	**4,377.5**	**31,666.1**

Accounting policies

for the year ended December 31, 2016

General information

Shire plc (the "Company") is a public company limited by shares, incorporated in Jersey and tax resident in Ireland.

The address of the Company's registered office is 22 Grenville Street, St Helier, Jersey, JE4 8PX, Channel Islands.

The address of the Company's principal place of business is 5 Riverwalk, Citywest Business Campus, Dublin 24, Republic of Ireland.

The Company is the ultimate parent of the Group and its principal activity is that of a holding company.

Basis of accounting

These financial statements have been prepared in accordance with FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" ("FRS 102") and the requirements of the Companies (Jersey) Law 1991, and under the historical cost convention.

Monetary amounts in these financial statements are rounded to the nearest whole $100,000, except where otherwise indicated.

Reduced disclosures

In accordance with FRS 102, the Company has taken advantage of the exemptions from the following disclosure requirements:

- Section 4 "Statement of Financial Position" — Reconciliation of the opening and closing number of shares.
- Section 7 "Statement of Cash Flows" — Presentation of a Statement of Cash Flow and related notes and disclosures.
- Section 11 "Basic Financial Instruments" & Section 12 "Other Financial Instrument Issues" — Carrying amounts, interest income/expense and net gains/losses for each category of financial instrument; basis of determining fair values; details of collateral, loan defaults or breaches, details of hedges, hedging fair value changes recognized in profit or loss and in other comprehensive income.
- Section 26 "Share-based Payment" — Share-based payment expense charged to profit or loss, reconciliation of opening and closing number and weighted average exercise price of share options, how the fair value of options granted was measured, measurement and carrying amount of liabilities for cash-settled share-based payments, explanation of modifications to arrangements.
- Section 33 "Related Party Disclosures" — Compensation for key management personnel.

The financial statements of the Company are consolidated in the financial statements of Shire plc. The consolidated financial statements of Shire plc are available from www.shire.com.

Consolidated financial statements

Consolidated accounts prepared in conformity with accounting principles generally accepted in the United States of America ("US GAAP"), in which the financial results and cash flow statement of the Company and its subsidiaries are included, can be found in the Shire Annual Report. Consequently, these financial statements present the financial position and financial performance of the Company as a separate entity.

These financial statements have been prepared in accordance with the Company's accounting policies described below, which have been applied consistently throughout the current and preceding year and have been approved by the Board.

The financial statements of the Company are consolidated in the financial statements of Shire plc. The consolidated financial statements of Shire plc are available from its registered office at 22 Grenville Street, St Helier, Jersey, JE4 8PX, Channel Islands or on its website, www.shire.com.

Going concern

The Group's balance sheet includes $528.8 million of cash and cash equivalents as of December 31, 2016.

The Group has a revolving credit facility ("RCF") of $2,100 million which matures in 2021, $450 million of which was utilized as of December 31, 2016. The RCF incorporates a $250 million U.S. Dollar and Euro swingline facility operating as a sub-limit thereof.

On September 23, 2016, Shire Acquisitions Investments Ireland Designated Activity Company ("SAIIDAC"), a wholly owned subsidiary of the Company, issued senior notes guaranteed by Shire plc, with a total aggregate principal amount of $12.1 billion. On December 1, 2016, Baxalta guaranteed the outstanding notes issued by SAIIDAC.

In addition, in connection with the acquisition of Baxalta, on June 3, 2016, Shire plc guaranteed senior notes issued by Baxalta totaling $5.0 billion and originally assumed $336.0 million of capital lease obligations. The details of these senior notes are presented in Note 18, Borrowings and Capital Lease Obligations, of the Shire Annual Report.

Further in connection with the acquisitions of Dyax and Baxalta, respectively, the Group entered into a $5.6 billion term loan facility in November 2015 and an $18.0 billion bridge loan in January 2016. The November 2015 term loan facility was fully utilized as of December 31, 2016 in the amount of $5.6 billion. The bridge loan was fully repaid and canceled subsequent to the issuance of $12.1 billion senior notes on September 23, 2016. The details of these facility agreements are presented in Note 18, Borrowings and Capital Lease Obligations, of the Shire Annual Report.

In addition, the Group also has access to certain short-term uncommitted lines of credit which are available to utilize from time to time to provide short-term cash management flexibility. As of December 31, 2016, these lines of credit were not utilized.

The Directors have a reasonable expectation that the Company has adequate resources to continue in operational existence for the foreseeable future. Accordingly the Directors continue to adopt the going concern basis of accounting in preparing the report and financial statements.

Functional and presentational currencies

The financial statements are presented in U.S. Dollars which is also the functional currency of the Company.

Foreign currencies

Transactions in currencies other than the functional currency (foreign currencies) are initially recorded at the exchange rate ruling on the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the reporting date. Non-monetary assets and liabilities denominated in foreign currencies are translated at the rate ruling at the date of the transaction or, if the asset or liability is measured at fair value, the rate when that fair value was determined.

All translation differences are taken to profit or loss, except to the extent that they relate to gains or losses on non-monetary items recognized in other comprehensive income, when the related translation gain or loss is also recognized in other comprehensive income.

Other income

Interest income

Interest income is accrued on a time-apportioned basis, by reference to the principal outstanding at the effective interest rate.

Dividend income

Dividend income from investments in subsidiaries is recognized when the Company's right to receive payment is established.

Borrowing costs

Finance costs relating to debt issued are recorded as a deferred charge and amortized to the statements of income over the period to the earliest redemption date of the debt, using the effective interest rate method. On extinguishment of the related debt, any unamortized deferred financing costs are written off and charged to interest expense in the consolidated statements of income.

Fixed asset investments

Interests in subsidiaries, associates and jointly controlled entities are initially measured at cost and subsequently measured at cost less any accumulated impairment losses.

Interests in subsidiaries, associates and jointly controlled entities are assessed for impairment at each reporting date. Any impairment losses or reversals of impairment losses are recognized immediately in profit or loss.

Taxation

The tax expense represents the sum of the current tax expense and deferred tax expense. Current tax assets are recognized when tax paid exceeds the tax payable.

Current tax is based on taxable profit for the year. Taxable profit differs from total comprehensive income because it excludes items of income or expense that are taxable or deductible in other periods. Current tax assets and liabilities are measured using tax rates that have been enacted or substantively enacted by the reporting date.

Deferred tax is calculated at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled based on tax rates that have been enacted or substantively enacted by the reporting date. Deferred tax is not discounted.

Deferred tax liabilities are recognized in respect of all timing differences that exist at the reporting date. Timing differences are differences between taxable profits and total comprehensive income that arise from the inclusion of income and expenses in tax assessments in different periods from their recognition in the financial statements. Deferred tax assets are recognized only to the extent that it is probable that they will be recovered by the reversal of deferred tax liabilities or other future taxable profits.

Deferred tax is recognized on income or expenses from subsidiaries, associates, branches and interests in jointly controlled entities, that will be assessed to or allow for tax in a future period except where the Company is able to control the reversal of the timing difference and it is probable that the timing difference will not reverse in the foreseeable future.

Current and deferred tax is charged or credited in profit or loss, except when it relates to items charged or credited to other comprehensive income or equity, when the tax follows the transaction or event it relates to and is also charged or credited to other comprehensive income, or equity.

Current tax assets and current tax liabilities and deferred tax assets and deferred tax liabilities are offset, if and only if, there is a legally enforceable right to set off the amounts and the entity intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Employee benefits

The costs of short-term employee benefits are recognized as a liability and an expense.

Retirement benefits

The Company contributes to personal defined contribution pension plans of employees. Contributions are charged to the profit and loss account as they become payable. Differences between contributions payable in the year and contributions actually paid are shown as either accruals or prepayments in the balance sheet.

Financial instruments

The Company has elected to apply the provisions of Section 11 "Basic Financial Instruments" and Section 12 "Other Financial Instruments Issues" of FRS 102, in full, to all of its financial instruments.

Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument, and are offset only when the Company currently has a legally enforceable right to set off the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

Financial assets

Trade debtors

Trade debtors which are receivable within one year and which do not constitute a financing transaction are initially measured at the transaction price. Trade debtors are subsequently measured at amortized cost, being the transaction price less any amounts settled and any impairment losses.

Where the arrangement with a trade debtor constitutes a financing transaction, the debtor is initially and subsequently measured at the present value of future payments discounted at a market rate of interest for a similar debt instrument.

A provision for impairment of trade debtors is established when there is objective evidence that the amounts due will not be collected according to the original terms of the contract. Impairment losses are recognized in profit or loss for the excess of the carrying value of the trade debtor over the present value of the future cash flows discounted using the original effective interest rate. Subsequent reversals of an impairment loss that objectively relate to an event occurring after the impairment loss was recognized, are recognized immediately in profit or loss.

Financial liabilities and equity

Financial instruments are classified as liabilities and equity instruments according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

Equity instruments
Financial instruments classified as equity instruments are recorded at the fair value of the cash or other resources received or receivable, net of direct costs of issuing the equity instruments.

Own shares
The fair value of consideration given for shares repurchased by the Company is deducted from equity.

Trade creditors
Trade creditors payable within one year that do not constitute a financing transaction are initially measured at the transaction price and subsequently measured at amortized cost, being the transaction price less any amounts settled.

Where the arrangement with a trade creditor constitutes a financing transaction, the creditor is initially and subsequently measured at the present value of future payments discounted at a market rate of interest for a similar instrument.

Borrowings
Borrowings are initially recognized at the transaction price, including transaction costs, and subsequently measured at amortized cost using the effective interest method. Interest expense is recognized on the basis of the effective interest method and is included in interest payable and other similar charges.

Commitments to receive a loan are measured at cost less impairment.

Derecognition of financial assets and liabilities
A financial asset is derecognized only when the contractual rights to cash flows expire or are settled, or substantially all the risks and rewards of ownership are transferred to another party, or if some significant risks and rewards of ownership are retained but control of the asset has transferred to another party that is able to sell the asset in its entirety to an unrelated third-party. A financial liability (or part thereof) is derecognized when the obligation specified in the contract is discharged, canceled or expires.

Share based payments
The Company grants share options ("equity-settled share-based payments") to certain employees.

Equity-settled share-based payments are measured at fair value at the date of grant by reference to the fair value of the equity instruments granted. Options and performance share awards granted without market conditions are valued using the Black-Scholes option-pricing model. Options and performance share awards granted with market conditions are valued using a binomial model.

The Company participates in a share-based payment arrangement granted to its employees and employees of its subsidiaries. The Company has elected to recognize and measure its share-based payment expense on the basis of a reasonable allocation of the expense for the Group.

The cost for awards granted to the Company's subsidiaries' employees represents additional capital contributions by the Company in its subsidiaries. An additional investment in subsidiaries has been recorded in respect of those awards granted to the Company's subsidiaries' employees, with a corresponding increase in the Company's shareholders' equity. The additional capital contribution is based on the fair value at the grant date of the awards issued. This accounting treatment applies as the parent has granted the share option rather than being subsidiary granting an option in the parent's equity.

Dividends
Dividends are recognized as liabilities once they are no longer at the discretion of the Company.

Notes to the financial statements

for the year ended December 31, 2016

1. Critical accounting estimates and areas of judgment

Estimates and judgment are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Critical accounting estimates and areas of judgment

The Company makes estimates and assumptions concerning the future. The resulting accounting estimates and assumptions will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

The only critical accounting judgments which the Directors believe are relevant to these financial statements are those relating to the treatment of share based payments in the company. Please see the accounting policy above for treatment of the share based payments in these financial statements.

2. Interest receivable and similar income

	2016 $'M	2015 $'M
Interest receivable on deposit to Group undertakings	–	0.3

3. Interest payable and similar charges

	2016 $'M	2015 $'M
Interest arising on bank loans	18.3	29.1
Interest arising on loans from group undertakings	78.1	34.1
Unwinding of discount on provisions (note 13)	18.1	–
	114.5	63.2

4. Loss on ordinary activities before taxation

Loss on ordinary activities is stated after charging/(crediting):

	2016 $'M	2015 $'M
Share based payments	7.4	4.4
Foreign exchange gains	–	(0.3)

Fees payable to Deloitte LLP and its associates in respect of both audit and non-audit services are borne by a subsidiary undertaking.

5. Segmental reporting

The directors consider that the Company, in its capacity as a holding company, operates as one operating segment. Therefore, there is no additional disclosure to make as required by FRS 102 paragraph 1.5.

6. Employees

The average monthly number of persons (including directors) employed by the Company during the year was:

	2016 No	2015 No
Directors	2	1

There were no staff other than the Directors.

Directors

In respect of the Directors of Shire plc:

	2016 $'M	2015 $'M
Wages and salaries	4.0	2.1
Social security costs	0.1	0.1
Defined contribution pension costs	0.1	0.1
Employee share schemes	7.4	4.4
Directors' fees	2.4	2.6
	14.0	9.3

	2016 No	2015 No
The number of Directors to whom retirement benefits are accruing under money purchase schemes was:	2	2
The number of Directors who exercised share options during the year was:	2	2
The number of Directors who received shares under long term incentive schemes was:	2	2

Directors' emoluments disclosed above include the following payments made to the highest paid Director:

	2016 $'M	2015 $'M
Remuneration	3.6	1.6
Company contributions to money purchase pension schemes	0.1	0.1
Share based payments	6.1	4.1
	9.8	5.8

7. Taxation

There was $nil corporation tax charged for the year ended December 31, 2016 (2015: $nil).

Factors affecting the tax charge for the year.

The tax assessed for the year is lower than the standard rate of corporation tax in Ireland of 25 percent (2015: 25 percent). The differences are explained below:

	2016 $'M	2015 $'M
Company losses on ordinary activities before tax	(173.3)	(91.5)
Company loss on ordinary activities multiplied by the standard rate of corporation tax of 25 percent (2015: 25 percent):	(43.3)	(22.9)
Effects of:		
Expenses not deductible for tax purposes	35.3	17.1
Group relief surrendered	8.0	5.8
	–	–

The Company had an unrecognized deferred tax asset of $21.8 million (2015: $21.8 million) in respect of losses as at December 31, 2016.

8. Dividends

	2016 $'M	2015 $'M
Second interim dividend — 22.16 cents (15.32 pence) per Ordinary Share, equivalent to 66.48 cents per ADS, paid in April 2016	130.2	–
First interim dividend — 4.63 cents (3.51 pence) per Ordinary Share, equivalent to 13.89 cents per ADS, paid in October 2016	41.1	–
Second interim dividend — 19.09 cents (12.51 pence) per Ordinary Share, equivalent to 57.27 cents per ADS, paid in April 2015	–	110.2
First interim dividend — 4.21 cents (2.69 pence) per Ordinary Share, equivalent to 12.63 cents per ADS, paid in October 2015	–	24.2
	171.3	134.4

Of the above amounts, the Company paid dividends amounting to $20.7 million in the year (2015: $6.8 million). In accordance with IAS arrangements, the Company directed Shire Biopharmaceuticals Holdings to pay dividends totaling $150.6 million (2015: $127.6 million) to those shareholders who choose to receive their dividends from a company tax resident in the UK.

The Board has resolved to pay a second interim dividend of 25.70 cents (20.64 pence) per Ordinary Share equivalent to 77.10 cents per ADS for the six months to December 31, 2016.

9. Fixed asset investments

	Subsidiary undertakings $'M
Cost	
As at January 1, 2016	16,704.8
Additions	60,236.6
Capital contribution relating to share based payments	311.1
Disposals	(38,891.0)
As at December 31, 2016	38,361.5
Net book value	
As at December 31, 2016	38,361.5
As at December 31, 2015	16,704.8

On January 22, 2016, the company subscribed for an additional 380,000,000 Ordinary Shares in Shire Pharmaceutical Holdings Ireland Limited, for total cash consideration of $1,900,000,000.

On June 03, 2016, the company subscribed for 611.34 Ordinary Shares in Baxalta Inc, in exchange for 305,213,250 Ordinary Shares in the company, for total consideration of $19,445,541,480.

On June 03, 2016, the company subscribed for 15,438.59 Ordinary Shares in Dyax Corp, in exchange for it's entire shareholding of 611.34 Ordinary Shares in Baxalta Inc, for total consideration of $19,445,541,480.

On June 06, 2016, the company contributed its entire shareholding in Dyax Corp in exchange for an additional 100,000,000 Ordinary Shares in Shire Pharmaceutical Holdings Ireland Limited, for total consideration of $19,445,541,480.

Subsidiaries

The Company directly owned 100 percent of the issued Ordinary Share capital of the following companies at December 31, 2016:

Company	Principal activities	Country of incorporation
Shire Pharmaceutical Holdings Ireland Limited	Holding company	Republic of Ireland
Shire Regenerative Medicine LLC	Holding company	United States of America

Details of the Company's indirect subsidiaries can be found in Note 31 of the Shire Annual Report in the consolidated accounts for the year ending December 31, 2016.

10. Debtors

	2016 $'M	2015 $'M
Amounts due from Group undertakings	242.0	80.7
Other debtors	4.7	5.9
	246.7	86.6

The amounts due from Group undertakings are primarily U.S. Dollar denominated and non-interest bearing. At December 31, 2016 an amount of $1.0 million (2015: $nil) bore interest at floating rates. The remaining balance is non-interest bearing. All amounts due from Group undertakings are repayable on demand.

11. Creditors: amounts falling due within one year

	2016 $'M	2015 $'M
Bank loan (note 12)	**450.0**	1,500.0
Amounts owed to Group undertakings	**5,867.4**	3,205.3
Accrued interest	**0.7**	0.6
Other creditors	**0.5**	9.7
	6,318.6	4,715.6

The amounts due to Group undertakings are primarily unsecured, U.S. Dollar denominated, repayable on demand and bear interest at floating rates of interest.

12. Borrowings

	2016 $'M	2015 $'M
Bank loan	**450.0**	1,500.0

On February 22, 2016, Shire repaid in full the remaining balance under the $850 million term loan facility agreement dated January 11, 2015 ("2015 Facility Agreement"). During the year, Shire repaid borrowings under the 2014 Revolving Credit Facility ("RCF"), which matures in 2021, and utilized the RCF to partially finance the acquisition of Dyax Corp on January 22, 2016 and for general corporate purposes.

At December 31, 2016 $450 million (2015: $750 million) of the RCF was utilized. The 2015 Facility Agreement was fully repaid and canceled in February 2016 (2015: $750 million).

Borrowings under the RCF are denominated in U.S. Dollars and bear interest at a floating rate of interest.

13. Provisions for liabilities

	Dyax Corp $'000	Total $'000
As at January 1, 2016	**–**	–
Additional provision in year	**605.4**	605.4
Unwinding of discount on provisions (note 3)	**18.1**	18.1
As at December 31, 2016	**623.5**	623.5

Dyax Corp

On January 22, 2016 the Group purchased Dyax Corp. As part of this agreement Shire plc is liable for total undiscounted future potential liabilities of $645.9 million (2015: $nil) upon approval by the FDA of DX-2930 for HAE.

At the reporting date the directors consider it probable that this condition will be met and the present value of this liability recognized above is $623.5 million (2015: $nil). The directors estimate that this provision will unwind within two years of the reporting date.

In consideration for Shire plc taking on the obligation to pay the deferred contingent consideration, Shire Pharmaceuticals International, a Group Company, agreed to reimburse Shire plc $605.4 million, $209.0 million of which is still outstanding and included within amounts due from group undertakings in note 10.

14. Share capital and reserves

Share capital	2016 No	2016 $'M	2015 No	2015 $'M
Allotted, issued and fully paid				
Ordinary Shares of 5p each	**912,173,612**	**81.3**	601,075,964	58.9
Subscriber Ordinary Shares of £1 each	**2**	**–**	2	–
		81.3		58.9

As at December 31, 2016, the Company's authorized ordinary share capital comprised 1,500,000,000 (2015: 1,000,000,000) Ordinary Shares of 5p each and 2 (2015: 2) Subscriber Ordinary Shares of £1 each.

Ordinary Share rights

The Company's Ordinary Shares, which carry no right to fixed income, each carry the right to one vote at general meetings of the Company.

As at December 31, 2016, the Company's issued Ordinary Share capital comprised 904,202,151 (2015: 592,548,261) Ordinary Shares of 5p each with voting rights and a further 7,971,461 (2015: 8,527,703) Ordinary Shares held in treasury. Therefore the total number of voting rights in the Company at December 31, 2016 was 904,202,151 (2015: 592,548,261).

Share issues

During the year 5,884,398 (2015: 2,018,462) Ordinary Shares of 5p each were issued as part of the Shire Group's share based payment scheme.

On June 3, 2016, 305,213,250 Ordinary Shares of 5p each were issued as part of the Shire Group's acquisition of Baxalta.

Share option scheme

Further details in respect of the Ordinary Shares reserved for issue under the Company's share option plan can be found in Note 28 of the Shire Annual Report.

Share premium

Consideration received for shares issued above their nominal value net of transaction costs.

Purchase of own shares

The treasury shares reserve represents the cost of shares in the Company purchased in the market and held by the Company for the purpose of returning funds to shareholders. The number of Ordinary Shares of 5p each held by the Company as at December 31, 2016 was 7,971,461 with a purchase value of $243.5 million (2015: 8,527,703 with a purchase value of $260.5 million) including transaction costs.

Share based payment reserve

The cumulative share-based payment expense.

Retained earnings

Cumulative profit and loss net of distributions to owners.

15. Capital commitments and other contractual obligations

Senior Notes Issuance

On September 23, 2016, SAIIDAC, issued senior notes offering with a total aggregate principal value of $12.1 billion ("SAIIDAC Notes"), guaranteed by Shire plc and, as of December 1, 2016, by Baxalta. SAIIDAC used the net proceeds to fully repay amounts outstanding under the January 2016 Facilities Agreement (discussed below), which was used to finance the cash consideration payable related to the Company's acquisition of Baxalta.

The SAIIDAC Notes are senior unsecured obligations and may be redeemed at SAIIDAC's option at the greater of (1) 100 percent of the principal amount plus accrued and unpaid interest or (2) the sum of the present values of the remaining scheduled payments of interest and principal discounted to the date of redemption on a semi-annual basis at the applicable treasury rate (as defined) plus an incremental margin, plus, in either case, accrued and unpaid interest. The SAIIDAC Notes also contain a change of control provision that may require that SAIIDAC to offer to purchase the SAIIDAC Notes at a price equal to 101 percent of the principal amount plus accrued and unpaid interest to the date of purchase under certain circumstances. On December 1, 2016, Baxalta Inc. (Baxalta), a wholly owned subsidiary of Shire plc, fully and unconditionally guaranteed the SAIIDAC Notes.

The costs and discount associated with this offering of $60.8 million have been recorded as a reduction to the carrying amount of the debt on the statement of financial position. These costs will be amortized as additional interest expense using the effective interest rate method over the period from issuance through maturity. Interest on the SAIIDAC Notes is payable March 23 and September 23 of each year, beginning on March 23, 2017.

Baxalta Notes

Shire plc guaranteed senior notes issued by Baxalta with a total aggregate principal amount of $5.0 billion in connection with the Baxalta acquisition ("Baxalta Notes").

Revolving Credit Facilities Agreement

On December 12, 2014, Shire entered into a $2,100.0 million revolving credit facilities agreement (the "RCF") with a number of financial institutions. Shire is an original borrower and original guarantor under the RCF. On January 15, 2016, SAIIDAC became an additional guarantor under the RCF and on December 1, 2016, Baxalta became an additional guarantor under the RCF. Shire has agreed to act as guarantor for any of its subsidiaries that become additional borrowers under the RCF. As of December 31, 2016 the Company utilized $450.0 million of the RCF.

The RCF, which terminates on December 12, 2021, may be applied towards financing the general corporate purposes of Shire. The RCF incorporates a $250.0 million U.S. Dollar and Euro swingline facility operating as a sub-limit thereof.

Interest on any loans made under the RCF is payable on the last day of each interest period, which may be one week or one, two, three or six months at the election of Shire, or as otherwise agreed with the lenders. The interest rate for the RCF is: LIBOR (or, in relation to any revolving loan in Euro, EURIBOR); plus 0.30 percent per annum subject to change depending upon (i) the prevailing ratio of Net Debt to EBITDA (each as defined in the RCF) in respect of the most recently completed financial year or financial half year and (ii) the occurrence and continuation of an event of default in respect of the financial covenants or the failure to provide a compliance certificate.

Shire shall also pay (i) a commitment fee equal to 35 percent of the applicable margin on available commitments under the RCF for the availability period applicable thereto and (ii) a utilization fee equal to (a) 0.10 percent per year of the aggregate of all outstanding loans up to an aggregate base currency amount equal to $700.0 million, (b) 0.15 percent per year of the amount by which the aggregate base currency amount of all outstanding loans exceeds $700.0 million but is equal to or less than $1,400.0 million and (c) 0.30 percent per year of the amount by which the aggregate base currency amount of all outstanding loans exceeds $1,400.0 million.

The RCF includes customary representations and warranties, covenants and events of default, including requirements that Shire's (i) ratio of Net Debt to EBITDA in respect of the most recently-ended 12-month relevant period (each as defined in the RCF) must not, at any time, exceed 3.5:1 except that, following an acquisition fulfilling certain criteria, Shire may elect to increase this ratio to (a) 5.5:1 for the relevant period in which the acquisition was completed (b) 5.0:1 in respect of the first relevant period following the relevant period in which the acquisition was completed and (c) 4.5:1 in respect of the second relevant period following the relevant period in which the acquisition was completed, and (ii) ratio of EBITDA to Net Interest for the most recently-ended 12-month relevant period (each as defined in the RCF) must not be less than 4.0:1. Shire elected to increase the Net Debt to EBITDA ratio in connection with the period ending June 30, 2016, following the completion of the acquisition of Baxalta during the period. Consequently, the applicable ratio for the period ending December 31, 2016 is 5.0:1.

The RCF restricts, subject to certain exceptions, Shire's ability to incur additional financial indebtedness, grant security over its assets or provide loans/grant credit. Further, any lender may require mandatory prepayment of its participation if there is a change of control of Shire, subject to certain exceptions for schemes of arrangement and analogous schemes.

Events of default under the RCF include, subject to customary grace periods and materiality thresholds: (i) non-payment of any amounts due under the finance documents (as defined in the RCF), (ii) failure to satisfy any financial covenants, (iii) material misrepresentation in any of the finance documents, (iv) failure to pay, or certain other defaults, under other financial indebtedness, (v) certain insolvency events or proceedings, (vi) material adverse changes in the business, operations, assets or financial condition of Shire as a whole, (vii) if it becomes unlawful for Shire (or any successor parent company) or any of their respective subsidiaries that are parties to the RCF to perform their obligations thereunder or (viii) if Shire (or any successor parent company) or any subsidiary thereof which is a party to the RCF repudiates such agreement or other finance document, among others.

January 2016 Facilities Agreement

On January 11, 2016, Shire (as original guarantor and original borrower), entered into an $18.0 billion bridge facilities agreement with various financial institutions (the "January 2016 Facilities Agreement").The January 2016 Facilities Agreement comprised two credit facilities: (i) a $13.0 billion term loan facility originally maturing on January 11, 2017 ("January 2016 Facility A") and (ii) a $5.0 billion revolving loan facility originally maturing on January 11, 2017 ("January 2016 Facility B"). On April 1, 2016 SAIIDAC became an additional borrower and additional guarantor under the January 2016 Facilities Agreement.

The January 2016 Facility A was utilized to finance the cash consideration payable in respect of the acquisition of Baxalta on

June 3, 2016 in the amount of $12,390.0 million. The net proceeds from the issuance of the SAIIDAC Notes were used to fully repay the amounts outstanding under the January 2016 Facility A in September 2016. The January 2016 Facility B was canceled effective July 11, 2016, in accordance with its terms.

November 2015 Facilities Agreement
On November 2, 2015, Shire (as original guarantor and original borrower) entered into a $5.6 billion facilities agreement with various financial institutions (the "November 2015 Facilities Agreement"). The November 2015 Facilities Agreement comprises three credit facilities: (i) a $1.0 billion term loan facility of which, following the exercise of the one year extension option in the amount of $400.0 million, $600.0 million matured and was repaid on November 2, 2016 and $400.0 million matures on November 2, 2017 ("November 2015 Facility A"), (ii) a $2.2 billion amortizing term loan facility which matures on November 2, 2017 ("November 2015 Facility B") and (iii) a $2.4 billion amortizing term loan facility which matures on November 2, 2018 ("November 2015 Facility C").

On January 15, 2016, SAIIDAC became an additional borrower and an additional guarantor under the November 2015 Facilities Agreement and on December 1, 2016, Baxalta became an additional guarantor under the November 2015 Facilities Agreement. As of December 31, 2016, the November 2015 Facilities Agreement was fully utilized by SAIIDAC as borrower in the amount of $5.0 billion to finance the cash consideration payable and certain costs related to the acquisition of Dyax. On January 30, 2017, SAIIDAC made its first repayment installment of $400.0 million of November 2015 Facility B in accordance with the terms of the agreement.

Interest on any loans made under the November 2015 Facilities Agreement is payable on the last day of each interest period, which may be one week or one, two, three or six months, or as otherwise agreed with the lenders. The interest rate applicable is LIBOR plus, in the case of the November 2015 Facility A, 0.55 percent per annum, in the case of the November 2015 Facility B, 0.65 percent per annum and, in the case of the November 2015 Facility C, 0.75 percent per annum, in each case subject to change depending on (i) the prevailing ratio of Net Debt to EBITDA (each as defined in the November 2015 Facilities Agreement) in respect of the most recently completed financial year or financial half year and (ii) the occurrence and continuation of an event of default in respect of the financial covenants or failure to provide a compliance certificate.

The November 2015 Facilities Agreement includes customary representations and warranties, covenants and events of default, including requirements that Shire's (i) ratio of Net Debt to EBITDA in respect of the most recently ended 12-month relevant period, (each as defined in the November 2015 Facilities Agreement), must not, at any time, exceed 3.5:1, except that following an acquisition fulfilling certain criteria, Shire may elect to increase this ratio to (a) 5.5:1 for the relevant period in which the acquisition was completed, (b) 5.0:1 in respect of the first relevant period following the relevant period in which the acquisition was completed, and (c) 4.5:1 in respect of the second relevant period following the relevant period in which the acquisition was completed, Shire has elected to increase this ratio in connection with the period ending June 30, 2016, following the completion of the acquisition of Baxalta during the period and (ii) ratio of EBITDA to Net Interest in respect of the most recently ended 12 month relevant period, (each as defined in the November 2015 Facilities Agreement), must not be less than 4.0:1.

The November 2015 Facilities Agreement restricts, subject to certain exceptions, Shire's ability to incur additional financial indebtedness, grant security over its assets or provide loans/grant credit. Further, any lender may require mandatory prepayment of its participation if there is a change of control of Shire, subject to certain exceptions for schemes of arrangement and analogous schemes.

Events of default under the November 2015 Facilities Agreement include, subject to customary grace periods and materiality thresholds: (i) non-payment of any amounts due under the finance documents (as defined in the November 2015 Facilities Agreement), (ii) failure to satisfy any financial covenants, (iii) material misrepresentation in any of the finance documents, (iv) failure to pay, or certain other defaults, under other financial indebtedness, (v) certain insolvency events or proceedings, (vi) material adverse changes in the business, operations, assets or financial condition of Shire as a whole, (vii) if it becomes unlawful for Shire (or any successor parent company) or any of their respective subsidiaries that are parties to the November 2015 Facilities Agreement to perform their obligations thereunder or (viii) if Shire (or any successor parent company) or any subsidiary thereof which is a party to the November 2015 Facilities Agreement repudiates the November 2015 Facilities Agreement or any other finance document, among others.

January 2015 Facility Agreement
On January 11, 2015, Shire entered into an $850.0 million term facility agreement with various financial institutions (the "January 2015 Facility Agreement") with an original maturity date of January 10, 2016. The maturity date was subsequently extended to July 11, 2016 in line with the provisions within the January 2015 Facility Agreement allowing the maturity date to be extended twice, at Shire's option, by six months on each occasion.

The January 2015 Facility Agreement was used to finance Shire's acquisition of NPS Pharma (including certain related costs). On September 28, 2015, the Company reduced the January 2015 Facility Agreement by $100.0 million. In January 2016 and at various points thereafter, the Company canceled parts of the January 2015 Facilities Agreement. On February 22, 2016, the Company repaid the remaining balance of $100.0 million of the January 2015 Facilities Agreement in full.

16. Retirement benefits
The Company operates a defined contribution pension scheme for all qualifying employees in the United Kingdom. The assets of the scheme are held separately from those of the Company in an independently administered fund. The contributions payable by the Company charged to profit or loss amounted to $nil (2015: $nil). Contributions totaling $nil (2015: $nil) were payable to the fund at the year end and are included in creditors.

17. Share based payments
Group share based payment plans
The Company participates in group share-based payment plans, and recognizes and measures its share-based payment expense on the basis of a reasonable allocation of the expense recognized for the Group in accordance with paragraph 26.16 of FRS 102. The allocation is based on the number of employees benefiting from the share-based payment plan employed by each group entity. During the year there were no individuals directly employed by the Company and the Directors of the Company referenced in Note 6 are contractual employees of a Group undertaking.

17. Share based payments (continued)

Certain employees are contractually employed by other group entities with elements of their payroll costs, including the share based payment charge relating to those employees, recharged to Shire plc on the basis of the fair value of the work performed. Share options relating to those employees are not included in the disclosures given below relating to each of the schemes currently in use.

Stock-settled SARs and stock options — SARs under LTIP and PSP (Part A)

Stock-settled share appreciation rights ("SARs"), granted to Executive Directors, are exercisable subject to service and performance criteria.

In respect of any award made to Executive Directors under the LTIP, performance criteria are based on Product Sales and Non GAAP EBITDA targets, with a Non GAAP Adjusted ROIC underpin. In respect of any award made to Executive Directors under the PSP (Part A), performance criteria are based on growth in Non GAAP Adjusted ROIC and Non GAAP EBITDA. These performance measures are an important measure of the Company's ability to meet the strategic objective to grow value for all of its stakeholders.

Awards granted to employees below Executive Director level are not subject to performance conditions and are only subject to service conditions.

Once awards have vested, participants will have until the seventh anniversary of the date of grant to exercise their awards.

As at December 31, 2016, there were no awards outstanding under this plan.

UK/Irish Sharesave Plans ("Sharesave Plans")

Options granted under the Sharesave Plans are granted with an exercise price equal to 80 percent and 75 percent of the mid-market price on the day before invitations are issued to UK and Ireland employees, respectively. Employees may enter into three or five year savings contracts. No performance conditions apply.

As at December 31, 2016, there were no awards outstanding under this plan.

Shire Global Employee Stock Purchase Plan ("Stock Purchase Plan")

Under the Stock Purchase Plan, options are granted with an exercise price equal to 85 percent of the fair market value of a share on the enrollment date (the first day of the offering period) or the exercise date (the last day of the offering period), whichever is the lower. Employees agree to save for a period up to 12 months. No performance conditions apply.

As at December 31, 2016, there were no awards outstanding under this plan.

RSUs and PSUs under LTIP and PSAs under PSP (Part B)

PSUs and PSAs granted to Executive Directors and PSUs granted to certain senior employees are exercisable subject to certain performance and service criteria.

RSUs and PSAs granted to employees below Executive Director are not subject to performance criteria and are only subject to service conditions.

The performance criteria for PSUs granted under the LTIP is based on Product sales and Non GAAP EBITDA targets, typically with a Non GAAP Adjusted ROIC underpin. The performance criteria for PSAs under the PSP (Part B) is based on growth in Non GAAP Adjusted ROIC and Non GAAP EBITDA.

As at December 31, 2016, there were no awards outstanding under this plan.

Replacement Awards Issued to Baxalta Employees

In connection with the acquisition of Baxalta and pursuant to the merger agreement associated with the acquisition, outstanding Baxalta equity awards held by Baxalta employees or employees of Baxter were canceled and exchanged for Shire equity awards. The outstanding Baxalta equity awards consisted primarily of stock options and RSUs and hence were replaced with Shire's stock options and RSUs. The replacement Shire awards generally have the same terms and conditions (including vesting) as the former Baxalta awards for which they were exchanged.

As at December 31, 2016, there were no Replacement Awards outstanding.

Valuation methodologies

The Company estimates the fair value of its share-based awards using a Black-Scholes valuation model. Key input assumptions used to estimate the fair value of share-based awards include the grant price of the award, the expected stock-based award term, volatility of the Company's share price, the risk-free rate and the Company's dividend yield. The Company believes that the valuation technique and the approach utilized to develop the underlying assumptions are appropriate in estimating the fair values of Shire's stock-based awards. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the Company.

18. Related party transactions

The Company has taken advantage of the exemption in Section 33 of FRS 102 to not disclose transactions with wholly owned Group companies.

The Directors consider that they are the only key management personnel of the company and details in respect of their remuneration is given in Note 6 to these financial statements.

Trademarks

We own or have rights to trademarks, service marks or trade names that we use in connection with the operation of our business. In addition, our names, logos and website names and addresses are owned by us or licensed by us. We also own or have the rights to copyrights that protect the content of our solutions. Solely for convenience, the trademarks, service marks, trade names and copyrights referred to in this Annual Report are listed without the ©, ® and ™ symbols, but we will assert, to the fullest extent under applicable law, the Company's rights or the rights of the applicable licensors to these trademarks, service marks, trade names and copyrights.

This Annual Report may include trademarks, service marks or trade names of other companies. The use or display of other parties' trademarks, service marks, trade names or products is not intended to, and does not imply a relationship with, or endorsement or sponsorship of us by, the trademark, service mark or trade name.

Designed and produced by
MerchantCantos www.merchantcantos.com

Print managed by
urbanprintsupport.co.uk

Printed by
Cousin, who have FSC chain of custody certification. They also use vegetable-based inks and have ISO14001 environmental accreditation.

This report is printed on XPer, which is FSC accredited.

Shire plc
5 Riverwalk,
Citywest Business Campus,
Dublin 24, Ireland
www.shire.com