In a year of growth, innovation, and execution, maintaining Shire’s high standard of corporate governance remains critically important to the Board.

In 2017, my fellow Directors and I have overseen the continued transformation of Shire: the integration of Baxalta, multiple new product launches, the expansion of our pipeline, and a detailed strategic review of the business. We have also refined the Company’s governance framework, improving a system of policies and procedures that utilize the best of our talent and resources, enabling Shire to operate as a lean, nimble, and ethical organization. This model of governance reflects our culture of performance, compliance, and accountability, and supports Shire’s core strategic drivers of growth, innovation, efficiency, and people. Further details on the Board’s key governance considerations during the year can be found on the opposite page.

In accordance with the Board’s commitment to continued improvement, all Directors participated in an internal performance evaluation in 2017. Key considerations of this exercise included effective governance, the review and communication of strategy, Board and committee composition, as well as information delivery and support. All members of the Board have committed to apply the learnings from this process as we strive to enhance our role as stewards of Shire. Further details on the evaluation process, including identified strengths and areas of focus, can be found on pages 66 to 67.

Shire’s resilience and adaptability has made it a leader in an evolving and competitive global market. This same resilience and adaptability applies to Shire’s governance, where our focus on effective succession planning and personal development ensures that the Board remains well-positioned to deliver guidance and support during times of change. In August, we announced that Jeff Poulton, Chief Financial Officer, would leave Shire at the end of 2017, having provided many years of valued service to the Company. Thomas Dittrich was identified as his successor and is expected to join the Company as Chief Financial Officer on March 19, 2018, serving as an executive member of the Board and as a member of the Executive Committee. Thomas’ wealth of experience within and outside the pharmaceutical sector, and in leading finance teams at numerous multinational companies, will be a tremendous asset for the Board and Shire alike.

In addition, reflecting our commitment to the Governance Code, the Board announced in August 2017 that Bill Burns, Senior Independent Director, and Anne Minto, the previous Chairman of our Remuneration Committee, would retire as Directors following the 2018 AGM, each having dedicated more than seven years to Shire. Al Struckman, an existing Non-Executive Director and member of the Remuneration Committee, replaced Anne as Committee Chairman in August 2017. In October, we appointed Sara Mathew Chairman of the Audit, Compliance & Risk Committee, replacing Dominic Blakemore. Both Dominic and Anne continue to serve as members of their respective Committees, to provide a smooth transition until their retirement from the Board.

In February 2018, we announced that Dominic would retire as a Director following the 2018 AGM to allow him to focus on his new role as Chief Executive of Compass Group plc, and that a search for a new Board member with comparable knowledge, insight, and experience was under way. We also announced that Olivier Bohuon, an existing Non-Executive Director, was to be appointed Senior
The Board's principal considerations and activities during the year were:

**Strategy**
- The integration of Baxalta and realization of related synergies
- The ongoing neuroscience strategic review, including the decision to operate standalone Rare Disease and Neuroscience divisions, key growth drivers for each and the potential for creating two separately listed companies
- Achievement of the Company’s target to rapidly pay down debt
- Capital allocation, the Company’s Long Range Plan and key drivers for growth
- Ongoing investor feedback, with a high level of engagement related to the Company’s key strategic initiatives and executive remuneration
- Launch activity for key products (including MYDAYIS) and ongoing commercial development
- Developments to the global operating environment including regulatory and tax reform, pricing pressures and other macro events
- Updates on the clinical development pipeline and the research and non-clinical portfolio, including portfolio productivity and prioritization

**Operations**
- The appraisal of the Company’s Technical Operations network, ensuring that it continues to appropriately support business operations and the delivery of strategy
- The resolution of a manufacturing interruption concerning CINRYZE
- Performance against the Company’s Environment, Health and Safety targets, and ongoing program development
- Ongoing commercial and manufacturing investments, including the development of a new, state-of-the-art biologics manufacturing facility in Ireland
- Performance updates against Quality Assurance initiatives
- The Company’s involvement in ongoing litigation

**Governance**
- Board performance and effectiveness, including induction and training initiatives
- Board and committee composition, including the anticipated reduction in Board membership following the previous expansion linked to the Baxalta acquisition, and changes to committee chairmanship/membership
- Succession planning for Executive and Non-Executive Directors, including internal and external capability mapping for the role of CEO
- Senior management talent assessment, development and succession, including recruitment for the roles of Chief Financial Officer, Head of Research & Development and Chief Human Resources Officer
- The reappointment of Deloitte LLP as the Company’s auditor
- Proposed changes to the Company’s Articles of Association, which were approved by shareholders at the 2017 AGM
- Updates from Board committees concerning matters falling within their remit, including amendments to their Terms of Reference

**Risk management and compliance, culture and responsibility**
- The ongoing monitoring and review of the Company’s risk management and internal control systems
- The assessment of the Company’s principal risks and determination of its risk appetite
- Employee survey results, morale and personal development programs, as well as other culture-related strategies
- Key policies including the Board Diversity Policy and Code of Ethics
- The Company’s approach to environmental protection and sustainable operations
- Compliance updates including assessments of the Company’s anti-bribery and anti-corruption program
- The fulfilment of obligations under the Company’s Corporate Integrity Agreement

**Financial performance and reporting**
- The Company’s ongoing performance against budget
- The performance of key marketed products (including XIIDRA) and related competition
- Generic competition to marketed products (including LIALDA)
- The Company’s full-year and half-year results, quarterly earnings releases and related guidance
- The Company’s Annual and Half-yearly Reports, Form 10-K and Form 10-Q filings
- The declaration of dividends and the Company’s stated dividend policy
- The Company’s continued adoption of the going concern basis of accounting
- The assessment of the Company’s long-term viability

Independent Director following the 2018 AGM. On behalf of the Board, I express our gratitude to Bill, Anne and Dominic, whose contributions to Shire and leadership on the Board have been instrumental parts of our growth and success.

In August, we also announced that David Ginsburg, Chairman of the Science & Technology Committee, would retire following the 2018 AGM. The Board, however, has agreed that David will remain in service while we continue our search for a new Non-Executive Director, specifically with scientific and/or medical experience.

Looking ahead to 2018, the Board and I will continue to work closely with management, shareholders, and other stakeholders as we pursue our strategy for growth while evaluating all strategic options available to Shire. As we transition to a company with two distinct divisions, we are mindful of the importance of effective corporate governance to Shire’s future success. We will therefore continue to position ourselves to best serve the needs of the business, to support management in the delivery of our strategy, and ultimately to promote the development of effective therapies for the patients we serve, all while creating shareholder value.
The Board has established the following governance framework in order to ensure effective oversight and control over the Group’s operations:

**Board of Directors**
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 setting the Company’s strategy and 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.

**Audit, Compliance & Risk Committee**
The Committee oversees Shire’s accounting and financial reporting processes, the audits of its financial statements and the effectiveness of the Company’s risk management, internal control and compliance framework, making recommendations to the Board as required.

**Remuneration Committee**
The Committee oversees remuneration matters affecting the Company’s Chairman, Executive Directors, Executive Committee members and wider employees, including annual and long-term incentive arrangements and related performance targets.

**Nomination & Governance Committee**
The Committee is responsible for reviewing the structure and composition of the Board and for overseeing succession planning for members of the Board and, in consultation with the Chief Executive Officer, the Executive Committee. In addition, the Committee reviews and makes recommendations to the Board on cultural, reputational, political and governance matters affecting the Group.

**Science & Technology Committee**
The Committee’s principal responsibilities are to regularly review and advise the Board on the Company’s investment in research, development and technology, the quality of the R&D pipeline and that of R&D talent within the Group.
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, leading the Non-Executive Directors in evaluating the performance 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. The Chief Executive Officer is accountable to the Board for the development of the Company’s strategy and operations, having regard to the risk profile, objectives and policies set forth by the Board and its committees.

Non-Executive Directors
The Non-Executive Directors are charged with exercising independent judgment during Board deliberations, and ensuring effective performance and delivery of strategy by management.

Company Secretary
The Company Secretary ensures an efficient flow of information between the Board, its committees and members of management to enable effective decision making. The Company Secretary is responsible for advising the Board on matters of governance and for facilitating induction and training initiatives for Directors.

Chief Financial Officer
The Chief Financial Officer is responsible for developing strategies to enable the fulfilment of Shire’s short and long-term strategic and financial goals, and for collaborating with the Chief Executive Officer in support of ongoing business operations and the development of new opportunities. In doing so, the Chief Financial Officer oversees all financial matters affecting the Company.

Executive Committee
The Committee assists the Chief Executive Officer in managing Shire’s operations, ensuring that the Group is run within the governance framework agreed by the Board. In doing so, the Executive Committee supports the development and implementation of the Company’s strategy and deliberates matters that are material from a risk, financial, reputational and/or strategic perspective.

The Board Reserve Powers, Board committee terms of reference and formal division of responsibilities of the Chairman, Senior Independent Director, Chief Executive Officer, Non-Executive Directors, and Company Secretary are available on the Company’s website: www.shire.com
### Board and committee meeting attendance

<table>
<thead>
<tr>
<th>Board member</th>
<th>Board appointment date</th>
<th>Board (scheduled)</th>
<th>Board (ad hoc)</th>
<th>Audit, Compliance &amp; Risk</th>
<th>Remuneration</th>
<th>Nomination &amp; Governance</th>
<th>Science &amp; Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan Kilsby</td>
<td>September 1, 2011</td>
<td>5(5)</td>
<td>5(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flemming Ornskov</td>
<td>January 2, 2013</td>
<td>5(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>William Burns</td>
<td>March 15, 2010</td>
<td>5(5)</td>
<td>3(3)</td>
<td>9(10)</td>
<td>6(6)</td>
<td>5(5)</td>
<td></td>
</tr>
<tr>
<td>Dominic Blakemore</td>
<td>January 1, 2014</td>
<td>4(5)</td>
<td>3(3)</td>
<td>5(5)</td>
<td>6(8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olivier Bohuon</td>
<td>July 1, 2015</td>
<td>5(5)</td>
<td>3(3)</td>
<td>10(10)</td>
<td>5(5)</td>
<td>0(1)</td>
<td></td>
</tr>
<tr>
<td>Ian Clark</td>
<td>January 3, 2017</td>
<td>5(5)</td>
<td>3(3)</td>
<td></td>
<td>8(8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gail Foster</td>
<td>June 3, 2016</td>
<td>5(5)</td>
<td>3(3)</td>
<td>5(5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steven Gillis</td>
<td>October 1, 2012</td>
<td>5(5)</td>
<td>4(5)</td>
<td>5(5)</td>
<td>9(10)</td>
<td></td>
<td>5(5)</td>
</tr>
<tr>
<td>David Ginsburg</td>
<td>June 16, 2010</td>
<td>5(5)</td>
<td>2(3)</td>
<td></td>
<td>6(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sara Mathew</td>
<td>September 1, 2015</td>
<td>5(5)</td>
<td>5(5)</td>
<td>5(5)</td>
<td>2(2)</td>
<td>5(5)</td>
<td></td>
</tr>
<tr>
<td>Anne Minto</td>
<td>June 16, 2010</td>
<td>5(5)</td>
<td>3(3)</td>
<td>10(10)</td>
<td>6(8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albert Stroucken</td>
<td>June 3, 2016</td>
<td>5(5)</td>
<td>5(5)</td>
<td>5(5)</td>
<td>10(10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeffrey Poulton</td>
<td>April 29, 2015 — December 31, 2017</td>
<td>5(5)</td>
<td>3(3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

The number in brackets denotes the number of meetings that Board and committee members were eligible to attend.

1 Ad hoc Board meetings include those that fell outside the usual Board calendar, which were timed to facilitate maximum possible attendance, and those of a sub-committee of the Board comprising a select group of Directors.

2 Each Board committee held five scheduled meetings during the year, with additional ad hoc meetings held to meet the requirements of the business and 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 Dominic Blakemore was absent from one scheduled Board meeting due to personal bereavement.

6 Dominic Blakemore was succeeded by Sara Mathew as Chairman of the Audit, Compliance & Risk Committee on October 27, 2017. Mr. Blakemore continues to serve as a member of the Committee.

7 In anticipation of changes to Board committee composition, with the approval of the Board, Olivier Bohuon was excused from attending one Science & Technology Committee meeting.

8 Anne Minto was succeeded by Albert Stroucken as Chairman of the Remuneration Committee on August 3, 2017. Ms. Minto continues to serve as a member of the Committee.

During the year the Board met frequently in order to discharge its duties. Five scheduled Board meetings were held, typically alongside Board committee meetings. In addition, five ad hoc Board meetings took place to consider the strategic review of the Company’s neuroscience business and other matters of significance.

During scheduled Board meetings it is customary for the Non-Executive Directors to meet 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.

Only members of the Board are entitled to attend Board meetings, however, during the year members from the following internal 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.
Effective stewardship is central to the development and promotion of the Company’s purpose, culture, and values, 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.

**Appointments**
The Board may appoint any individual as a Director either to fill a vacancy or as an additional member of the Board, subject to subsequent election and annual re-election by the Company’s shareholders. The process for new appointments is led by the Nomination & Governance Committee (procedural details are available on page 76) which ultimately makes a recommendation to the Board.

With the exception of Dominic Blakemore, William Burns, and Anne Minto, all Directors are seeking election or re-election at the Annual General Meeting to be held on April 24, 2018. At this meeting, Non-Executive Director terms of appointment and Executive Director service contracts will be made available for inspection by shareholders.

**Conducts 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 the conflict and, if so, set any related terms and conditions. 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 circumstances relating to an authorized conflict, the Director concerned is required to inform the Nomination & Governance Committee and the Chairman of the Board. Authorized conflicts are reviewed annually and at such other times as is necessary by the Nomination & Governance Committee, which reports on its findings to the Board. Details on Directors’ interests in transactions can be found on page 109.

**Independency and competencies**
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 each Non-Executive Director 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 56 to 58. Details of the 2017 Board performance evaluation can be found on pages 66 to 67.

**Planning and operation**
At the start of the year the Chairman and her fellow Directors, supported by the Company Secretary, agree on a forward-looking schedule of matters to be considered by the Board and its committees, with specific updates made throughout the year as required. In addition, the Chairman, assisted by the Company Secretary, ensures appropriate time-allocation at meetings and encourages open and balanced discussion with a view to achieving resolution by consensus. If consensus is not possible, decisions are to be taken by majority vote, with the Chairman having the deciding vote in the case of an equality of votes.

**Information and support**
The Chairman, supported by the Company Secretary, ensures that effective channels of communication exist between the Board, its committees and members of management, and that Board members are provided with the information necessary for them to discharge their duties and responsibilities. Before decisions are taken at Board and committee meetings, consideration is given to the adequacy of the information made available, enabling the deferral of decision-making if necessary. Directors may seek clarification, additional information or professional advice necessary to the fulfilment of their duties and responsibilities from across the business, from the Company Secretary or from independent sources at the Company’s expense.

**Diversity**
The Board recognizes the inherent value of diversity at all levels within the organization, and strives to foster an inclusive and respectful professional culture. In doing so, the Board promotes its core belief that a diverse workforce brings a wealth of ideas, innovation and drive that in turn contribute to the Company’s ability to anticipate, and adapt to, ongoing changes in its operating environment.

During the year the Board reviewed its Diversity Policy and considered related external publications, including the Hampton-Alexander Review concerning gender diversity and the Parker Review concerning ethnic diversity. The 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 and 39.

**Commitment**
Prior to appointment, Non-Executive Directors are required to disclose to the Board their existing 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 significant commitments. As part of the 2017 Board performance evaluation, it was determined that each of the Directors had committed sufficient time to their role.
Upon appointment to the Board, all Directors undergo a formal induction program that is tailored to their individual skills, knowledge and experience:

**Board induction program**

**Objectives:**
To facilitate each Director’s familiarization with the Company’s business, strategy, and governance framework, as well as their own duties and responsibilities.

<table>
<thead>
<tr>
<th>Core program</th>
<th>Induction meetings</th>
<th>Bespoke program</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Directors’ duties and responsibilities</td>
<td>• Members of the Board</td>
<td>• Board committee responsibilities</td>
</tr>
<tr>
<td>• Strategy and technical operations</td>
<td>• Company Secretary</td>
<td>• Site visits</td>
</tr>
<tr>
<td>• Research and development</td>
<td>• Members of the Executive Committee</td>
<td>• Executive remuneration</td>
</tr>
<tr>
<td>• Corporate governance and reputation</td>
<td>• Members of management and subject-matter specialists</td>
<td>• Global taxation</td>
</tr>
<tr>
<td>• Risk management, compliance and internal control</td>
<td>• Corporate brokers and external advisors</td>
<td>• Commercial operations</td>
</tr>
</tbody>
</table>

In addition to undergoing an initial induction, as part of the annual Board performance evaluation each Director discusses with the Chairman their individual development requirements with a view to ensuring that 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.

The 2017 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, and was aligned with the principles of the Governance Code.

**Board performance evaluation**

**Key areas of focus**
- Information and support
- Time management
- Effective governance
- Independence, diversity and succession planning
- Collective skill and experience
- Delivery and communication of strategy

<table>
<thead>
<tr>
<th>Individual meetings</th>
<th>Chairman’s performance</th>
<th>Evaluation and review</th>
<th>Board committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Chairman discussed with each Non-Executive Director their individual performance, training needs, and overall Board effectiveness</td>
<td>The Senior Independent Director solicited the views of fellow Directors with respect to the performance of the Chairman, and provided her with constructive feedback</td>
<td>The Chairman led a performance evaluation and effectiveness review with the Board based on the Directors’ feedback</td>
<td>The Chairman of each Board committee held performance and effectiveness discussions with their committee members</td>
</tr>
</tbody>
</table>
Key strengths, and areas of focus for 2018, were identified as follows:

**Strengths**
- Culture of positive engagement and constructive debate
- Appropriate Board committee structure and composition, with each committee possessing the necessary skills and experience to perform effectively
- Appropriate balance of support and challenge between the Board and members of management

**2018 areas of focus**
- Develop collective Board awareness of corporate governance matters prevalent in the UK
- Streamline the flow of information from management to the Board and its committees, including the manner in which support is provided at meetings
- Continue to improve the flow of information between Board committees
- Enhance communication of strategy to investors and other stakeholders

Areas of focus for 2017, identified during the 2016 internal Board performance evaluation, and related progress are as follows:

**2017 areas of focus**
- The Board’s approach to reviewing corporate strategy
- Succession planning for management and Non-Executive Directors

**Progress**
- The Board has refined the way it considers matters of strategy, including broadening its deliberations and allocating more time for dedicated discussion
- The Board oversaw an independent talent assessment of members of management, prioritizing their ongoing development and refining success plans for second and third-tier management and the skills required at executive level. The Board also sought to broaden its awareness of suitable candidates for potential appointment as Non-Executive Directors through dedicated interactions with external search consultancies and networking initiatives
Governance

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, mitigating, and monitoring the principal risks faced by the Group. These systems are developed in furtherance of 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 (ICFR) 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 ICFR takes into account key policies such as the Controller’s Accounting 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 ICFR testing, are regularly reviewed by the Audit, Compliance & Risk (ACR) Committee which, along with management, assesses the ongoing effectiveness of the ICFR 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.

Monitoring and review
The Board, supported by the ACR Committee, is responsible for the ongoing monitoring and review of the Group’s risk management and internal control systems. In doing so, the Board:

- agrees, on an annual basis, a scheduled monitoring program and identifies those aspects that will be overseen, on its behalf, by the ACR Committee
- ensures that considerations of risk feature within its wider discussions, including those concerning the Company’s business model and strategy
- reflects 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

Following completion of the Baxalta acquisition, 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 Enterprise Risk Management program and biannual enterprise risk assessment. In addition, the Board has taken into consideration risk management and internal controls implementation, effectiveness, and integration as part of its wider post-transaction strategic review.

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 concerning key aspects of the Company’s risk management and internal control regime, including its operation and integration, management’s oversight and related reporting, risk appetite, culture, and other aspects pertinent to the affairs of the Company
- reflection 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, drawing on the Board’s more-regular discussions and feedback from the ACR Committee
- evaluation of the principal features of the risk management and internal control systems, their composition relative to Shire’s strategic direction and conclusions as to their overall effectiveness

Following its review in respect of the 2017 financial year and the period up to the approval of this Annual Report, the Board neither identified, nor was advised of, any failings or weaknesses 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 18 and 19.
Going concern
The Directors’ Report (covering pages 2 to 113 and 184 to 198) 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.

Viability statement
For the purpose of assessing ongoing viability, the Board considered the Company’s prospects over a four-year period. This period is consistent with the relative focus within the Company’s Long Range Plan (the “LRP”), which underpins the Group’s investment and planning processes, supports the implementation of the Company’s strategy and enables the prioritization of our key strategic drivers: growth, innovation, efficiency, and people. The LRP includes the evaluation of key sensitivities that relate to certain of the Company’s principal risks and uncertainties (as outlined on pages 18 to 21), including the realistic availability and effectiveness of mitigating actions, with a view to determining their potential impact on the Company’s financial position, ability to deliver on strategy and, ultimately, its viability. The sensitivity analysis considers the Company’s future cash flows and funding requirements, including the ability to repay outstanding debt and other obligations, the contingent value rights held by the former shareholders of Dyax, maintaining compliance with ongoing loan covenants, the sustainability of the Company’s dividend policy, and its strategy for reinvesting in long-term growth. The sensitivity analysis assumes that debt maturing within the four-year period will be repaid from operating cash flows. Specific scenarios considered during the year included increased pricing pressure in the U.S. and Europe, competition pressure on our Hematology franchise, lower market share for strategic products, general demand decrease and the failure of strategic pipeline programs, such as SHP643 (lanadelumab).

In addition to evaluating the LRP, as part of its wider assessment of ongoing viability the Board considered:

- its assessment of the Company’s principal risks and uncertainties (as outlined on pages 18 to 21)
- its monitoring and review of the Company’s risk management and internal control systems (as outlined on page 68)
- reporting and assurance that it receives from its committees, members of management and the Group’s external auditor
- the impact of significant projects, strategic developments and other significant commitments on the Company’s risk profile, including the acquisition of Baxalta in 2016, and the establishment of separate Rare Disease and Neuroscience divisions in 2018

Having regard to each of these considerations, 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. In drawing this conclusion, the Board’s assessment did not include the impact of undertaking other strategic initiatives, including the possible separation and independent listing of each of the Rare Disease and Neuroscience divisions.
The Board is committed to maintaining open and constructive dialogue 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:

<table>
<thead>
<tr>
<th>Meetings with shareholders</th>
<th>Digital application</th>
<th>Corporate responsibility reports and engagement</th>
<th>Results announcements and presentations</th>
<th>Healthcare conferences</th>
<th>Financial reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Chairman, Chief Executive Officer, Chief Financial Officer, the Chairmen of the Board committees and members of management engaged with many of Shire’s major shareholders and their representative bodies to receive views on matters material to the Company and its operations. Such matters included the ongoing integration of Baxalta, the Company's strategy and financial targets, and the proposed 2018 Directors’ Remuneration Policy. In addition, a meeting with members of the Investor Forum was held at the Company’s London office, with topics of discussion including capital allocation; Board composition, responsibilities and its role in business development; and succession planning.</td>
<td>The Shire IR Briefcase app is regularly updated with news and presentations and provides access to the Company’s latest Annual Report.</td>
<td>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.</td>
<td>The Company communicated its performance to shareholders and analysts through quarterly financial results announcements, each accompanied by an explanatory webcast and Q&amp;A session provided by the Chief Executive Officer, the Chief Financial Officer and other members of management.</td>
<td>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.</td>
<td>The Group 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 equity listings on the London Stock Exchange and the NASDAQ Global Select Market, and its debt listing on the New York Stock Exchange.</td>
</tr>
</tbody>
</table>
Ensuring a robust and integrated system of compliance, risk management, and internal control has been a key priority of the Committee.

Committee meetings held during the year typically coincided with key dates in the Group’s financial reporting cycle (details of Committee members’ attendance can be found on page 64). 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 auditor, 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 discussions with 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 wider 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 fulfilment 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:

### Finalizing purchase accounting related to the acquisition of Baxalta
- the valuation of acquired intangible assets and goodwill
- the subsequent adjustments to preliminary acquisition fair values related to our unit of account judgments and allocation of cost of goods sold for intangible assets, refinements to the estimated selling price for inventory, and the corresponding impact of these matters on goodwill and deferred tax liabilities

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

### Long-lived Assets, including Property, Plant and Equipment, and Intangible Assets
- the assessment of events and circumstances that may indicate that the carrying value of a long-lived asset has been impaired. Specifically, the Committee assessed the positive scientific and marketing results of competing products for CINRYZE and FEIBA, and the temporary stock-out of CINRYZE in the U.S.
- determining when facilities in Shire’s manufacturing footprint should be impaired or classified as held for sale pursuant to the Company’s Network Study
- ensuring the depreciation and amortization method appropriately reflects the pattern of economic benefit

Further information is available in Notes 12 and 14 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 products with newly launched generic competition, most notably those related to LIALDA
- the impact of implementing the new revenue recognition accounting standard and the conclusion that it would not have a material impact on the Company’s financial position or operations

Further information is available in Note 3 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
- the impact of tax reform in the United States

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.

Committee activities
In addition to the key considerations previously noted, 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 Company’s response to a comment letter from the U.S. Securities and Exchange Commission on its 2016 Form 10-K
- reviewing and assessing the Group’s quarterly application of its Non GAAP policy, including those costs incurred as part of its continuing integration activities relating to the Baxalta acquisition
- reviewing tax matters impacting the Group
- reviewing the impact of Baxalta-related integration activities, such as the establishment of a shared corporate services centre and the respective alignment of the consolidation processes and Information Technology systems, on the financial reporting process

### 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 periodic updates on the status of the external auditor’s testing of the control environment following the integration of the internal control environment of Baxalta into the Company’s SOX compliance program
- conducting an assessment of the external audit process, including a review of management’s evaluation of the performance and effectiveness of the external auditor
- reviewing and approving the 2017 Audit Plan and audit fee
- assessing the objectivity and independence of the external auditor

### Compliance and risk management
- reviewing periodic updates from the Chief Compliance and Risk Officer and the Head of Internal Audit, encompassing key areas such as the Company’s overall compliance program, the internal audit plan status and results, the Company’s compliance with its Corporate Integrity Agreement, the Company’s Enterprise Risk Management program, and the Company’s Internal Investigations program
- assessing the Group’s principal risks and the associated mitigation strategy
Additional matters
- assessing the continued impact of the integration of the legacy Baxalta business and the strategic review of the neuroscience business on management’s ability to undertake ongoing duties in a timely and effective manner
- reviewing the Group’s treasury policies and ongoing treasury activities
- assessing the effectiveness of the Group’s internal audit program

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.

Amongst other things, this policy:

- prohibits the auditor from providing a service that:
  - 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

- prescribes services that:
  - the external auditor is explicitly prohibited from providing
  - have been pre-approved by the Committee subject to individual and aggregate monetary limits

- requires:
  - the Chief Accounting Officer’s review of all service assignments prior to the initiation of any related non-audit service by the external auditor

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 are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fees (millions)</th>
<th>Percentage</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>$7.2 million; 49%</td>
<td>A majority of these fees ($5.6 million) relate to the completion of projects already under way at Baxalta prior to its combination with the Company in 2016. Also included in this amount are fees related to audit work that only the Independent Registered Public Accountant can reasonably be expected to perform, such as quarterly review procedures, statutory audits or procedures relating to regulatory filings.</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>$20.2 million; 137%</td>
<td>Fees principally related to the continuation of projects already under way 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.</td>
<td></td>
</tr>
</tbody>
</table>

Further details on the breakdown of non-audit fees paid or due to the external auditor as a result of services provided during 2017 can be found in Note 29 to the consolidated financial statements. Information regarding non-audit services performed during 2016 and the procedures performed by the Committee to ensure the objectivity and independence of Deloitte LLP can be found on pages 77, 78 and 175 of the Company’s 2016 Annual Report.

The Committee was satisfied throughout the year that the objectivity and independence of Deloitte LLP was not impaired. 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
- 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 2017, the external auditor was sufficiently robust in dealings with members of management, and 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 that measured the external auditor’s performance against predetermined “critical success factors” that were designed to facilitate continuing and measurable improvement in the effectiveness of the external audit process.
In accordance with European and national regulation, 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 current intention 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 and the continued strategic review of the Company’s neuroscience business.

It should be noted that, despite the Committee’s current intention regarding the timing of tender, the external auditor is subject to ongoing effectiveness review and thereby 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.

The Committee concluded that:

- the "critical success factors" had been substantially met
- there existed a constructive working relationship between the external auditor and members of management
- 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 to address these in 2018.

Appointment and tendering
Deloitte LLP has served as Shire’s external auditor since 2002, with the current audit partner, John Adam, commencing his appointment in 2016. Following the review of Deloitte LLP’s continued objectivity, independence and performance relating to the 2017 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 2018 financial year. There existed no contractual obligations that inhibited or influenced the Committee’s recommendation.

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, communications, 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, which is overseen by the Chief Compliance and Risk Officer, is managed by an independent third-party in order to preserve anonymity as appropriate. Concerns and allegations are 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

The Committee is resolute in its mission to drive robust governance and strategic leadership of the Company, underpinned by rigorous succession planning.

Susan Kilsby
Committee Chairman

Membership and meetings
As of the year end, the Nomination & Governance Committee comprised five independent Non-Executive Directors and the Chairman of the Board.

<table>
<thead>
<tr>
<th>Committee member</th>
<th>Date of Committee appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan Kilsby</td>
<td>Feb 1, 2014</td>
</tr>
<tr>
<td>Olivier Bohuon</td>
<td>Feb 15, 2017</td>
</tr>
<tr>
<td>William Burns</td>
<td>Jun 27, 2011</td>
</tr>
<tr>
<td>David Ginsburg</td>
<td>Dec 3, 2015</td>
</tr>
<tr>
<td>Sara Mathew</td>
<td>Feb 15, 2017</td>
</tr>
<tr>
<td>Anne Minto</td>
<td>Feb 8, 2012</td>
</tr>
</tbody>
</table>

1 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 (details of Committee members’ attendance can be found on page 64). At the invitation of the Committee Chairman, regular additional meeting attendees included the Chief Executive Officer and members from the Company’s Human Resources, 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, culture 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:

Chief Financial Officer succession
In August 2017, Shire announced that Jeff Poulton, Chief Financial Officer, would leave his position at the end of 2017, having provided many years of valued service to the Company. Russell Reynolds Associates, an executive search consultancy with no other connection to the Company, was retained to lead the search for a successor. The Committee considered internal and external candidates before making a recommendation to the Board. In November 2017, Shire announced that Thomas Dittrich would be appointed Chief Financial Officer, serving as an executive member of the Board and as a member of the Company’s Executive Committee. Mr. Dittrich is expected to commence his role on March 19, 2018. The Board appointed John Miller, Shire’s Senior Vice President of Finance, as Interim Chief Financial Officer, to serve until Mr. Dittrich’s appointment becomes effective.

Non-Executive Director succession
In accordance with the anticipated reduction in Board membership following its previous expansion linked to the Baxalta acquisition, and reflective of the Board’s commitment to the orderly refreshment of its collective skill and experience, in August 2017, Shire announced that William Burns, Senior Independent Director, and Anne Minto, prior Chairman of the Remuneration Committee, would retire from the Board following the 2018 AGM. The Board also announced that David Ginsburg, Chairman of the Science & Technology Committee, would simultaneously retire, however, the Board has agreed that Dr. Ginsburg will continue in service while it progresses its
search for a new Non-Executive Director, specifically with scientific and/or medical experience. In addition, the Board announced in February 2018 that Dominic Blakemore, having been appointed Chief Executive of Compass Group plc on January 1, 2018, had decided to step down following the 2018 AGM, and that a search for a new Non-Executive Director with comparable knowledge, insight, and experience was under way. We also announced that Olivier Bohuon, an existing Non-Executive Director, was to be appointed Senior Independent Director following the 2018 AGM.

Board Committee changes
As part of its ongoing review of Board and committee composition, and in light of the appointment of Ian Clark to the Board in January 2017, the Committee recommended to the Board various changes to committee composition, that were approved and became effective in February 2017 (current Board committee composition is set out on pages 56 to 58). In addition, in August 2017, Al Stroucken, an existing Non-Executive Director and member of the Remuneration Committee, replaced Anne Minto as Remuneration Committee Chairman. Ms. Minto continues to serve as a member of the Remuneration Committee to enable a period of transition until her retirement from the Board. Furthermore, in October 2017, the Board approved the appointment of Sara Mathew as Chairman of the Audit, Compliance & Risk Committee, replacing Dominic Blakemore who continues to serve as a member of that committee.

Executive Committee succession
During the year the Committee reviewed ongoing succession planning for the CEO, CFO and other members of the Company’s Executive Committee, with skills, knowledge, and experience mapping undertaken for each role. With the positions of Head of Research & Development and Chief Human Resources Officer becoming vacant, potential successors were considered with recommendations made to the Board. An internal candidate, Joanne Cordeiro was appointed Chief Human Resources Officer in August 2017, having joined Shire in 2011. Andreas Busch was appointed Head of Research and Development and Chief Scientific Officer in January 2018, joining from Bayer AG where he worked for 13 years.

Goverance and culture
The Committee reviewed various matters concerning the development of governance and culture, including the Company’s Code of Ethics, proposed changes to the Company’s Articles of Association (as approved by shareholders at the 2017 AGM), the Company’s ongoing compliance with the UK Corporate Governance Code and papers dedicated to corporate culture. As part of its considerations, and in light of the ongoing development of the business, the Committee recommended to the Board that its responsibilities be expanded to encompass the oversight of culture-related strategic initiatives. The Committee’s Terms of Reference were subsequently updated to reflect this additional responsibility.

Board Diversity Policy
In the context a continued external focus on diversity, Committee members participated in the wider Board review of Shire’s Board Diversity Policy. Further details on the review, including a description of the policy, can be found on page 65. 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 and 39.
We have overseen the strengthening of Shire’s pipeline through R&D and business development, with a focus on innovation and value for patients.

Dr. David Ginsburg
Committee Chairman

Membership and meetings
As of 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.

<table>
<thead>
<tr>
<th>Committee member</th>
<th>Date of Committee appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Ginsburg</td>
<td>Jun 16, 2010</td>
</tr>
<tr>
<td>William Burns</td>
<td>Feb 8, 2012</td>
</tr>
<tr>
<td>Steven Gillis</td>
<td>Oct 1, 2012</td>
</tr>
<tr>
<td>Ian Clark</td>
<td>Feb 15, 2017</td>
</tr>
<tr>
<td>Olivier Bohuon</td>
<td>Jul 1, 2015 — Feb 15, 2017</td>
</tr>
</tbody>
</table>

The Committee typically meets before scheduled meetings of the Board (details of Committee members’ attendance can be found on page 64). 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:

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
- “deep dives” into key therapeutic areas, including hematology, neuroscience, hereditary angioedema, gastroenterology, and ophthalmics
- portfolio productivity and prioritization
- key clinical trial/study data including SHP465 (MYDAYIS), SHP680 and SHP643 (lanadelumab)
- R&D budget, organizational structure, and governance, including expertise within the function

- 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
Dear shareholder,

I am pleased to present the Directors’ Remuneration Report (DRR) for the financial year ending December 31, 2017. Since becoming the new Chairman of Shire's Remuneration Committee on August 3, 2017, I have been working closely with Anne Minto, its former Chairman, to ensure a smooth succession, and to gain a clear understanding of Shire’s shareholder views. I would like to thank Anne for her help in enabling a successful transition and for sharing the deep institutional knowledge she has gained over her tenure as Chairman.

This has been another year of significant growth and continued change for Shire. As such, I would like to provide you with an overview of the major decisions the Committee took during 2017, the context in which these decisions were made, and the changes to the Executive Directors' remuneration arrangements.

Since our last Remuneration Policy was approved, Shire has transformed itself into the leading global biotech company focused on rare diseases.

Since our last Remuneration Policy was approved, Shire has transformed itself into the leading global biotech company focused on rare diseases.
corporate performance, the Company’s strategy and the shareholder experience. For the 2017 EAI outcomes, it was determined that the CEO’s and CFO’s awards would be 123 percent of target in line with the overall EAI corporate funding score, and that no personal multiplier would be applied. The 2015 LTIP award vested at 38 percent of maximum, reflecting actual performance over the past three years against the Net Product Sales and Non GAAP EBITDA performance metrics and the Non GAAP adjusted ROIC underpin.

In the chart below, we have listed the CEO’s LTIP awards that have vested over the past three years and the current values of these awards as a percentage of their original face value at grant. These three years represent the performance period, which also has an additional two-year post-vest holding period for awards granted under our 2015 Policy, resulting in a five-year time horizon. As you can see from the chart below, the actual compensation delivered to the Executive Directors does show alignment with the shareholder experience, in that the current value of the 2014 and 2015 awards is less than 50 percent of the face value at grant.

Current valuation of CEO’s LTIP awards vesting over the past three years (as a percentage of value at grant)\(^2\)

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>100%</td>
<td>38%</td>
<td>10%</td>
</tr>
</tbody>
</table>

1 Represents awards granted in 2013, 2014, and 2015 and vesting in 2016, 2017, and 2018 respectively. Awards comprise Stock Appreciation Rights (SARs) and Performance Share Units (PSUs) subject to relevant performance conditions. In the case of the 2013 and 2014 awards, no vested PSUs have been sold and no vested SARs have been exercised.

2 Current value is based on the Q4 2017 average closing ADS price of $148.21.

As Shire has transformed as a business, our Executive Committee has also changed. We are pleased to announce the expected appointment of a new Executive Director and Chief Financial Officer (CFO), Thomas Dittrich, who is due to commence his role on March 19, 2018, as well as a new pre-eminent Head of Research and Development and Chief Scientific Officer, Dr. Andreas Busch. These critical roles will help Shire continue to chart its course, both in the financial discipline and expertise needed to navigate our business strategy, and in successful drug discovery and development.

As communicated to shareholders in last year’s DRR, the Committee has undertaken a comprehensive review of our Remuneration Policy within this context of transformation. As we considered the strategic drivers at Shire, coupled with feedback we have received from many of our shareholders, the Committee’s principles that guided its decisions impacting the policy were:

- **Simplicity**
  Seek transparency in design and communication.

- **Alignment**
  Ensure pay outcomes mirror the shareholder experience.

- **Prioritize strategic corporate performance**
  Link individual pay outcomes clearly with company performance.

- **Integrated global business**
  Recognize Shire’s international business footprint and market for talent.

- **Flexibility**
  Enable the policy to support potential business changes over time.

By taking the time to consider all elements of the Policy carefully through this lens, the Committee has taken the opportunity to ensure that the Remuneration Policy for Executive Directors outlined in this report, supports the Company’s strategic direction and continues to drive growth and create shareholder value. As a result of this review, we are presenting a new Remuneration Policy for shareholder approval at the 2018 Annual General Meeting (AGM).

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:

**Part 1: Annual Statement**
1. a) Our remuneration at a glance
2. b) 2017 single total figure of remuneration
3. c) Other audited disclosures
4. d) 2017 single total figure of remuneration for the Chairman and Non-Executive Directors
5. e) Departure Arrangements for Jeff Poulton
6. f) Payments to past Directors
7. g) Non-audited disclosures

**Part 2: Directors’ Remuneration Policy**
1. a) Executive Director remuneration policy
2. b) Chairman and Non-Executive Director remuneration policy
3. c) Recruitment remuneration policy
4. d) Service contracts and termination arrangements
5. e) Remuneration scenarios
6. f) Shareholder engagement
7. g) Remuneration of other employees

**Part 3: Annual Report on Remuneration**
1. a) Implementation of Directors’ Remuneration Policy in 2018
2. b) 2017 single total figure of remuneration for Executive Directors (subject to audit)
3. c) Other audited disclosures
4. d) 2017 single total figure of remuneration for the Chairman and Non-Executive Directors (subject to audit)
5. e) Departure Arrangements for Jeff Poulton (subject to audit)
6. f) Payments to past Directors (subject to audit)
7. g) Non-audited disclosures

The Directors’ Remuneration Policy (Part 2) will be subject to a binding shareholder vote at the 2018 AGM to obtain approval for a period of three years effective following the AGM. The remainder of this report will be subject to an advisory shareholder vote at the 2018 AGM.
Context for the Remuneration Policy review
As Shire executes its strategic plan, it is critical that the remuneration structure supports Shire’s goals over the next Remuneration Policy period. The imperatives for the business over this period include:

- **Leverage rare disease platform**
- **Performance improvement and product sales growth**
- **Establish & begin operating as two divisions: Rare disease division and Neuroscience division**
- **Pipeline progression**
- **Expand leadership position in core therapeutic areas**
- **Drive further cost efficiencies and margin improvement**
- **Debt pay-down**

The Board believes the achievement of these strategic pillars will enable Shire to continue to deliver long-term sustainable growth and shareholder value.

As we move into the detailed policy changes outlined below, we would like to thank the shareholders who engaged in consultation in late 2017. During this time, we met with more than 30 of our largest shareholders and proxy advisory bodies. Overall, shareholders recognized that Shire was evolving to the next stage as an organization, and positively indicated that the new design was best positioned to support Shire’s strategic agenda. The feedback we received was valuable and influenced the development of the new Remuneration Policy.

**New Remuneration Policy: Summary of key changes from current policy**

The key elements of the new Remuneration Policy that differ from the current arrangements are:

1. **Simplification of LTIP vehicles by discontinuing the use of performance-based Stock Appreciation Rights (SARs) and consolidating LTIP delivery into one single vehicle — Performance Share Units (PSUs)**

Shire has previously granted a blend of performance-based SARs and PSUs under the LTIP. While this mix was historically appropriate for the business based on Shire’s size and development stage, the Committee has determined that future awards under the LTIP should be made exclusively in PSUs to ensure alignment with key financial metrics. The consolidation of performance-based SARs into PSUs significantly simplifies the LTIP for both participants and shareholders. This change also responds to concerns that performance-based SARs are overly complex and lack transparency.

The performance cycle of the proposed PSU program will continue to be measured over a three-year period followed by a two-year post-vest holding period. This means shares will only be released to participants five years after grant.

2. **Alignment of performance measures within the EAI and LTIP to Shire’s strategic imperatives**

Given our sharp focus on product sales growth, cost efficiencies and debt pay-down, the Committee has realigned the performance metrics that our Executive Directors’ incentives will be measured under in both the EAI and LTIP.

**EAI — performance measures**

- Underscoring the importance of our financial performance, we have increased the weightings of our financial metrics to 80 percent; non-financial metrics will be weighted 20 percent.
- Recognizing the dynamic nature of Shire’s business, and to provide flexibility in the near-term, the Committee retains discretion to vary the metrics of the performance measures as the business may require over the next three years.

The proposed EAI performance measures and the rationale for their selection are set out in the table below.

<table>
<thead>
<tr>
<th>Financials (80 percent)</th>
<th>Rationale</th>
</tr>
</thead>
</table>
| Net Product Sales (1/3rd) | • Aligned with growth strategy  
• Drives focus on balance of top-line and bottom-line performance outcomes |
| Non GAAP diluted EPS (1/3rd) | • Encompasses growth commitment made under Baxalta deal  
• Use of Non GAAP diluted EPS reflects current leverage and capital intensive nature of the business |
| Non GAAP Free Cash Flow (1/3rd) | • Drives focus on debt management  
• Over the longer term, provides liquidity for future acquisitions and strategic investments in our product portfolio |

<table>
<thead>
<tr>
<th>Non-Financials (20 percent)</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>• Focus on up to five equally weighted key corporate objectives and pipeline milestones aligned with Shire’s strategic pillars</td>
</tr>
<tr>
<td>Innovation</td>
<td></td>
</tr>
</tbody>
</table>
LTIP — performance measures

We have listened to shareholder views, raised during the consultation process, about the importance of retaining ROIC as a metric within our LTIP, alongside the originally proposed relative Total Shareholder Return (TSR) measure. We remain committed to ensuring Shire’s investments in the business enhance value for our shareholders over the long-term, and believe the combination of these metrics is directly aligned with the shareholder experience. The inclusion of a relative TSR metric in the LTIP will better reflect near-term feedback on the execution of our M&A strategy, while ROIC will reward continued development of our returns trajectory over time.

<table>
<thead>
<tr>
<th>Measure and weighting</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Product Sales (20 percent)</td>
<td>• Aligned with growth strategy</td>
</tr>
<tr>
<td>Non GAAP diluted EPS (20 percent)</td>
<td>• Drives focus on balance of top-line and bottom-line performance outcomes</td>
</tr>
<tr>
<td>Non GAAP adjusted ROIC (20 percent)</td>
<td>• Encompasses growth commitment made under Baxalta deal</td>
</tr>
<tr>
<td>Relative TSR (40 percent)</td>
<td>• Reflects long-term returns on strategic and M&amp;A decisions</td>
</tr>
<tr>
<td></td>
<td>• Alignment with shareholder value creation and delivery of returns over the longer term</td>
</tr>
</tbody>
</table>

A custom peer group of global life sciences companies will form the constituents of the relative TSR peer group. The use of an industry-specific peer group means the Executive Directors are rewarded only for strong performance relative to those peer companies Shire is competing against for investment capital. To create this focused list, we selected peer companies based on closeness of comparison to Shire in size, complexity and operations. Selection to these criteria resulted in a group of 20 peer companies (please see page 97 in Part 3(a) for the proposed TSR peer group).

3. Improvement of the link between strategic corporate performance and Executive Directors’ pay outcomes under the EAI

Under the previous Remuneration Policy, we calculated the EAI for the Executive Directors in two parts: we determined corporate funding of the EAI based on financial performance at 75 percent weighting, and non-financial performance at 25 percent weighting. This score could be modified down to 0 percent or up to 200 percent based on individual Executive Director performance. Given shareholder feedback regarding the complexity of how we determined Executive Directors’ bonuses under this model, we are proposing to simplify the plan, so that we will determine the Executive Directors’ EAI based solely on the outcome of corporate performance, with 80 percent weighted on financial performance and 20 percent weighted on non-financial performance. We believe this approach ties the EAI award more directly to overall corporate performance, and provides greater transparency to shareholders by placing more weighting on empirical financial data.

4. Decrease in the maximum LTIP face value annual award in light of shareholder feedback, while recognizing the global talent market within which Shire competes

The maximum annual award under the proposed new LTIP is 600 percent face value of salary, a significant reduction from the previous maximum award of 840 percent. This reduced award level reflects the exchange from performance-based SARs into PSUs, and also recognizes the feedback received from a number of shareholders on the maximum award opportunity under the previous LTIP.

In setting the revised LTIP award level, the Committee has considered carefully the very real tension Shire experiences between our listing in the UK and our headquarters in the U.S., where most of our employees are located and where the majority of Shire’s operations are based. We believe that we are unique as a UK-listed business, insofar as key Executive Committee members are based in the U.S. The need to compete for talent in the U.S. biotech market is therefore a material reality for the Shire business, which is very different from the majority of FTSE-listed organizations. In this context, the Committee has determined the maximum LTIP award level recognizing the historic opportunity under the previous policy, the upper quartile of the FTSE 50 market and the lower quartile of our biopharmaceutical competitors (the majority of whom are based in the U.S.). The proposed amount is intended to balance the competitive tension across these two markets.

The Committee is, however, very conscious of shareholder sensitivity to levels awarded to Executive Directors and will continue to consider the actual level of award to be made each year depending on the performance of the business and associated factors. For 2018, the Committee agreed upon an LTIP award for the CEO with a face value of 425 percent of base salary.
5. Increase in the shareholding guidelines to U.S. aligned levels

Under the new Remuneration Policy, the shareholding requirements will be increased to 500 percent of base salary for the CEO and 300 percent for the CFO, from 200 percent and 150 percent respectively. It should be noted that our CEO’s current shareholding is equal to 788 percent of salary (as at December 31, 2017).

The Committee firmly believes Shire’s Executive Directors should have a significant portion of their wealth in Company shares, as this aligns them with the shareholder experience over the long-term. Given that shareholding requirements in the U.S. are generally more demanding than those in the UK, we are increasing our Executive Directors’ shareholding requirements to be set at U.S. competitive levels, to recognize the U.S./UK balance we have tried to engender within our LTIP design, both in terms of quantum and structure.

Departure of CFO

Jeff Poulton, the Company’s former CFO, left the Company on December 31, 2017. Full details of the treatment of his remuneration on departure are set out in Part 3(e) of this report, and I can confirm that the decisions the Committee took were within the terms of the current Remuneration Policy.

Joining arrangements for new CFO

The Committee considered in detail the remuneration arrangements for Mr. Dittrich, to ensure they were in the best interests of the Company and its shareholders, and appropriate to secure his appointment to Shire. These are set out below ahead of his expected appointment on March 19, 2018.

- **Base salary** — On appointment to Chief Financial Officer, Mr. Dittrich’s remuneration will comprise an annual base salary of CHF 750,000, reflecting the deep wealth of knowledge and experience he brings to the role. This is below the lower quartile for comparable roles in the FTSE 50 (excluding financial services) and below the median of the Company’s global industry peer group.

- **EAI opportunity** — Mr. Dittrich’s annual bonus opportunity for the 2018 performance year will be 160 percent of base salary at maximum and 80 percent of base salary at target, in line with the previous CFO’s level.

- **LTIP awards** — Mr. Dittrich will be granted a 2018 LTIP award with a face value of 357 percent of base salary.

- **Retirement and other benefits** — Mr. Dittrich will also be eligible for retirement and other benefits consistent with his role and location. On joining Shire, he will be based in Zug, Switzerland, before relocating to the U.S. During his time in Switzerland, he will receive retirement and other benefits aligned with other Swiss Executive Committee members. This will include a retirement benefits contribution of 14 percent of base salary. Upon his relocation to the U.S., Mr. Dittrich will receive retirement and other benefits aligned with other U.S. Executive Committee members, which will comprise a retirement benefits contribution of 20 percent of base salary, representing a decrease from the previous CFO’s retirement benefits contribution of 25 percent of base salary.

- **Replacement awards** — Mr. Dittrich will be entitled to the following cash and equity grants to reflect the awards forfeited by him on his departure from his previous employment. In determining the amount and structure of these commitments, the Committee sought to replicate the fair values and timing of the compensation foregone, in line with best practice and the approved Remuneration Policy.

  - To replace his forfeited 2015 LTIP award, he will be eligible to receive a replacement award of Shire shares upon joining based on the maximum opportunity / face value that can be delivered under his 2015 LTIP award from his previous employer. The award will have a face value of CHF 1,320,000 upon grant, and will vest after one year (2019) based on the actual disclosed performance in his previous employer’s 2018 compensation report (published in February 2019).

  - To replace his forfeited 2016 LTIP award, he will be eligible to receive a replacement award of Shire PSUs granted upon joining based on the maximum opportunity / face value that can be delivered under his 2016 LTIP award, as disclosed in his previous employer’s 2016 compensation report. This award will have a face value of CHF 1,000,000 and will vest after three years (2021), subject to the achievement of Shire’s 2018 LTIP performance measures.

- **Relocation assistance** — Mr. Dittrich will also be eligible for relocation assistance in connection with his permanent relocation to the U.S., in line with the policy that applies to all employees across the organization. The details of the relocation assistance provided will be reported within the remuneration reports as appropriate, for the year to which it relates.

Concluding remarks

I would like to thank my fellow members of the Remuneration Committee for their commitment and engagement in what has been an intensive year for the Committee, necessitating many additional meetings. I would also like to thank Anne Minto for her tremendous leadership of the Committee over the past eight years. Anne will retire from the Board with effect from the conclusion of the 2018 AGM. In addition, I would like to thank both the Shire and PwC teams for their continued hard work and support. I welcome the opportunity to serve as the Chairman of the Remuneration Committee and look forward to continued dialog and engagement.

Albert Stroucken
Chairman of the Remuneration Committee

Shire Annual Report 2017